



Catalogue no. 31-001-XIE

# Monthly Survey of Manufacturing

December 2004



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Statistics Canada

Manufacturing, Construction and Energy Division

Monthly survey of manufacturing section

# Monthly Survey of Manufacturing

December 2004

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# Symbols

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- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0<sup>s</sup> value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- p preliminary
- r revised
- x confidential to meet secrecy requirements of the *Statistics Act*
- E use with caution
- F too unreliable to be published

## Acknowledgments

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- **Marcelle Dion**, Director, Manufacturing, Construction & Energy Division
- **Daniela Ravindra**, Chief, Monthly Survey of Manufacturing
- **Russell Kowaluk**, Economist, is the author of this publication.

## 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 consult our documentation on Statistics Canada's Website.

## Schedule of releases

| Schedule of releases | Monthly survey of manufacturing |
|----------------------|---------------------------------|
| Reference period     | Release date                    |
| November 2004        | January 20, 2005                |
| December 2004        | February 14, 2005               |

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# Highlights

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## Monthly Survey of Manufacturing

- In November, both the backlog of unfilled orders and new orders received weakened for the fourth consecutive month. Despite the weakness, manufacturers managed to chalk up a modest 0.2% increase in shipments to \$50.0 billion. Manufacturers continued to face factors beyond their control; among them, rising costs and the soaring Canadian dollar have taken a bite out of manufacturing activity in recent months.

## Analysis – November 2004

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In November, both the backlog of unfilled orders and new orders received weakened for the fourth consecutive month. Despite the weakness, manufacturers managed to chalk up a modest 0.2% increase in shipments to \$50.0 billion. Manufacturers continued to face factors beyond their control; among them, rising costs and the soaring Canadian dollar have taken a bite out of manufacturing activity in recent months.

The Canadian dollar made strong gains in November, touching the US 85 cent mark by the end of the month, its highest level since 1992. The sustained strength of the dollar continued to render manufactured goods, priced in Canadian dollars, more expensive abroad, a challenge for manufacturers trying to secure and retain foreign customers. The latest Canadian international merchandise trade statistics reported a 2.9% decline in total exports for November, the fourth decrease in the last five months.

In addition to the impediments created by a high-valued dollar, input costs have also soared in 2004. For some manufacturers, the higher costs may be cutting into their profit margins.

### Orders trending down

The impact of these obstacles has been quite apparent. Canada's manufacturers saw their new orders decrease 0.5% to \$49.6 billion in November, a six-month low. The transportation equipment (-5.5%) and computer (-3.9%) industries were primarily responsible for the fourth decline in a row.

Unfilled orders, which may contribute to future shipments, have also dropped four straight months. In November, the backlog of orders fell 1.2% to \$36.7 billion, further weakening the trend. In November, orders stood 3.3% below the peak of 2004, set in July (\$37.9 billion). Manufacturers of computer equipment (-4.4%) and aerospace products and parts (-0.9%) contributed to the decline.

### Manufacturers slash jobs in 2004

As a further indication of the rough road in recent months, employment in manufacturing was essentially unchanged in December, capping off a lacklustre year. According to the most recent Labour Force Survey, the second half of 2004 was particularly difficult as manufacturers eliminated 51,000 factory jobs since July.

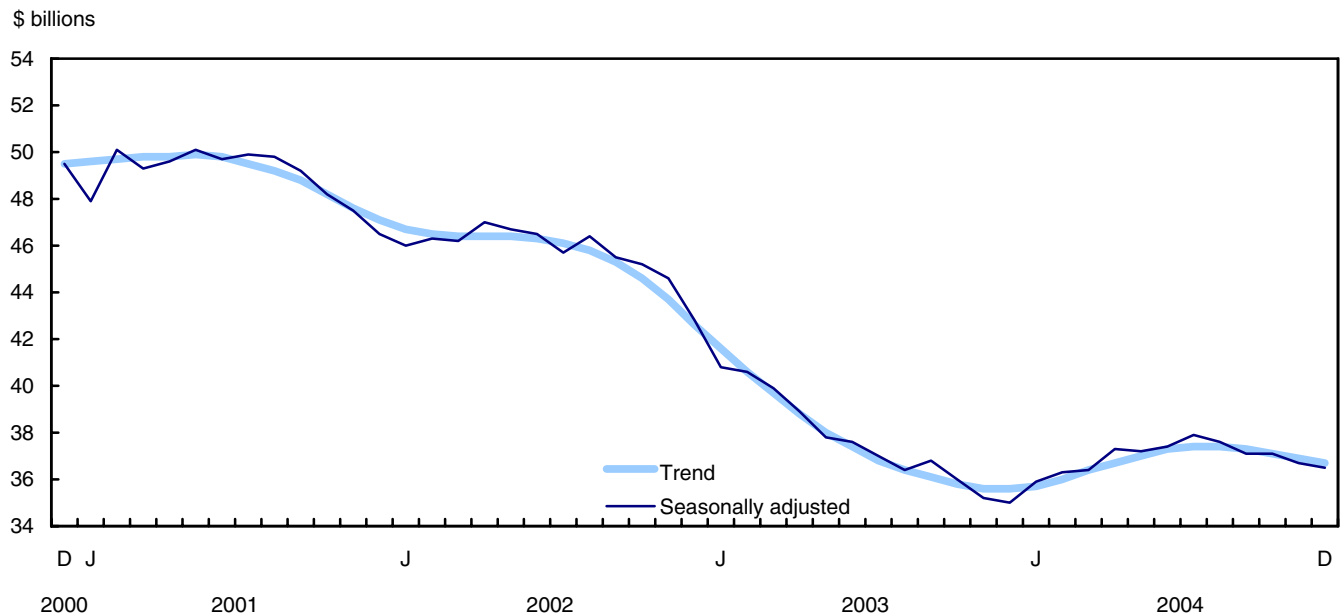
### Shipments carve out small gain

Despite the deteriorating state of orders, manufacturers posted a modest increase in the value of goods shipped in November. Shipments edged up 0.2% to \$50.0 billion following declines in September (-0.5%) and October (-1.0%). November's increase was widespread, with 15 of 21 industries, accounting for 69% of total shipments, contributing to the rise.

Measured in constant dollars, shipments rose 0.7% to \$47.0 billion, the first increase since August.

Chart 1

**Manufacturers' unfulfilled orders decline five months straight**



**New Brunswick and the West report big gains**

Six provinces reported higher shipments in November, although they were largely offset by decreases in the two largest manufacturing provinces, Ontario and Quebec. New Brunswick led all provinces, posting a \$146 million (+12.6%) jump in shipments to a record \$1.3 billion. The province's non-durable goods sector dominated in November, with a 16% surge in shipments to just over \$1.0 billion.

Both Alberta and British Columbia also reported strong shipments in November. Sizable gains in Alberta's machinery and petroleum industries boosted shipments by \$112 million (+2.5%) to a record \$4.6 billion. In the first 11 months of 2004, manufacturing activity was up a robust 14.7% in Alberta. Moving west, shipments in British Columbia increased \$44 million (+1.2%) to \$3.6 billion. The food and primary metals industries were the main contributors to the gain.



Text Table 1

## Shipments by province and territory

|  | November 2004       | December 2004 | November 2004 to<br>December 2004 |
|--|---------------------|---------------|-----------------------------------|
|  | seasonally adjusted |               |                                   |
|  | \$ millions         |               | % change                          |
| <b>Canada</b>                              | <b>50,169</b>       | <b>50,063</b> | <b>-0.2</b>                       |
| Newfoundland and Labrador                  | 262                 | 272           | 3.9                               |
| Prince Edward Island                       | 116                 | 121           | 4.3                               |
| Nova Scotia                                | 798                 | 761           | -4.7                              |
| New Brunswick                              | 1,314               | 1,209         | -8.0                              |
| Quebec                                     | 11,457              | 11,493        | 0.3                               |
| Ontario                                    | 25,997              | 26,064        | 0.3                               |
| Manitoba                                   | 1,106               | 1,076         | -2.7                              |
| Saskatchewan                               | 856                 | 845           | -1.3                              |
| Alberta                                    | 4,625               | 4,620         | -0.1                              |
| British Columbia                           | 3,631               | 3,595         | -1.0                              |
| Yukon Territory                            | 2                   | 1             | -3.7                              |
| Northwest Territories including<br>Nunavut | 6                   | 6             | 3.7                               |

Offsetting much of the gains in November were decreases in Canada's manufacturing heartland. A slowdown in the motor vehicle and parts industries contributed to the third successive decrease for Ontario. Shipments fell by \$155 million (-0.6%) to \$25.9 billion, the lowest since May. Manufacturing in Quebec also retreated by \$126 million (-1.1%) to \$11.3 billion. Production slowed in the aerospace and petroleum products industries, pulling down output for the third time in four months.

## Computer shipments jump

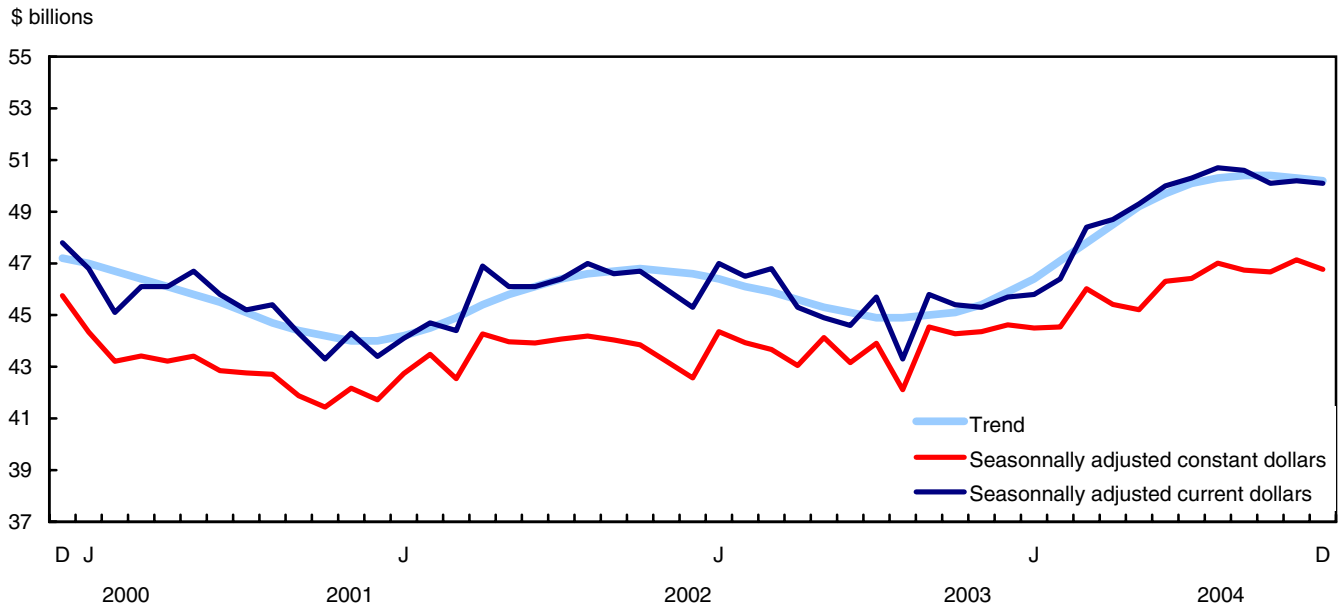
The computer and electronic products industry reported a robust 5.6% increase in shipments to \$1.6 billion, making up some of the ground lost in October (-7.3%). The beleaguered industry has been showing small gains in recent months, partly due to improvements in the communications equipment industry. Overall, shipments of computers and electronic products are on track to report the first annual increase since 2000. Shipments were up 7.3% from January to November.

High industrial prices, which were up almost 37% in November compared to last year, continued to set records in the petroleum and coal products industry. Shipments rose another 1.5% to \$4.3 billion, the highest level ever for the industry. In addition, exports of crude petroleum hit a record high of \$2.5 billion in November.

Other industries reporting increases include chemical products (+1.5%) and machinery (+2.2%) manufacturing.

**Chart 2**

**Shipments end year on a down note**



Some manufacturing industries pulled back in November, partly offsetting the modest rise in shipments. Following a large number of orders shipped in October, the railroad rolling stock industry reported a 34.4% drop in production in November to \$179 million. Manufacturers of motor vehicle parts have been feeling the pinch of a slowdown in the motor vehicle industry. Parts manufacturing fell back by 2.9% to \$2.7 billion, the third consecutive decrease.

**Inventories hold their own**

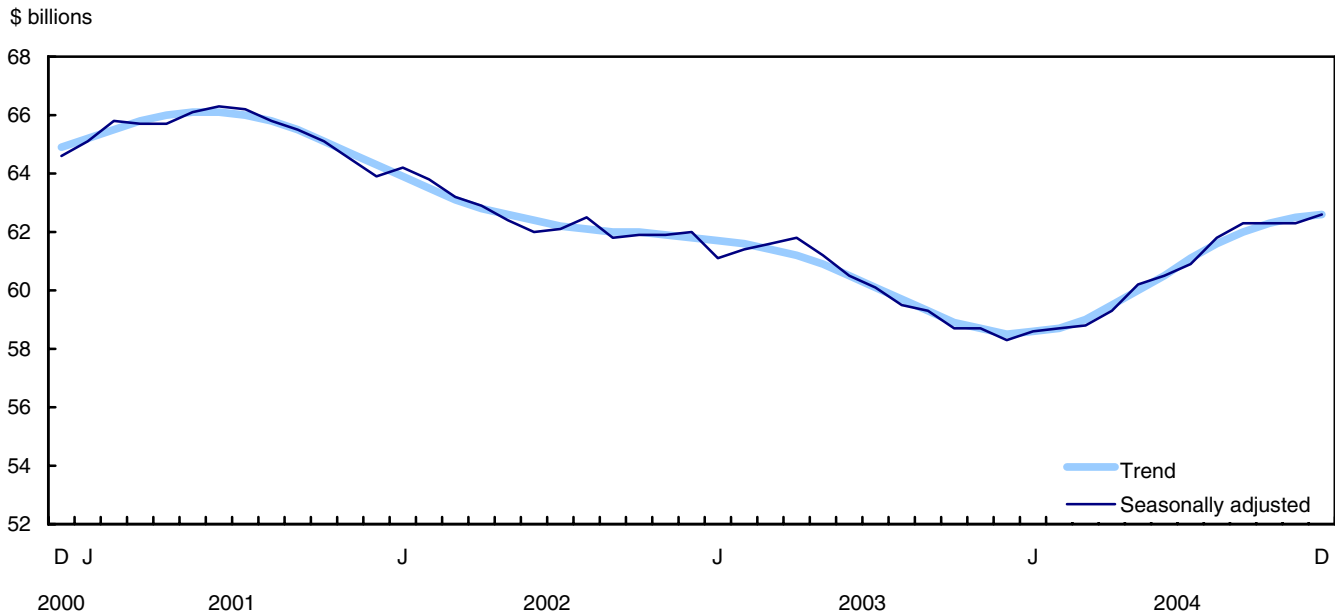
For the third month in a row, manufacturers’ inventories were essentially unchanged at \$62.2 billion. Inventories had been on a steady rise since the start of the year. November’s level is 6.7% higher than at the close of 2003.

Raw material inventories rose 0.3% to \$27.1 billion, following October’s 0.3% decrease. The trend for raw materials has been rising since the start of the year, although signs indicate the trend may be slowing.

Counterbalancing the build-up in raw materials, slight decreases were reported in both goods-in-process (-0.1%) and finished products (-0.2%) inventories. November marked the third drop in a row for goods-in-process inventories, which stood at \$13.8 billion at month’s end. Meanwhile, finished products, which have been trending upwards in recent months, edged back to \$21.3 billion, the first decline since July.

Chart 3

**Manufacturers face rising finished product inventories**



Higher inventories for primary metals (+3.0%) and machinery (+2.5%) were offset by declines in the motor vehicle (-8.7%) and the wood products (-1.5%) industries.

**Slight uptake in shipments shifts down the inventory-to-shipment ratio**

November's modest gain in shipments resulted in a slight downward shift of the inventory-to-shipment ratio. The ratio edged down to 1.24 from 1.25 in October. The inventory-to-shipment ratio is a key measure of the time, in months, that would be required in order to exhaust inventories if shipments were to remain at their current level.

Chart 4

Inventory-to-shipment ratio pushes up again

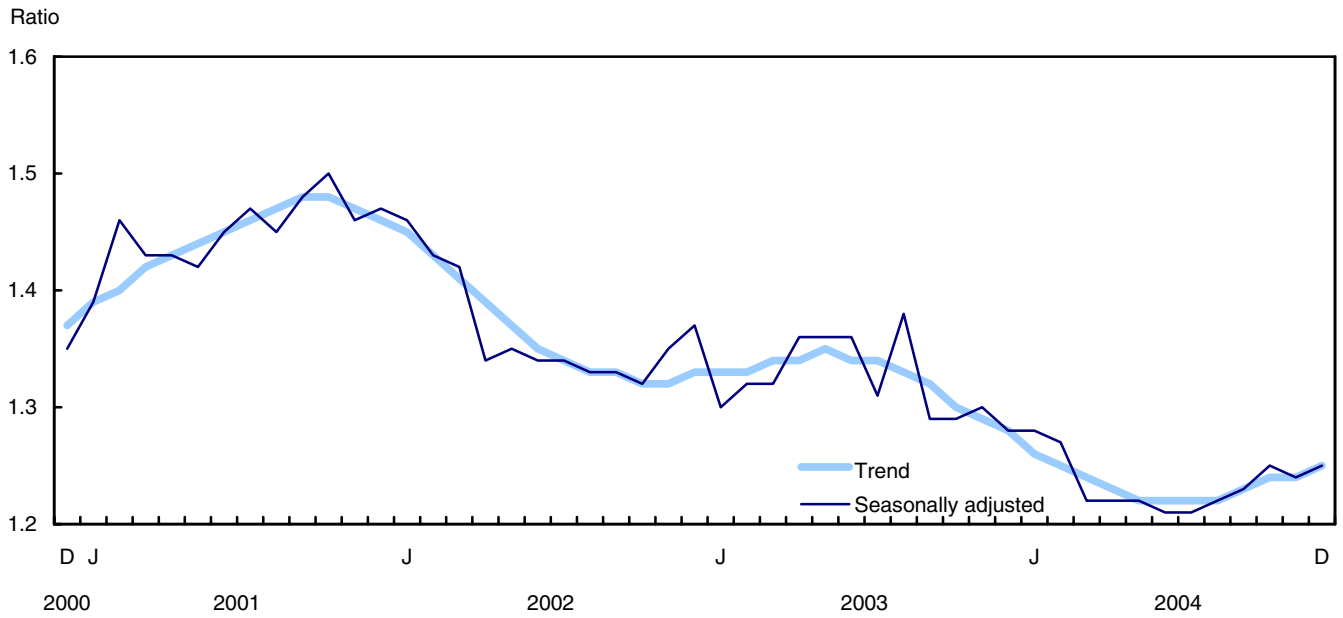


Chart 5

Inventories - Monthly change in trend

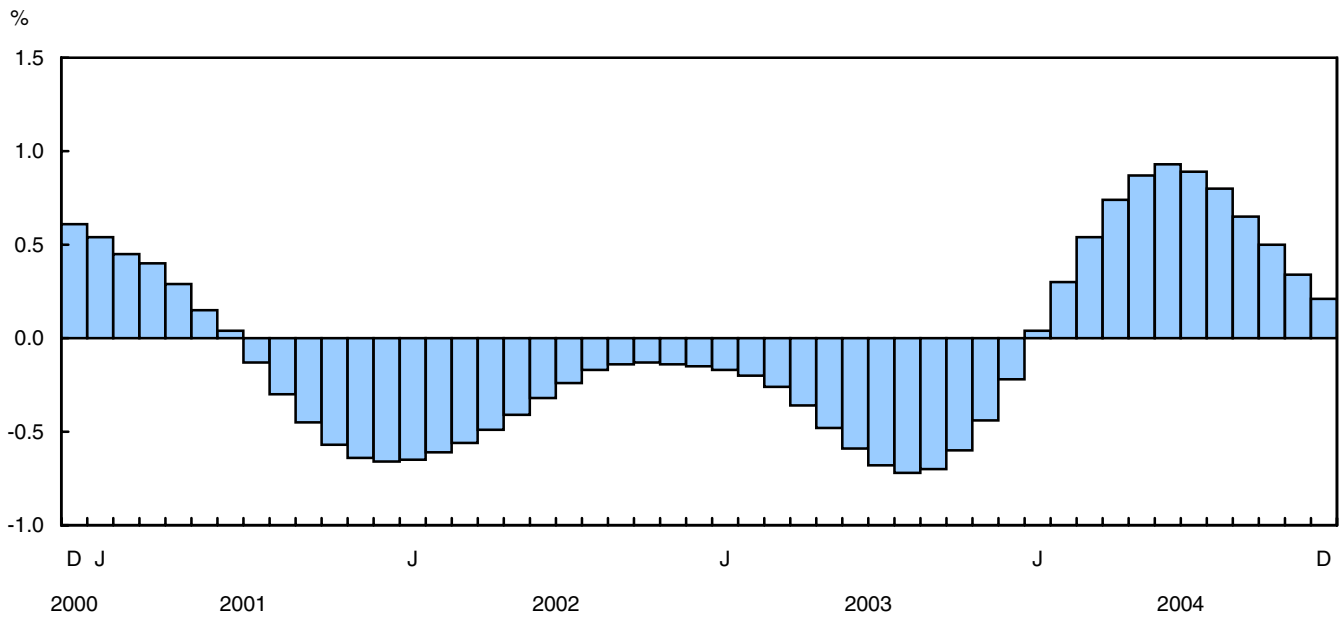


Chart 6

Shipments - Monthly change in trend

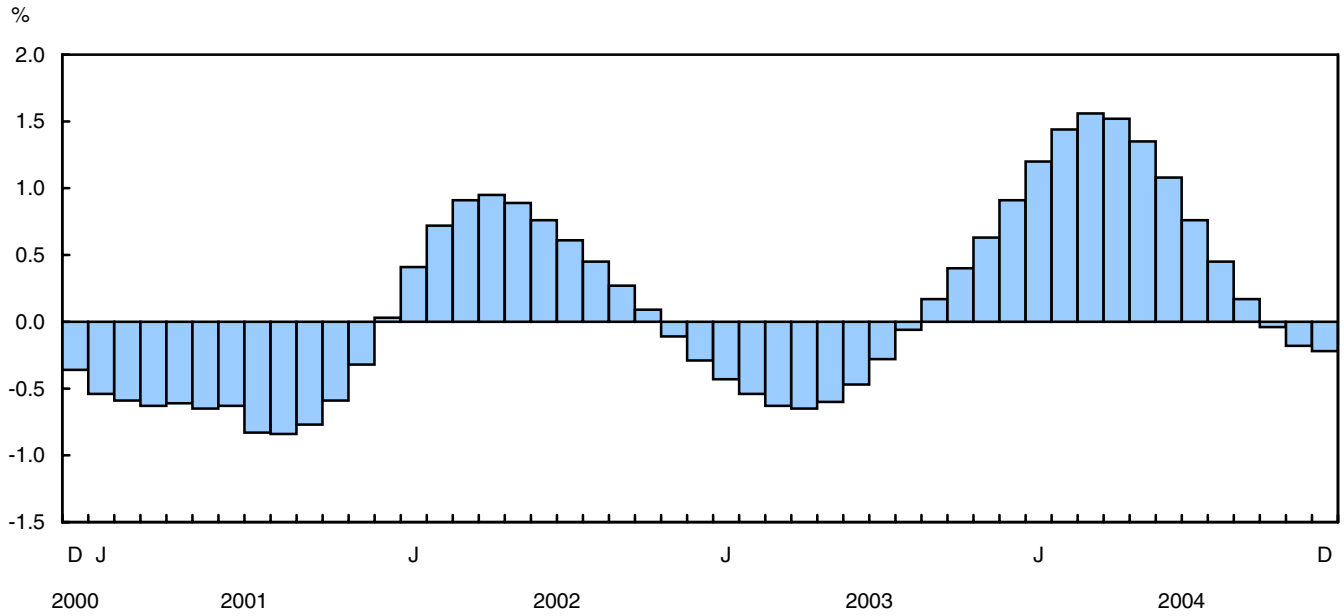
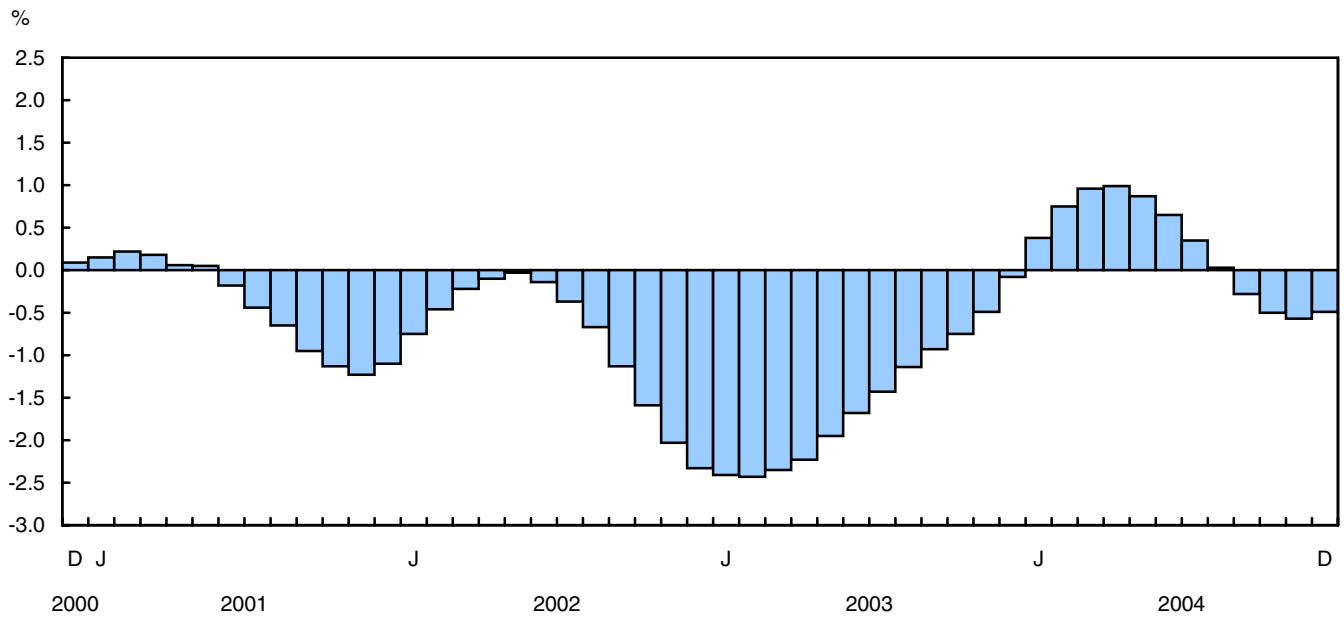


Chart 7

Unfilled orders - Monthly change in trend



### Note to readers

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

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

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

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

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

## Related products

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### Selected publications from Statistics Canada

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|          |   |
|----------|---|
| 31-203-X | Manufacturing industries of Canada, national and provincial areas |
| 31-533-X | Monthly Survey of Manufacturing: use of administrative data       |

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### A note on CANSIM

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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.

### Selected CANSIM tables from Statistics Canada

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|          |  |
|----------|--|
| 028-0002 | Industrial capacity utilization rates, by North American Industry Classification System (NAICS)  |
| 302-0007 | Business conditions survey, by North American Industrial Classification System (NAICS), manufacturing industries, Canada                         |
| 302-0008 | Business conditions survey, Canadian manufacturing industries, by province   |
| 304-0014 | Manufacturers' shipments, inventories, orders and inventory to shipment ratios, by North American Industry Classification System (NAICS), Canada |
| 304-0015 | Manufacturing shipments, by North American Industry Classification System (NAICS) and province   |
| 377-0008 | Real manufacturing shipments, orders, inventory owned and inventory/shipment ratio, 1997 dollars, seasonally adjusted                            |

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### **Selected surveys from Statistics Canada**

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|      |                                 |
|------|---------------------------------|
| 2101 | Monthly Survey of Manufacturing |
| 2152 | Business Conditions Survey      |
| 2821 | Capacity Utilization Rates      |

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### **Selected tables of Canadian statistics from Statistics Canada**

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- *Canadian Statistics - Manufacturing shipments, by provinces and territories (monthly)*
- *Canadian Statistics - Manufacturing shipments, by subsectors (monthly)*
- *Canadian Statistics - Economic indicators, by provinces and territories (monthly and quarterly)*
- *Canadian Statistics - Manufacturing shipments*
- *Canadian Statistics - Manufacturing shipments, by provinces and territories*
- *Canadian Statistics - Business condition survey of the manufacturing sector, by subsectors (quarterly)*
- *Canadian Statistics - Business condition survey of the manufacturing sector, unadjusted, by provinces (quarterly)*
- *Canadian Statistics - Business condition survey of the manufacturing sector, seasonally adjusted, by provinces (quarterly)*
- *Canadian Statistics - Industrial capacity utilization rates (quarterly)*



# Statistical Tables

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Table 1-1

## All manufacturing industries - Shipments, inventories and orders

| Period         | Unadjusted  |             |                 |            | Seasonally adjusted |             |                 |            |
|----------------|-------------|-------------|-----------------|------------|---------------------|-------------|-----------------|------------|
|                | Shipments   | Inventories | Unfilled orders | New orders | Shipments           | Inventories | Unfilled orders | New orders |
|                | \$ millions |             |                 |            |                     |             |                 |            |
| December 2003  | 42,991      | 57,195      | 34,653          | 42,595     | 45,678              | 58,301      | 35,020          | 45,493     |
| January 2004   | 42,408      | 58,233      | 35,548          | 43,303     | 45,801              | 58,572      | 35,931          | 46,712     |
| February 2004  | 43,757      | 59,751      | 36,284          | 44,493     | 46,355              | 58,671      | 36,346          | 46,770     |
| March 2004     | 52,181      | 60,081      | 36,343          | 52,239     | 48,366              | 58,838      | 36,362          | 48,381     |
| April 2004     | 49,460      | 60,186      | 37,216          | 50,332     | 48,749              | 59,304      | 37,279          | 49,667     |
| May 2004       | 51,363      | 60,696      | 37,510          | 51,658     | 49,296              | 60,154      | 37,226          | 49,243     |
| June 2004      | 53,572      | 60,203      | 37,357          | 53,418     | 49,988              | 60,492      | 37,375          | 50,136     |
| July 2004      | 45,551      | 60,314      | 38,248          | 46,442     | 50,325              | 60,938      | 37,906          | 50,856     |
| August 2004    | 51,925      | 61,779      | 37,809          | 51,487     | 50,667              | 61,823      | 37,592          | 50,353     |
| September 2004 | 52,721      | 61,936      | 37,408          | 52,321     | 50,552              | 62,268      | 37,144          | 50,104     |
| October 2004   | 51,320      | 61,866      | 37,029          | 50,941     | 50,064              | 62,333      | 37,121          | 50,041     |
| November 2004  | 51,048      | 62,147      | 36,391          | 50,411     | 50,169              | 62,346      | 36,685          | 49,733     |
| December 2004  | 46,424      | 61,417      | 36,185          | 46,218     | 50,063              | 62,592      | 36,537          | 49,915     |

Table 1-2

## All manufacturing industries - Month to month % change and trend

| Period         | Month to month % change |       |                     |       | Inventory to shipments ratio |      | Month to month % change |       |                     |       |
|----------------|-------------------------|-------|---------------------|-------|------------------------------|------|-------------------------|-------|---------------------|-------|
|                | Shipments               |       | Inventories         |       |                              |      | Unfilled orders         |       | New orders          |       |
|                | Seasonally adjusted     | Trend | Seasonally adjusted | Trend |                              |      | Seasonally adjusted     | Trend | Seasonally adjusted | Trend |
| December 2003  | 1.5                     | 0.9   | -0.7                | -0.2  | 1.28                         | 1.28 | -0.5                    | -0.1  | 2.9                 | 1.2   |
| January 2004   | 0.3                     | 1.2   | 0.5                 | 0.0   | 1.28                         | 1.26 | 2.6                     | 0.4   | 2.7                 | 1.6   |
| February 2004  | 1.2                     | 1.4   | 0.2                 | 0.3   | 1.27                         | 1.25 | 1.2                     | 0.8   | 0.1                 | 1.7   |
| March 2004     | 4.3                     | 1.6   | 0.3                 | 0.5   | 1.22                         | 1.24 | 0.0                     | 1.0   | 3.4                 | 1.7   |
| April 2004     | 0.8                     | 1.5   | 0.8                 | 0.7   | 1.22                         | 1.23 | 2.5                     | 1.0   | 2.7                 | 1.5   |
| May 2004       | 1.1                     | 1.3   | 1.4                 | 0.9   | 1.22                         | 1.22 | -0.1                    | 0.9   | -0.9                | 1.3   |
| June 2004      | 1.4                     | 1.1   | 0.6                 | 0.9   | 1.21                         | 1.22 | 0.4                     | 0.7   | 1.8                 | 0.9   |
| July 2004      | 0.7                     | 0.8   | 0.7                 | 0.9   | 1.21                         | 1.22 | 1.4                     | 0.3   | 1.4                 | 0.5   |
| August 2004    | 0.7                     | 0.5   | 1.5                 | 0.8   | 1.22                         | 1.22 | -0.8                    | 0.0   | -1.0                | 0.2   |
| September 2004 | -0.2                    | 0.2   | 0.7                 | 0.7   | 1.23                         | 1.23 | -1.2                    | -0.3  | -0.5                | -0.1  |
| October 2004   | -1.0                    | 0.0   | 0.1                 | 0.5   | 1.25                         | 1.24 | -0.1                    | -0.5  | -0.1                | -0.2  |
| November 2004  | 0.2                     | -0.2  | 0.0                 | 0.3   | 1.24                         | 1.24 | -1.2                    | -0.6  | -0.6                | -0.2  |
| December 2004  | -0.2                    | -0.2  | 0.4                 | 0.2   | 1.25                         | 1.25 | -0.4                    | -0.5  | 0.4                 | -0.2  |

Table 2-1

## Motor vehicle, and parts and accessories industries - Shipments, inventories and orders

| Period         | Unadjusted  |             |                 |            | Seasonally adjusted |             |                 |            |
|----------------|-------------|-------------|-----------------|------------|---------------------|-------------|-----------------|------------|
|                | Shipments   | Inventories | Unfilled orders | New orders | Shipments           | Inventories | Unfilled orders | New orders |
|                | \$ millions |             |                 |            |                     |             |                 |            |
| December 2003  | 7,139       | 3,001       | 1,797           | 7,165      | 8,233               | 3,067       | 1,765           | 8,267      |
| January 2004   | 7,785       | 3,091       | 1,821           | 7,810      | 8,221               | 3,065       | 1,801           | 8,258      |
| February 2004  | 8,329       | 3,276       | 1,872           | 8,380      | 8,128               | 3,214       | 1,859           | 8,185      |
| March 2004     | 10,209      | 3,440       | 1,970           | 10,306     | 8,701               | 3,365       | 1,974           | 8,817      |
| April 2004     | 9,592       | 3,551       | 2,036           | 9,659      | 8,828               | 3,505       | 2,083           | 8,936      |
| May 2004       | 9,552       | 3,511       | 2,070           | 9,586      | 8,922               | 3,441       | 2,093           | 8,933      |
| June 2004      | 10,219      | 3,338       | 2,022           | 10,171     | 8,980               | 3,406       | 2,054           | 8,941      |
| July 2004      | 5,629       | 3,351       | 2,126           | 5,733      | 8,959               | 3,442       | 2,119           | 9,024      |
| August 2004    | 9,464       | 3,509       | 2,032           | 9,370      | 9,073               | 3,532       | 2,021           | 8,975      |
| September 2004 | 9,532       | 3,458       | 1,932           | 9,432      | 9,161               | 3,483       | 1,920           | 9,060      |
| October 2004   | 8,788       | 3,377       | 1,815           | 8,671      | 8,706               | 3,431       | 1,811           | 8,597      |
| November 2004  | 8,951       | 3,361       | 1,830           | 8,965      | 8,603               | 3,302       | 1,811           | 8,603      |
| December 2004  | 7,411       | 3,226       | 1,925           | 7,506      | 8,736               | 3,385       | 1,907           | 8,833      |

Table 2-2

## Motor vehicle, and parts and accessories industries - Month to month % change and trend

| Period         | Month to month % change |       |                     |       | Inventory to shipments ratio |      | Month to month % change |       |                     |       |
|----------------|-------------------------|-------|---------------------|-------|------------------------------|------|-------------------------|-------|---------------------|-------|
|                | Shipments               |       | Inventories         |       |                              |      | Unfilled orders         |       | New orders          |       |
|                | Seasonally adjusted     | Trend | Seasonally adjusted | Trend |                              |      | Seasonally adjusted     | Trend | Seasonally adjusted | Trend |
| December 2003  | 3.2                     | 0.4   | -0.8                | 0.9   | 0.37                         | 0.38 | 2.0                     | 3.4   | 3.0                 | 0.5   |
| January 2004   | -0.1                    | 0.9   | -0.1                | 1.3   | 0.37                         | 0.38 | 2.1                     | 3.6   | -0.1                | 1.0   |
| February 2004  | -1.1                    | 1.4   | 4.9                 | 1.7   | 0.40                         | 0.38 | 3.2                     | 3.4   | -0.9                | 1.4   |
| March 2004     | 7.1                     | 1.7   | 4.7                 | 1.8   | 0.39                         | 0.38 | 6.2                     | 2.9   | 7.7                 | 1.6   |
| April 2004     | 1.5                     | 1.7   | 4.2                 | 1.8   | 0.40                         | 0.38 | 5.5                     | 2.1   | 1.4                 | 1.5   |
| May 2004       | 1.1                     | 1.5   | -1.8                | 1.5   | 0.39                         | 0.38 | 0.5                     | 1.2   | 0.0                 | 1.3   |
| June 2004      | 0.7                     | 1.1   | -1.0                | 1.1   | 0.38                         | 0.38 | -1.9                    | 0.2   | 0.1                 | 0.8   |
| July 2004      | -0.2                    | 0.5   | 1.1                 | 0.6   | 0.38                         | 0.39 | 3.2                     | -0.7  | 0.9                 | 0.3   |
| August 2004    | 1.3                     | 0.0   | 2.6                 | 0.2   | 0.39                         | 0.39 | -4.6                    | -1.4  | -0.5                | -0.1  |
| September 2004 | 1.0                     | -0.4  | -1.4                | -0.2  | 0.38                         | 0.39 | -5.0                    | -1.9  | 0.9                 | -0.5  |
| October 2004   | -5.0                    | -0.7  | -1.5                | -0.5  | 0.39                         | 0.39 | -5.7                    | -2.0  | -5.1                | -0.7  |
| November 2004  | -1.2                    | -0.8  | -3.8                | -0.7  | 0.38                         | 0.39 | 0.0                     | -1.7  | 0.1                 | -0.7  |
| December 2004  | 1.5                     | -0.8  | 2.5                 | -0.7  | 0.39                         | 0.39 | 5.3                     | -1.1  | 2.7                 | -0.6  |

Table 3-1

**All manufacturing industries except motor vehicle, parts and accessories industries - Shipments, inventories and orders**

| Period         | Unadjusted  |             |                 |            | Seasonally adjusted |             |                 |            |
|----------------|-------------|-------------|-----------------|------------|---------------------|-------------|-----------------|------------|
|                | Shipments   | Inventories | Unfilled orders | New orders | Shipments           | Inventories | Unfilled orders | New orders |
|                | \$ millions |             |                 |            |                     |             |                 |            |
| December 2003  | 35,852      | 54,194      | 32,856          | 35,430     | 37,445              | 55,234      | 33,255          | 37,226     |
| January 2004   | 34,622      | 55,142      | 33,726          | 35,493     | 37,579              | 55,507      | 34,130          | 38,454     |
| February 2004  | 35,428      | 56,475      | 34,412          | 36,113     | 38,228              | 55,457      | 34,487          | 38,585     |
| March 2004     | 41,972      | 56,641      | 34,373          | 41,933     | 39,665              | 55,473      | 34,387          | 39,564     |
| April 2004     | 39,867      | 56,635      | 35,180          | 40,674     | 39,922              | 55,799      | 35,196          | 40,731     |
| May 2004       | 41,811      | 57,185      | 35,440          | 42,071     | 40,374              | 56,713      | 35,133          | 40,311     |
| June 2004      | 43,352      | 56,865      | 35,335          | 43,247     | 41,007              | 57,086      | 35,321          | 41,195     |
| July 2004      | 39,922      | 56,963      | 36,122          | 40,709     | 41,366              | 57,496      | 35,787          | 41,832     |
| August 2004    | 42,461      | 58,270      | 35,777          | 42,117     | 41,594              | 58,291      | 35,572          | 41,378     |
| September 2004 | 43,190      | 58,477      | 35,476          | 42,888     | 41,391              | 58,785      | 35,224          | 41,044     |
| October 2004   | 42,533      | 58,489      | 35,213          | 42,270     | 41,358              | 58,902      | 35,310          | 41,444     |
| November 2004  | 42,097      | 58,786      | 34,562          | 41,446     | 41,565              | 59,044      | 34,874          | 41,130     |
| December 2004  | 39,013      | 58,191      | 34,260          | 38,712     | 41,327              | 59,207      | 34,630          | 41,082     |

Table 3-2

**All manufacturing industries except motor vehicle, parts and accessories industries - Month to month % change and trend**

| Period         | Month to month % change |       |                     |       | Inventory to shipments ratio |      | Month to month % change |       |                     |       |
|----------------|-------------------------|-------|---------------------|-------|------------------------------|------|-------------------------|-------|---------------------|-------|
|                | Shipments               |       | Inventories         |       |                              |      | Unfilled orders         |       | New orders          |       |
|                | Seasonally adjusted     | Trend | Seasonally adjusted | Trend |                              |      | Seasonally adjusted     | Trend | Seasonally adjusted | Trend |
| December 2003  | 1.2                     | 1.0   | -0.7                | -0.3  | 1.48                         | 1.47 | -0.7                    | -0.3  | 2.9                 | 1.4   |
| January 2004   | 0.4                     | 1.3   | 0.5                 | 0.0   | 1.48                         | 1.45 | 2.6                     | 0.2   | 3.3                 | 1.7   |
| February 2004  | 1.7                     | 1.4   | -0.1                | 0.2   | 1.45                         | 1.44 | 1.0                     | 0.6   | 0.3                 | 1.8   |
| March 2004     | 3.8                     | 1.5   | 0.0                 | 0.5   | 1.40                         | 1.42 | -0.3                    | 0.9   | 2.5                 | 1.7   |
| April 2004     | 0.6                     | 1.5   | 0.6                 | 0.7   | 1.40                         | 1.41 | 2.4                     | 0.9   | 2.9                 | 1.5   |
| May 2004       | 1.1                     | 1.3   | 1.6                 | 0.8   | 1.40                         | 1.40 | -0.2                    | 0.9   | -1.0                | 1.3   |
| June 2004      | 1.6                     | 1.1   | 0.7                 | 0.9   | 1.39                         | 1.40 | 0.5                     | 0.7   | 2.2                 | 0.9   |
| July 2004      | 0.9                     | 0.8   | 0.7                 | 0.9   | 1.39                         | 1.40 | 1.3                     | 0.4   | 1.5                 | 0.6   |
| August 2004    | 0.6                     | 0.5   | 1.4                 | 0.8   | 1.40                         | 1.41 | -0.6                    | 0.1   | -1.1                | 0.3   |
| September 2004 | -0.5                    | 0.3   | 0.8                 | 0.7   | 1.42                         | 1.41 | -1.0                    | -0.2  | -0.8                | 0.0   |
| October 2004   | -0.1                    | 0.1   | 0.2                 | 0.6   | 1.42                         | 1.42 | 0.2                     | -0.4  | 1.0                 | -0.1  |
| November 2004  | 0.5                     | 0.0   | 0.2                 | 0.4   | 1.42                         | 1.42 | -1.2                    | -0.5  | -0.8                | -0.1  |
| December 2004  | -0.6                    | -0.1  | 0.3                 | 0.3   | 1.43                         | 1.43 | -0.7                    | -0.5  | -0.1                | -0.1  |

Table 4-1

## Shipments by major group and selected industries - Unadjusted

|   | NAICS Code | Current periods |               |               |               | Previous year |               | Year to date       |                | Annual             |                |
|---|------------|-----------------|---------------|---------------|---------------|---------------|---------------|--------------------|----------------|--------------------|----------------|
|   |            | Dec. 2004       | Nov. 2004     | Oct. 2004     | Sept. 2004    | Dec. 2003     | Nov. 2003     | % change from 2003 | 2004           | % change from 2002 | 2003           |
| \$millions  |            |                 |               |               |               |               |               |                    |                |                    |                |
| Food manufacturing  | 311        | 5,739           | 5,811         | 5,910         | 5,980         | 5,407         | 5,452         | 8.1                | 68,551         | 1.7                | 63,436         |
| Beverage and tobacco product manufacturing                  | 312        | 1,085           | 899           | 936           | 980           | 1,064         | 976           | -1.2               | 11,889         | 3.2                | 12,032         |
| Textile mills   | 313        | 233             | 271           | 278           | 288           | 249           | 281           | -4.3               | 3,274          | -11.0              | 3,421          |
| Textile product mills                                       | 314        | 181             | 209           | 214           | 203           | 162           | 183           | 0.4                | 2,307          | -10.3              | 2,297          |
| Clothing manufacturing                                      | 315        | 418             | 584           | 574           | 580           | 476           | 606           | -8.5               | 6,472          | -6.3               | 7,075          |
| Leather and allied product manufacturing                    | 316        | 45              | 59            | 74            | 80            | 54            | 63            | -15.1              | 631            | -13.7              | 743            |
| Wood product manufacturing                                  | 321        | 2,575           | 2,905         | 3,152         | 3,476         | 2,199         | 2,641         | 19.7               | 37,419         | -3.4               | 31,248         |
| Paper manufacturing   | 322        | 2,652           | 2,761         | 2,783         | 2,804         | 2,531         | 2,625         | -0.3               | 33,095         | -3.6               | 33,204         |
| Printing and related support activities                     | 323        | 931             | 1,068         | 1,041         | 1,058         | 951           | 1,038         | 1.5                | 11,768         | -0.7               | 11,590         |
| Petroleum and coal products manufacturing                   | 324        | 3,937           | 4,235         | 4,346         | 4,152         | 3,006         | 2,932         | 21.8               | 45,496         | 9.0                | 37,355         |
| Chemical manufacturing                                      | 325        | 3,714           | 3,905         | 3,868         | 3,925         | 3,291         | 3,215         | 11.2               | 45,780         | 3.6                | 41,187         |
| Plastics and rubber products manufacturing                  | 326        | 1,850           | 2,231         | 2,301         | 2,291         | 1,759         | 2,048         | 4.7                | 25,887         | 1.0                | 24,722         |
| Non-metallic mineral product manufacturing                  | 327        | 810             | 1,197         | 1,266         | 1,295         | 778           | 1,015         | 6.0                | 12,711         | 5.3                | 11,994         |
| Primary metal manufacturing                                 | 331        | 3,728           | 3,938         | 3,922         | 3,899         | 3,184         | 3,074         | 18.7               | 44,631         | 2.3                | 37,606         |
| Fabricated metal product manufacturing                      | 332        | 2,653           | 3,258         | 3,264         | 3,338         | 2,342         | 2,649         | 11.8               | 34,676         | 0.4                | 31,026         |
| Machinery manufacturing                                     | 333        | 2,310           | 2,455         | 2,369         | 2,524         | 2,167         | 2,118         | 7.4                | 27,477         | -2.9               | 25,576         |
| Computer and electronic product manufacturing               | 334        | 1,920           | 1,715         | 1,532         | 1,831         | 1,910         | 1,691         | 6.8                | 20,064         | -13.1              | 18,790         |
| Electrical equipment, appliance and component manufacturing | 335        | 789             | 884           | 865           | 928           | 791           | 862           | 3.9                | 10,373         | -5.7               | 9,984          |
| Transportation equipment manufacturing                      | 336        | 9,088           | 10,643        | 10,697        | 11,143        | 8,927         | 9,697         | 5.0                | 126,953        | -3.9               | 120,949        |
| Motor vehicle manufacturing                                 | 3361       | 5,134           | 6,240         | 5,923         | 6,533         | 4,818         | 5,477         | 4.5                | 72,391         | -6.4               | 69,258         |
| Motor vehicle body and trailer manufacturing                | 3362       | 305             | 352           | 345           | 340           | 286           | 284           | 4.4                | 3,859          | 0.1                | 3,695          |
| Motor vehicle parts manufacturing                           | 3363       | 2,277           | 2,711         | 2,865         | 2,998         | 2,321         | 2,639         | 5.2                | 33,070         | -0.1               | 31,433         |
| Aerospace product and parts manufacturing                   | 3364       | 966             | 978           | 1,085         | 827           | 1,085         | 848           | 7.9                | 12,496         | 1.5                | 11,586         |
| Railroad rolling stock manufacturing                        | 3365       | 211             | 191           | 243           | 218           | 201           | 212           | -1.4               | 2,337          | -7.7               | 2,370          |
| Ship and boat building                                      | 3366       | 81              | 93            | 91            | 98            | 95            | 82            | 10.9               | 1,220          | -5.4               | 1,100          |
| Furniture and related product manufacturing                 | 337        | 1,182           | 1,365         | 1,319         | 1,290         | 1,092         | 1,161         | 4.4                | 14,653         | 1.2                | 14,035         |
| Miscellaneous manufacturing                                 | 339        | 584             | 654           | 610           | 656           | 650           | 654           | 1.7                | 7,622          | 3.5                | 7,495          |
| <b>Non-durable goods industries<sup>1</sup></b>             |            | <b>20,785</b>   | <b>22,034</b> | <b>22,324</b> | <b>22,342</b> | <b>18,950</b> | <b>19,420</b> | <b>7.6</b>         | <b>255,151</b> | <b>1.5</b>         | <b>237,062</b> |
| <b>Durable goods industries<sup>2</sup></b>                 |            | <b>25,639</b>   | <b>29,014</b> | <b>28,997</b> | <b>30,380</b> | <b>24,041</b> | <b>25,563</b> | <b>9.0</b>         | <b>336,579</b> | <b>-2.6</b>        | <b>308,703</b> |
| <b>Manufacturing</b>  |            | <b>46,424</b>   | <b>51,048</b> | <b>51,320</b> | <b>52,721</b> | <b>42,991</b> | <b>44,983</b> | <b>8.4</b>         | <b>591,730</b> | <b>-0.8</b>        | <b>545,765</b> |

1. Non-durable goods industries include the following NAICS: 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, 326

2. Durable goods industries include the following NAICS: 321, 327, 331, 332, 333, 334, 335, 336, 337, 339

Table 4-2

## Shipments by major group and selected industries - Seasonally adjusted

|   | NAICS Code | Change from November | Current periods |               |               |               | Change from previous month |             |             | Trend change from previous month |             |             |            |  |
|---|------------|----------------------|-----------------|---------------|---------------|---------------|----------------------------|-------------|-------------|----------------------------------|-------------|-------------|------------|--|
|   |            |                      | Dec. 2004       | Nov. 2004     | Oct. 2004     | Sept. 2004    | Dec. 2004                  | Nov. 2004   | Oct. 2004   | Dec. 2004                        | Nov. 2004   | Oct. 2004   | Sept. 2004 |  |
|   |            |                      | \$ millions     |               |               |               | percentage                 |             |             |                                  |             |             |            |  |
| Food manufacturing  | 311        | -12                  | 5,744           | 5,755         | 5,707         | 5,742         | -0.2                       | 0.8         | -0.6        | 0.0                              | 0.0         | 0.0         | 0.0        |  |
| Beverage and tobacco product manufacturing                  | 312        | 69                   | 1,013           | 944           | 962           | 970           | 7.3                        | -1.8        | -0.9        | -0.4                             | -0.6        | -0.7        | -0.8       |  |
| Textile mills   | 313        | -3                   | 263             | 266           | 270           | 267           | -1.2                       | -1.4        | 1.2         | -0.4                             | -0.4        | -0.4        | -0.5       |  |
| Textile product mills                                       | 314        | 1                    | 203             | 201           | 201           | 198           | 0.7                        | 0.2         | 1.6         | 0.5                              | 0.8         | 1.2         | 1.5        |  |
| Clothing manufacturing                                      | 315        | -15                  | 516             | 531           | 502           | 524           | -2.9                       | 5.8         | -4.2        | -0.2                             | -0.3        | -0.6        | -0.9       |  |
| Leather and allied product manufacturing                    | 316        | 3                    | 54              | 51            | 54            | 51            | 5.5                        | -5.1        | 6.3         | 0.3                              | 0.9         | 1.1         | 1.0        |  |
| Wood product manufacturing                                  | 321        | 44                   | 3,109           | 3,065         | 3,139         | 3,256         | 1.4                        | -2.3        | -3.6        | -0.9                             | -1.1        | -1.1        | -0.7       |  |
| Paper manufacturing   | 322        | 57                   | 2,787           | 2,730         | 2,715         | 2,744         | 2.1                        | 0.6         | -1.1        | 0.0                              | -0.2        | -0.3        | -0.2       |  |
| Printing and related support activities                     | 323        | -21                  | 963             | 984           | 985           | 1,002         | -2.1                       | -0.1        | -1.7        | -0.4                             | -0.4        | -0.2        | 0.0        |  |
| Petroleum and coal products manufacturing                   | 324        | -269                 | 4,025           | 4,293         | 4,216         | 4,064         | -6.3                       | 1.8         | 3.7         | -0.4                             | 0.1         | 0.9         | 1.5        |  |
| Chemical manufacturing                                      | 325        | -41                  | 3,946           | 3,986         | 3,928         | 3,994         | -1.0                       | 1.5         | -1.7        | -0.1                             | 0.0         | 0.3         | 0.7        |  |
| Plastics and rubber products manufacturing                  | 326        | 4                    | 2,208           | 2,205         | 2,185         | 2,203         | 0.2                        | 0.9         | -0.8        | 0.2                              | 0.2         | 0.3         | 0.5        |  |
| Non-metallic mineral product manufacturing                  | 327        | -60                  | 1,067           | 1,127         | 1,078         | 1,073         | -5.3                       | 4.5         | 0.5         | 0.3                              | 0.4         | 0.5         | 0.6        |  |
| Primary metal manufacturing                                 | 331        | 3                    | 3,895           | 3,892         | 3,878         | 3,822         | 0.1                        | 0.4         | 1.5         | 0.1                              | 0.4         | 0.6         | 0.8        |  |
| Fabricated metal product manufacturing                      | 332        | -1                   | 3,076           | 3,077         | 3,064         | 3,058         | 0.0                        | 0.4         | 0.2         | 0.6                              | 0.8         | 1.1         | 1.3        |  |
| Machinery manufacturing                                     | 333        | -64                  | 2,309           | 2,373         | 2,328         | 2,393         | -2.7                       | 1.9         | -2.7        | -0.5                             | -0.4        | -0.1        | 0.3        |  |
| Computer and electronic product manufacturing               | 334        | 42                   | 1,702           | 1,660         | 1,588         | 1,651         | 2.5                        | 4.5         | -3.8        | 0.6                              | 0.3         | -0.1        | -0.4       |  |
| Electrical equipment, appliance and component manufacturing | 335        | 9                    | 859             | 849           | 858           | 875           | 1.1                        | -1.0        | -1.9        | -0.2                             | -0.2        | -0.3        | -0.3       |  |
| Transportation equipment manufacturing                      | 336        | 171                  | 10,421          | 10,249        | 10,567        | 10,814        | 1.7                        | -3.0        | -2.3        | -0.8                             | -0.9        | -0.8        | -0.5       |  |
| Motor vehicle manufacturing                                 | 3361       | 136                  | 6,054           | 5,918         | 5,961         | 6,311         | 2.3                        | -0.7        | -5.5        | -0.8                             | -0.8        | -0.6        | -0.3       |  |
| Motor vehicle body and trailer manufacturing                | 3362       | -14                  | 333             | 347           | 334           | 332           | -4.0                       | 3.7         | 0.7         | 0.0                              | 0.2         | 0.5         | 0.9        |  |
| Motor vehicle parts manufacturing                           | 3363       | -3                   | 2,683           | 2,685         | 2,745         | 2,850         | -0.1                       | -2.2        | -3.7        | -0.6                             | -0.8        | -0.8        | -0.6       |  |
| Aerospace product and parts manufacturing                   | 3364       | -39                  | 927             | 966           | 1,009         | 882           | -4.0                       | -4.3        | 14.3        | -2.0                             | -2.7        | -2.9        | -2.7       |  |
| Railroad rolling stock manufacturing                        | 3365       | 56                   | 209             | 153           | 270           | 189           | 36.4                       | -43.2       | 42.7        | 2.2                              | 2.3         | 2.0         | 1.6        |  |
| Ship and boat building                                      | 3366       | 0                    | 102             | 102           | 102           | 122           | -0.3                       | -0.3        | -16.4       | -1.3                             | -1.4        | -0.8        | 0.3        |  |
| Furniture and related product manufacturing                 | 337        | -16                  | 1,292           | 1,308         | 1,267         | 1,225         | -1.2                       | 3.2         | 3.4         | 0.9                              | 1.2         | 1.4         | 1.4        |  |
| Miscellaneous manufacturing                                 | 339        | -7                   | 613             | 620           | 572           | 625           | -1.2                       | 8.4         | -8.6        | -0.6                             | -1.0        | -1.3        | -1.5       |  |
| <b>Non-durable goods industries<sup>1</sup></b>             |            | <b>-227</b>          | <b>21,721</b>   | <b>21,948</b> | <b>21,725</b> | <b>21,759</b> | <b>-1.0</b>                | <b>1.0</b>  | <b>-0.2</b> | <b>-0.1</b>                      | <b>0.0</b>  | <b>0.2</b>  | <b>0.4</b> |  |
| <b>Durable goods industries<sup>2</sup></b>                 |            | <b>121</b>           | <b>28,342</b>   | <b>28,221</b> | <b>28,339</b> | <b>28,793</b> | <b>0.4</b>                 | <b>-0.4</b> | <b>-1.6</b> | <b>-0.3</b>                      | <b>-0.3</b> | <b>-0.2</b> | <b>0.0</b> |  |
| <b>Manufacturing</b>  |            | <b>-105</b>          | <b>50,063</b>   | <b>50,169</b> | <b>50,064</b> | <b>50,552</b> | <b>-0.2</b>                | <b>0.2</b>  | <b>-1.0</b> | <b>-0.2</b>                      | <b>-0.2</b> | <b>0.0</b>  | <b>0.2</b> |  |

1. Non-durable goods industries include the following NAICS: 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, 326

2. Durable goods industries include the following NAICS: 321, 327, 331, 332, 333, 334, 335, 336, 337, 339

Table 5-1

## Inventories by major group and selected industries - Unadjusted

| NAICS Code  | Current periods |               |               |               | Previous year |               | Year to date       |              | Average per month  |             |               |
|---|-----------------|---------------|---------------|---------------|---------------|---------------|--------------------|--------------|--------------------|-------------|---------------|
|   | Dec. 2004       | Nov. 2004     | Oct. 2004     | Sept. 2004    | Dec. 2003     | Nov. 2003     | % change from 2003 | Average 2004 | % change from 2002 | 2003        |               |
| \$millions  |                 |               |               |               |               |               |                    |              |                    |             |               |
| Food manufacturing  | 311             | 4,796         | 5,040         | 5,050         | 4,935         | 4,527         | 4,735              | 4.7          | 4,779              | 0.2         | 4,564         |
| Beverage and tobacco product manufacturing                  | 312             | 1,580         | 1,693         | 1,635         | 1,593         | 1,544         | 1,639              | -0.2         | 1,646              | 2.7         | 1,650         |
| Textile mills   | 313             | 453           | 458           | 467           | 482           | 474           | 486                | -8.8         | 473                | -8.0        | 519           |
| Textile product mills                                       | 314             | 360           | 366           | 374           | 367           | 349           | 355                | -1.2         | 361                | -4.2        | 365           |
| Clothing manufacturing                                      | 315             | 1,165         | 1,169         | 1,204         | 1,267         | 1,331         | 1,340              | -12.6        | 1,269              | 0.9         | 1,451         |
| Leather and allied product manufacturing                    | 316             | 121           | 122           | 125           | 138           | 117           | 118                | -6.1         | 132                | -9.8        | 141           |
| Wood product manufacturing                                  | 321             | 4,313         | 4,119         | 4,162         | 4,165         | 4,165         | 3,956              | -2.8         | 4,406              | -0.9        | 4,533         |
| Paper manufacturing   | 322             | 3,549         | 3,561         | 3,614         | 3,653         | 3,486         | 3,549              | -0.3         | 3,577              | -1.1        | 3,588         |
| Printing and related support activities                     | 323             | 867           | 885           | 908           | 917           | 848           | 864                | 0.6          | 875                | -2.4        | 870           |
| Petroleum and coal products manufacturing                   | 324             | 2,098         | 2,263         | 2,360         | 2,370         | 1,841         | 1,901              | 11.8         | 2,247              | 0.8         | 2,009         |
| Chemical manufacturing                                      | 325             | 6,474         | 6,275         | 6,244         | 6,125         | 5,749         | 5,728              | 9.1          | 6,167              | 9.3         | 5,652         |
| Plastics and rubber products manufacturing                  | 326             | 2,284         | 2,319         | 2,278         | 2,297         | 2,219         | 2,233              | 1.7          | 2,317              | 4.4         | 2,279         |
| Non-metallic mineral product manufacturing                  | 327             | 1,153         | 1,105         | 1,090         | 1,111         | 1,094         | 1,090              | 1.1          | 1,138              | -0.2        | 1,125         |
| Primary metal manufacturing                                 | 331             | 5,808         | 5,732         | 5,545         | 5,436         | 4,666         | 4,764              | 3.6          | 5,080              | -1.5        | 4,902         |
| Fabricated metal product manufacturing                      | 332             | 4,367         | 4,333         | 4,295         | 4,281         | 3,390         | 3,466              | 8.3          | 3,982              | 1.3         | 3,676         |
| Machinery manufacturing                                     | 333             | 4,849         | 4,933         | 4,841         | 4,816         | 4,389         | 4,533              | 3.5          | 4,683              | -3.2        | 4,522         |
| Computer and electronic product manufacturing               | 334             | 3,672         | 3,889         | 3,942         | 3,801         | 4,037         | 4,279              | -10.7        | 3,926              | -11.3       | 4,398         |
| Electrical equipment, appliance and component manufacturing | 335             | 1,848         | 1,935         | 1,923         | 1,906         | 1,719         | 1,806              | 0.7          | 1,883              | -2.8        | 1,870         |
| Transportation equipment manufacturing                      | 336             | 9,247         | 9,459         | 9,322         | 9,779         | 8,863         | 9,369              | -3.3         | 9,321              | -17.9       | 9,637         |
| Motor vehicle manufacturing                                 | 3361            | 1,278         | 1,349         | 1,458         | 1,560         | 1,183         | 1,258              | 13.5         | 1,461              | -8.6        | 1,288         |
| Motor vehicle body and trailer manufacturing                | 3362            | 480           | 483           | 483           | 466           | 412           | 456                | -1.1         | 460                | 12.3        | 466           |
| Motor vehicle parts manufacturing                           | 3363            | 1,948         | 2,012         | 1,918         | 1,898         | 1,818         | 1,908              | 3.5          | 1,913              | 13.1        | 1,847         |
| Aerospace product and parts manufacturing                   | 3364            | 4,541         | 4,528         | 4,413         | 4,793         | 4,399         | 4,668              | -8.6         | 4,456              | -30.5       | 4,875         |
| Railroad rolling stock manufacturing                        | 3365            | 734           | 815           | 813           | 819           | 740           | 774                | -11.1        | 779                | -7.5        | 876           |
| Ship and boat building                                      | 3366            | 116           | 115           | 112           | 104           | 127           | 137                | -13.3        | 111                | -1.8        | 129           |
| Furniture and related product manufacturing                 | 337             | 1,262         | 1,308         | 1,288         | 1,277         | 1,179         | 1,195              | -0.3         | 1,235              | 2.7         | 1,238         |
| Miscellaneous manufacturing                                 | 339             | 1,151         | 1,185         | 1,198         | 1,219         | 1,207         | 1,241              | 0.4          | 1,222              | 4.1         | 1,217         |
| <b>Non-durable goods industries<sup>1</sup></b>             |                 | <b>23,748</b> | <b>24,151</b> | <b>24,259</b> | <b>24,145</b> | <b>22,485</b> | <b>22,948</b>      | <b>3.3</b>   | <b>23,843</b>      | <b>2.3</b>  | <b>23,087</b> |
| <b>Durable goods industries<sup>2</sup></b>                 |                 | <b>37,669</b> | <b>37,996</b> | <b>37,607</b> | <b>37,791</b> | <b>34,709</b> | <b>35,698</b>      | <b>-0.7</b>  | <b>36,875</b>      | <b>-7.1</b> | <b>37,118</b> |
| <b>Manufacturing</b>  |                 | <b>61,417</b> | <b>62,147</b> | <b>61,866</b> | <b>61,936</b> | <b>57,195</b> | <b>58,646</b>      | <b>0.9</b>   | <b>60,717</b>      | <b>-3.7</b> | <b>60,205</b> |

1. Non-durable goods industries include the following NAICS: 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, 326

2. Durable goods industries include the following NAICS: 321, 327, 331, 332, 333, 334, 335, 336, 337, 339

Table 5-2

## Inventories by major group and selected industries - Seasonally adjusted

|   | NAICS Code | Change from November | Current periods |               |               |               | Change from previous month |             |             | Trend change from previous month |            |            |            |  |
|---|------------|----------------------|-----------------|---------------|---------------|---------------|----------------------------|-------------|-------------|----------------------------------|------------|------------|------------|--|
|   |            |                      | Dec. 2004       | Nov. 2004     | Oct. 2004     | Sept. 2004    | Dec. 2004                  | Nov. 2004   | Oct. 2004   | Dec. 2004                        | Nov. 2004  | Oct. 2004  | Sept. 2004 |  |
|   |            |                      | \$ millions     |               |               |               | percentage                 |             |             |                                  |            |            |            |  |
| Food manufacturing  | 311        | 5                    | 4,870           | 4,865         | 4,871         | 4,806         | 0.1                        | -0.1        | 1.4         | 0.1                              | 0.1        | 0.2        | 0.3        |  |
| Beverage and tobacco product manufacturing                  | 312        | -12                  | 1,669           | 1,681         | 1,659         | 1,650         | -0.7                       | 1.3         | 0.5         | 0.1                              | 0.2        | 0.3        | 0.4        |  |
| Textile mills   | 313        | 0                    | 459             | 459           | 468           | 483           | -0.1                       | -2.0        | -3.0        | -0.8                             | -0.9       | -0.8       | -0.6       |  |
| Textile product mills                                       | 314        | -9                   | 360             | 369           | 375           | 370           | -2.5                       | -1.5        | 1.3         | -0.5                             | -0.3       | 0.0        | 0.3        |  |
| Clothing manufacturing                                      | 315        | -12                  | 1,217           | 1,229         | 1,228         | 1,240         | -1.0                       | 0.1         | -1.0        | -0.1                             | -0.2       | -0.3       | -0.5       |  |
| Leather and allied product manufacturing                    | 316        | 1                    | 136             | 135           | 134           | 138           | 0.7                        | 1.1         | -2.9        | 0.3                              | 0.5        | 0.7        | 0.9        |  |
| Wood product manufacturing                                  | 321        | 31                   | 4,471           | 4,440         | 4,514         | 4,488         | 0.7                        | -1.6        | 0.6         | 0.0                              | 0.0        | 0.1        | 0.3        |  |
| Paper manufacturing   | 322        | 33                   | 3,622           | 3,589         | 3,655         | 3,714         | 0.9                        | -1.8        | -1.6        | 0.2                              | 0.3        | 0.3        | 0.4        |  |
| Printing and related support activities                     | 323        | 19                   | 893             | 873           | 891           | 909           | 2.2                        | -2.0        | -1.9        | 0.2                              | 0.3        | 0.5        | 0.6        |  |
| Petroleum and coal products manufacturing                   | 324        | -81                  | 2,286           | 2,367         | 2,390         | 2,336         | -3.4                       | -1.0        | 2.3         | -0.5                             | -0.3       | 0.1        | 0.4        |  |
| Chemical manufacturing                                      | 325        | 143                  | 6,585           | 6,441         | 6,412         | 6,274         | 2.2                        | 0.5         | 2.2         | 0.8                              | 1.0        | 1.2        | 1.2        |  |
| Plastics and rubber products manufacturing                  | 326        | 0                    | 2,339           | 2,339         | 2,326         | 2,336         | 0.0                        | 0.6         | -0.4        | 0.0                              | 0.0        | 0.1        | 0.2        |  |
| Non-metallic mineral product manufacturing                  | 327        | 19                   | 1,181           | 1,162         | 1,156         | 1,151         | 1.6                        | 0.5         | 0.5         | 0.6                              | 0.7        | 0.7        | 0.7        |  |
| Primary metal manufacturing                                 | 331        | 77                   | 5,703           | 5,626         | 5,454         | 5,340         | 1.4                        | 3.2         | 2.1         | 1.4                              | 1.8        | 2.3        | 2.6        |  |
| Fabricated metal product manufacturing                      | 332        | 74                   | 4,430           | 4,356         | 4,317         | 4,302         | 1.7                        | 0.9         | 0.3         | 1.0                              | 1.4        | 1.8        | 2.2        |  |
| Machinery manufacturing                                     | 333        | 53                   | 4,958           | 4,906         | 4,799         | 4,806         | 1.1                        | 2.2         | -0.2        | 0.7                              | 0.9        | 1.0        | 1.1        |  |
| Computer and electronic product manufacturing               | 334        | -104                 | 3,732           | 3,836         | 3,887         | 3,892         | -2.7                       | -1.3        | -0.1        | -0.6                             | -0.6       | -0.5       | -0.4       |  |
| Electrical equipment, appliance and component manufacturing | 335        | -37                  | 1,897           | 1,934         | 1,920         | 1,927         | -1.9                       | 0.7         | -0.4        | -0.1                             | -0.1       | 0.0        | 0.2        |  |
| Transportation equipment manufacturing                      | 336        | 66                   | 9,315           | 9,249         | 9,374         | 9,625         | 0.7                        | -1.3        | -2.6        | -0.6                             | -0.6       | -0.5       | -0.2       |  |
| Motor vehicle manufacturing                                 | 3361       | 83                   | 1,422           | 1,339         | 1,480         | 1,551         | 6.2                        | -9.6        | -4.6        | -1.8                             | -1.9       | -1.7       | -1.2       |  |
| Motor vehicle body and trailer manufacturing                | 3362       | 13                   | 499             | 486           | 484           | 473           | 2.8                        | 0.3         | 2.2         | 0.6                              | 0.9        | 1.2        | 1.5        |  |
| Motor vehicle parts manufacturing                           | 3363       | 0                    | 1,963           | 1,963         | 1,951         | 1,932         | 0.0                        | 0.6         | 0.9         | 0.2                              | 0.3        | 0.4        | 0.5        |  |
| Aerospace product and parts manufacturing                   | 3364       | 48                   | 4,439           | 4,391         | 4,409         | 4,610         | 1.1                        | -0.4        | -4.3        | -0.4                             | -0.5       | -0.5       | -0.3       |  |
| Railroad rolling stock manufacturing                        | 3365       | -81                  | 734             | 815           | 813           | 819           | -9.9                       | 0.2         | -0.7        | -2.8                             | -2.6       | -1.8       | -0.5       |  |
| Ship and boat building                                      | 3366       | 2                    | 109             | 106           | 106           | 105           | 2.1                        | 0.1         | 0.8         | -0.1                             | -0.4       | -0.8       | -1.1       |  |
| Furniture and related product manufacturing                 | 337        | -25                  | 1,284           | 1,309         | 1,291         | 1,267         | -1.9                       | 1.4         | 1.9         | 0.4                              | 0.7        | 1.0        | 1.3        |  |
| Miscellaneous manufacturing                                 | 339        | 5                    | 1,186           | 1,181         | 1,214         | 1,214         | 0.4                        | -2.7        | 0.0         | -0.4                             | -0.5       | -0.6       | -0.6       |  |
| <b>Non-durable goods industries<sup>1</sup></b>             |            | <b>87</b>            | <b>24,435</b>   | <b>24,348</b> | <b>24,408</b> | <b>24,255</b> | <b>0.4</b>                 | <b>-0.2</b> | <b>0.6</b>  | <b>0.2</b>                       | <b>0.3</b> | <b>0.5</b> | <b>0.6</b> |  |
| <b>Durable goods industries<sup>2</sup></b>                 |            | <b>159</b>           | <b>38,157</b>   | <b>37,998</b> | <b>37,925</b> | <b>38,014</b> | <b>0.4</b>                 | <b>0.2</b>  | <b>-0.2</b> | <b>0.2</b>                       | <b>0.3</b> | <b>0.5</b> | <b>0.7</b> |  |
| <b>Manufacturing</b>  |            | <b>246</b>           | <b>62,592</b>   | <b>62,346</b> | <b>62,333</b> | <b>62,268</b> | <b>0.4</b>                 | <b>0.0</b>  | <b>0.1</b>  | <b>0.2</b>                       | <b>0.3</b> | <b>0.5</b> | <b>0.7</b> |  |

1. Non-durable goods industries include the following NAICS: 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, 326

2. Durable goods industries include the following NAICS: 321, 327, 331, 332, 333, 334, 335, 336, 337, 339



Table 6-1

## Unfilled orders by selected major group and industries - Unadjusted

|   | NAICS Code | Current periods |               |               |               | Previous year |               | Year to date       |               | Average per month  |               |
|---|------------|-----------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|
|   |            | Dec. 2004       | Nov. 2004     | Oct. 2004     | Sept. 2004    | Dec. 2003     | Nov. 2003     | % Change from 2003 | Average 2004  | % Change from 2002 | 2003          |
| \$millions  |            |                 |               |               |               |               |               |                    |               |                    |               |
| Textile mills   | 313        | 235             | 240           | 246           | 236           | 208           | 206           | -3.7               | 224           | -20.6              | 233           |
| Textile product mills                                       | 314        | 92              | 101           | 108           | 106           | 74            | 83            | 9.8                | 95            | 6.6                | 86            |
| Clothing manufacturing                                      | 315        | 153             | 159           | 173           | 183           | 158           | 165           | -5.4               | 188           | 3.6                | 199           |
| Leather and allied product manufacturing                    | 316        | 15              | 13            | 12            | 17            | 25            | 25            | -25.9              | 21            | -2.2               | 28            |
| Plastics and rubber products manufacturing                  | 326        | 500             | 474           | 478           | 494           | 335           | 373           | 20.4               | 441           | 1.9                | 366           |
| Primary metal manufacturing                                 | 331        | 1,957           | 1,904         | 1,813         | 1,982         | 1,706         | 1,758         | 7.6                | 1,891         | -2.8               | 1,757         |
| Fabricated metal product manufacturing                      | 332        | 4,544           | 4,455         | 4,533         | 4,492         | 3,470         | 3,490         | 18.2               | 4,162         | -1.7               | 3,522         |
| Machinery manufacturing                                     | 333        | 4,925           | 5,049         | 5,058         | 5,099         | 4,363         | 4,155         | 12.1               | 4,909         | -14.5              | 4,380         |
| Computer and electronic product manufacturing               | 334        | 2,846           | 2,985         | 3,117         | 3,123         | 3,178         | 3,267         | -10.5              | 3,116         | -5.5               | 3,483         |
| Electrical equipment, appliance and component manufacturing | 335        | 858             | 910           | 905           | 907           | 808           | 879           | -2.6               | 877           | -3.5               | 901           |
| Transportation equipment manufacturing                      | 336        | 17,248          | 17,213        | 17,530        | 17,652        | 17,922        | 18,118        | -9.4               | 18,184        | -26.7              | 20,074        |
| Motor vehicle manufacturing                                 | 3361       | 822             | 726           | 715           | 782           | 593           | 562           | 37.2               | 777           | -25.1              | 566           |
| Motor vehicle body and trailer manufacturing                | 3362       | 504             | 513           | 472           | 460           | 376           | 398           | 11.3               | 478           | -1.5               | 430           |
| Motor vehicle parts manufacturing                           | 3363       | 1,103           | 1,104         | 1,100         | 1,151         | 1,204         | 1,209         | 7.7                | 1,177         | 25.4               | 1,093         |
| Aerospace product and parts manufacturing                   | 3364       | 11,290          | 11,118        | 11,300        | 11,184        | 11,525        | 11,466        | -12.1              | 11,571        | -34.2              | 13,167        |
| Ship and boat building                                      | 3366       | 44              | 45            | 48            | 45            | 65            | 78            | -43.6              | 47            | 230.1              | 83            |
| Miscellaneous manufacturing                                 | 339        | 232             | 221           | 230           | 190           | 158           | 160           | 19.8               | 193           | -13.4              | 162           |
| <b>Non-durable goods industries<sup>1</sup></b>             |            | <b>2,062</b>    | <b>2,066</b>  | <b>2,154</b>  | <b>2,222</b>  | <b>1,735</b>  | <b>1,872</b>  | <b>1.7</b>         | <b>2,063</b>  | <b>7.1</b>         | <b>2,029</b>  |
| <b>Durable goods industries<sup>2</sup></b>                 |            | <b>34,122</b>   | <b>34,325</b> | <b>34,874</b> | <b>35,187</b> | <b>32,918</b> | <b>33,177</b> | <b>-2.1</b>        | <b>34,881</b> | <b>-18.7</b>       | <b>35,629</b> |
| <b>Manufacturing</b>  |            | <b>36,185</b>   | <b>36,391</b> | <b>37,029</b> | <b>37,408</b> | <b>34,653</b> | <b>35,049</b> | <b>-1.9</b>        | <b>36,944</b> | <b>-17.7</b>       | <b>37,658</b> |

1. Non-durable goods industries include the following NAICS: 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, 326

2. Durable goods industries include the following NAICS: 321, 327, 331, 332, 333, 334, 335, 336, 337, 339

Table 6-2

## Unfilled orders by selected major group and industries - Seasonally adjusted

|   | NAICS Code | Change from November | Current periods |               |               |               | Change from previous month |             |             | Trend change from previous month |             |             |             |  |  |  |
|---|------------|----------------------|-----------------|---------------|---------------|---------------|----------------------------|-------------|-------------|----------------------------------|-------------|-------------|-------------|--|--|--|
|   |            |                      | Dec. 2004       | Nov. 2004     | Oct. 2004     | Sept. 2004    | Dec. 2004                  | Nov. 2004   | Oct. 2004   | Dec. 2004                        | Nov. 2004   | Oct. 2004   | Sept. 2004  |  |  |  |
| \$ millions   |            |                      |                 |               |               |               |                            |             |             |                                  |             |             | percentage  |  |  |  |
| Textile mills   | 313        | -4                   | 240             | 244           | 251           | 237           | -1.7                       | -2.6        | 5.9         | 0.9                              | 1.2         | 1.4         | 1.6         |  |  |  |
| Textile product mills                                       | 314        | -1                   | 104             | 105           | 108           | 108           | -1.2                       | -2.6        | -0.2        | -0.1                             | 0.5         | 1.3         | 2.1         |  |  |  |
| Clothing manufacturing                                      | 315        | -3                   | 181             | 184           | 192           | 196           | -1.4                       | -4.4        | -2.0        | -0.8                             | -0.8        | -0.6        | -0.3        |  |  |  |
| Leather and allied product manufacturing                    | 316        | 2                    | 18              | 16            | 16            | 19            | 12.4                       | -0.9        | -18.5       | -0.4                             | -0.5        | -0.7        | -1.6        |  |  |  |
| Plastics and rubber products manufacturing                  | 326        | 47                   | 523             | 475           | 460           | 472           | 9.9                        | 3.4         | -2.5        | 2.1                              | 2.5         | 2.6         | 2.5         |  |  |  |
| Primary metal manufacturing                                 | 331        | 65                   | 2,023           | 1,958         | 1,923         | 1,999         | 3.3                        | 1.9         | -3.8        | 0.8                              | 0.9         | 1.0         | 1.0         |  |  |  |
| Fabricated metal product manufacturing                      | 332        | 89                   | 4,544           | 4,455         | 4,533         | 4,492         | 2.0                        | -1.7        | 0.9         | 1.0                              | 0.8         | 0.8         | 1.2         |  |  |  |
| Machinery manufacturing                                     | 333        | -124                 | 4,925           | 5,049         | 5,058         | 5,099         | -2.5                       | -0.2        | -0.8        | -0.4                             | -0.2        | 0.0         | 0.4         |  |  |  |
| Computer and electronic product manufacturing               | 334        | -139                 | 2,846           | 2,985         | 3,117         | 3,123         | -4.7                       | -4.3        | -0.2        | -2.1                             | -2.0        | -1.5        | -0.9        |  |  |  |
| Electrical equipment, appliance and component manufacturing | 335        | -51                  | 858             | 910           | 905           | 907           | -5.7                       | 0.6         | -0.3        | -1.3                             | -1.0        | -0.4        | 0.2         |  |  |  |
| Transportation equipment manufacturing                      | 336        | -10                  | 17,324          | 17,334        | 17,556        | 17,471        | -0.1                       | -1.3        | 0.5         | -0.8                             | -1.1        | -1.2        | -1.2        |  |  |  |
| Motor vehicle manufacturing                                 | 3361       | 97                   | 822             | 726           | 715           | 782           | 13.3                       | 1.5         | -8.5        | -0.4                             | -1.3        | -1.8        | -1.6        |  |  |  |
| Motor vehicle body and trailer manufacturing                | 3362       | 1                    | 524             | 523           | 493           | 481           | 0.2                        | 6.1         | 2.4         | 0.8                              | 1.1         | 1.3         | 1.4         |  |  |  |
| Motor vehicle parts manufacturing                           | 3363       | 0                    | 1,085           | 1,085         | 1,096         | 1,138         | 0.0                        | -1.0        | -3.7        | -1.5                             | -2.0        | -2.2        | -2.1        |  |  |  |
| Aerospace product and parts manufacturing                   | 3364       | 111                  | 11,356          | 11,245        | 11,312        | 10,996        | 1.0                        | -0.6        | 2.9         | 0.1                              | -0.1        | -0.4        | -0.6        |  |  |  |
| Ship and boat building                                      | 3366       | 3                    | 52              | 49            | 47            | 43            | 7.1                        | 3.1         | 9.3         | 4.9                              | 5.6         | 6.1         | 6.1         |  |  |  |
| Miscellaneous manufacturing                                 | 339        | 18                   | 242             | 224           | 209           | 183           | 8.0                        | 7.1         | 14.5        | 3.0                              | 3.6         | 3.8         | 3.7         |  |  |  |
| <b>Non-durable goods industries<sup>1</sup></b>             |            | <b>30</b>            | <b>2,134</b>    | <b>2,103</b>  | <b>2,163</b>  | <b>2,217</b>  | <b>1.4</b>                 | <b>-2.8</b> | <b>-2.4</b> | <b>-0.5</b>                      | <b>-0.3</b> | <b>0.3</b>  | <b>1.2</b>  |  |  |  |
| <b>Durable goods industries<sup>2</sup></b>                 |            | <b>-179</b>          | <b>34,403</b>   | <b>34,582</b> | <b>34,957</b> | <b>34,927</b> | <b>-0.5</b>                | <b>-1.1</b> | <b>0.1</b>  | <b>-0.5</b>                      | <b>-0.6</b> | <b>-0.5</b> | <b>-0.4</b> |  |  |  |
| <b>Manufacturing</b>  |            | <b>-148</b>          | <b>36,537</b>   | <b>36,685</b> | <b>37,121</b> | <b>37,144</b> | <b>-0.4</b>                | <b>-1.2</b> | <b>-0.1</b> | <b>-0.5</b>                      | <b>-0.6</b> | <b>-0.5</b> | <b>-0.3</b> |  |  |  |

1. Non-durable goods industries include the following NAICS: 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, 326

2. Durable goods industries include the following NAICS: 321, 327, 331, 332, 333, 334, 335, 336, 337, 339

Table 7-1

## New orders by selected major group and industries - Unadjusted

|   | NAICS Code | Current periods |               |               |               | Previous year |               | Year to date       |                | Annual             |                |
|---|------------|-----------------|---------------|---------------|---------------|---------------|---------------|--------------------|----------------|--------------------|----------------|
|   |            | Dec. 2004       | Nov. 2004     | Oct. 2004     | Sept. 2004    | Dec. 2003     | Nov. 2003     | % Change from 2003 | 2004           | % Change from 2002 | 2003           |
| \$millions  |            |                 |               |               |               |               |               |                    |                |                    |                |
| Textile mills   | 313        | 228             | 264           | 288           | 302           | 251           | 276           | -1.6               | 3,301          | -13.6              | 3,356          |
| Textile product mills                                       | 314        | 173             | 202           | 216           | 203           | 153           | 180           | 1.5                | 2,325          | -11.2              | 2,290          |
| Clothing manufacturing                                      | 315        | 411             | 570           | 563           | 566           | 469           | 602           | -8.5               | 6,467          | -6.4               | 7,066          |
| Leather and allied product manufacturing                    | 316        | 46              | 60            | 69            | 74            | 54            | 65            | -16.9              | 621            | -12.6              | 747            |
| Plastics and rubber products manufacturing                  | 326        | 1,875           | 2,228         | 2,285         | 2,321         | 1,721         | 2,043         | 5.6                | 26,052         | 0.1                | 24,666         |
| Primary metal manufacturing                                 | 331        | 3,781           | 4,029         | 3,754         | 3,972         | 3,131         | 3,074         | 19.6               | 44,883         | 0.8                | 37,522         |
| Fabricated metal product manufacturing                      | 332        | 2,742           | 3,181         | 3,304         | 3,456         | 2,322         | 2,572         | 15.0               | 35,750         | 0.7                | 31,096         |
| Machinery manufacturing                                     | 333        | 2,186           | 2,447         | 2,327         | 2,431         | 2,375         | 1,983         | 10.6               | 28,040         | -0.7               | 25,351         |
| Computer and electronic product manufacturing               | 334        | 1,781           | 1,583         | 1,526         | 1,752         | 1,821         | 1,595         | 8.6                | 19,732         | -17.1              | 18,169         |
| Electrical equipment, appliance and component manufacturing | 335        | 737             | 889           | 863           | 917           | 720           | 874           | 6.0                | 10,423         | -6.8               | 9,835          |
| Transportation equipment manufacturing                      | 336        | 9,123           | 10,326        | 10,575        | 10,760        | 8,732         | 9,302         | 10.6               | 126,279        | -6.3               | 114,188        |
| Motor vehicle manufacturing                                 | 3361       | 5,231           | 6,250         | 5,856         | 6,482         | 4,849         | 5,475         | 5.0                | 72,620         | -6.5               | 69,172         |
| Motor vehicle body and trailer manufacturing                | 3362       | 296             | 392           | 356           | 336           | 264           | 277           | 9.6                | 3,986          | -2.2               | 3,637          |
| Motor vehicle parts manufacturing                           | 3363       | 2,275           | 2,715         | 2,814         | 2,950         | 2,316         | 2,702         | 4.5                | 32,968         | -1.0               | 31,557         |
| Aerospace product and parts manufacturing                   | 3364       | 1,138           | 796           | 1,202         | 840           | 1,144         | 451           | 116.0              | 12,262         | -17.0              | 5,676          |
| Ship and boat building                                      | 3366       | 80              | 90            | 94            | 109           | 82            | 82            | 5.8                | 1,200          | -3.2               | 1,134          |
| Miscellaneous manufacturing                                 | 339        | 594             | 645           | 650           | 649           | 648           | 629           | 2.6                | 7,696          | 4.1                | 7,498          |
| <b>Non-durable goods industries<sup>1</sup></b>             |            | <b>20,781</b>   | <b>21,946</b> | <b>22,256</b> | <b>22,353</b> | <b>18,813</b> | <b>19,277</b> | <b>7.8</b>         | <b>255,479</b> | <b>1.4</b>         | <b>236,934</b> |
| <b>Durable goods industries<sup>2</sup></b>                 |            | <b>25,436</b>   | <b>28,465</b> | <b>28,685</b> | <b>29,968</b> | <b>23,782</b> | <b>24,750</b> | <b>12.2</b>        | <b>337,783</b> | <b>-3.8</b>        | <b>301,074</b> |
| <b>Manufacturing</b>  |            | <b>46,218</b>   | <b>50,411</b> | <b>50,941</b> | <b>52,321</b> | <b>42,595</b> | <b>44,027</b> | <b>10.3</b>        | <b>593,262</b> | <b>-1.6</b>        | <b>538,008</b> |

1. Non-durable goods industries include the following NAICS: 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, 326

2. Durable goods industries include the following NAICS: 321, 327, 331, 332, 333, 334, 335, 336, 337, 339

Table 7-2

## New orders by selected major group and industries - Seasonally adjusted

|   | NAICS Code | Change from November | Current periods |               |               |               | Change from previous month |             |             | Trend change from previous month |             |             |             |  |  |  |
|---|------------|----------------------|-----------------|---------------|---------------|---------------|----------------------------|-------------|-------------|----------------------------------|-------------|-------------|-------------|--|--|--|
|   |            |                      | Dec. 2004       | Nov. 2004     | Oct. 2004     | Sept. 2004    | Dec. 2004                  | Nov. 2004   | Oct. 2004   | Dec. 2004                        | Nov. 2004   | Oct. 2004   | Sept. 2004  |  |  |  |
| \$ millions   |            |                      |                 |               |               |               |                            |             |             |                                  |             |             | percentage  |  |  |  |
| Textile mills   | 313        | -1                   | 259             | 260           | 284           | 277           | -0.3                       | -8.5        | 2.5         | -0.6                             | -0.6        | -0.5        | -0.5        |  |  |  |
| Textile product mills                                       | 314        | 3                    | 202             | 199           | 201           | 202           | 1.5                        | -1.1        | -0.6        | 0.2                              | 0.4         | 0.8         | 1.1         |  |  |  |
| Clothing manufacturing                                      | 315        | -9                   | 513             | 522           | 498           | 525           | -1.8                       | 4.9         | -5.2        | -0.2                             | -0.4        | -0.7        | -1.0        |  |  |  |
| Leather and allied product manufacturing                    | 316        | 5                    | 56              | 51            | 50            | 51            | 9.6                        | 1.4         | -0.8        | 0.3                              | 0.9         | 1.4         | 1.4         |  |  |  |
| Plastics and rubber products manufacturing                  | 326        | 35                   | 2,256           | 2,220         | 2,174         | 2,232         | 1.6                        | 2.2         | -2.6        | 0.1                              | 0.2         | 0.4         | 0.5         |  |  |  |
| Primary metal manufacturing                                 | 331        | 32                   | 3,960           | 3,928         | 3,802         | 3,900         | 0.8                        | 3.3         | -2.5        | 0.1                              | 0.4         | 0.6         | 0.8         |  |  |  |
| Fabricated metal product manufacturing                      | 332        | 165                  | 3,165           | 3,000         | 3,105         | 3,176         | 5.5                        | -3.4        | -2.2        | 0.9                              | 0.7         | 0.5         | 0.5         |  |  |  |
| Machinery manufacturing                                     | 333        | -179                 | 2,185           | 2,364         | 2,287         | 2,299         | -7.6                       | 3.4         | -0.5        | -0.9                             | -0.9        | -0.9        | -0.7        |  |  |  |
| Computer and electronic product manufacturing               | 334        | 36                   | 1,563           | 1,527         | 1,582         | 1,572         | 2.4                        | -3.5        | 0.7         | 0.4                              | -0.5        | -1.2        | -1.5        |  |  |  |
| Electrical equipment, appliance and component manufacturing | 335        | -47                  | 807             | 854           | 856           | 864           | -5.5                       | -0.2        | -0.9        | -0.4                             | -0.9        | -1.0        | -0.8        |  |  |  |
| Transportation equipment manufacturing                      | 336        | 384                  | 10,411          | 10,027        | 10,652        | 10,345        | 3.8                        | -5.9        | 3.0         | -0.3                             | -0.6        | -0.8        | -0.7        |  |  |  |
| Motor vehicle manufacturing                                 | 3361       | 222                  | 6,150           | 5,928         | 5,895         | 6,259         | 3.7                        | 0.6         | -5.8        | -0.7                             | -0.7        | -0.6        | -0.4        |  |  |  |
| Motor vehicle body and trailer manufacturing                | 3362       | -43                  | 334             | 377           | 346           | 331           | -11.3                      | 9.0         | 4.4         | -0.5                             | -0.1        | 0.4         | 0.9         |  |  |  |
| Motor vehicle parts manufacturing                           | 3363       | 7                    | 2,682           | 2,675         | 2,702         | 2,800         | 0.3                        | -1.0        | -3.5        | -0.5                             | -0.7        | -0.8        | -0.7        |  |  |  |
| Aerospace product and parts manufacturing                   | 3364       | 139                  | 1,038           | 899           | 1,325         | 813           | 15.5                       | -32.2       | 63.0        | 0.6                              | 0.1         | -0.4        | -0.7        |  |  |  |
| Ship and boat building                                      | 3366       | 2                    | 105             | 103           | 106           | 127           | 1.6                        | -2.7        | -16.5       | -1.5                             | -1.4        | -0.6        | 1.1         |  |  |  |
| Miscellaneous manufacturing                                 | 339        | -4                   | 631             | 635           | 598           | 616           | -0.6                       | 6.1         | -2.9        | -0.7                             | -1.0        | -1.2        | -1.3        |  |  |  |
| <b>Non-durable goods industries<sup>1</sup></b>             |            | <b>-136</b>          | <b>21,752</b>   | <b>21,888</b> | <b>21,671</b> | <b>21,792</b> | <b>-0.6</b>                | <b>1.0</b>  | <b>-0.6</b> | <b>-0.1</b>                      | <b>-0.1</b> | <b>0.1</b>  | <b>0.3</b>  |  |  |  |
| <b>Durable goods industries<sup>2</sup></b>                 |            | <b>318</b>           | <b>28,164</b>   | <b>27,845</b> | <b>28,370</b> | <b>28,312</b> | <b>1.1</b>                 | <b>-1.8</b> | <b>0.2</b>  | <b>-0.2</b>                      | <b>-0.3</b> | <b>-0.4</b> | <b>-0.4</b> |  |  |  |
| <b>Manufacturing</b>  |            | <b>182</b>           | <b>49,915</b>   | <b>49,733</b> | <b>50,041</b> | <b>50,104</b> | <b>0.4</b>                 | <b>-0.6</b> | <b>-0.1</b> | <b>-0.2</b>                      | <b>-0.2</b> | <b>-0.2</b> | <b>-0.1</b> |  |  |  |

1. Non-durable goods industries include the following NAICS: 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, 326

2. Durable goods industries include the following NAICS: 321, 327, 331, 332, 333, 334, 335, 336, 337, 339

Table 8-1

## Shipments for selected industries - Unadjusted

|  | NAICS Code | Current periods |           |           |            | Previous year |           | Year to date       |        | Annual             |        |
|--|------------|-----------------|-----------|-----------|------------|---------------|-----------|--------------------|--------|--------------------|--------|
|  |            | Dec. 2004       | Nov. 2004 | Oct. 2004 | Sept. 2004 | Dec. 2003     | Nov. 2003 | % Change from 2003 | 2004   | % Change from 2002 | 2003   |
| \$ millions  |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>311 Food manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
| Animal food manufacturing  | 3111       | 391             | 401       | 414       | 427        | 438           | 430       | 0.2                | 5,109  | -1.9               | 5,099  |
| Starch and vegetable fat and oil manufacturing   | 31122      | 239             | 257       | 268       | 268        | 278           | 276       | 11.7               | 3,481  | 11.4               | 3,117  |
| Sugar and confectionery product manufacturing  | 3113       | 315             | 324       | 383       | 360        | 320           | 339       | 1.9                | 3,834  | 10.0               | 3,764  |
| Fruit and vegetable preserving and specialty food manufacturing                          | 3114       | 600             | 577       | 572       | 602        | 525           | 518       | 9.2                | 6,522  | -0.9               | 5,974  |
| Dairy product manufacturing  | 3115       | 981             | 982       | 986       | 952        | 938           | 932       | 4.9                | 11,493 | 9.8                | 10,958 |
| Meat product manufacturing   | 3116       | 1,730           | 1,763     | 1,702     | 1,788      | 1,473         | 1,503     | 19.0               | 20,260 | -3.9               | 17,027 |
| Cookie, cracker and pasta manufacturing  | 31182      | 131             | 148       | 149       | 153        | 130           | 139       | 3.7                | 1,636  | -2.1               | 1,577  |
| Other food manufacturing   | 3119       | 426             | 415       | 425       | 405        | 438           | 433       | -1.0               | 4,887  | 4.1                | 4,936  |
| <b>312 Beverage and tobacco product manufacturing</b>                                    |            |                 |           |           |            |               |           |                    |        |                    |        |
| Soft drink and ice manufacturing   | 31211      | 269             | 234       | 236       | 258        | 295           | 234       | -3.9               | 3,205  | 12.7               | 3,336  |
| Breweries  | 31212      | 416             | 334       | 329       | 359        | 391           | 300       | 13.0               | 4,360  | 1.0                | 3,858  |
| Wineries   | 31213      | 90              | 72        | 58        | 80         | 62            | 70        | 11.9               | 790    | -2.6               | 706    |
| Distilleries   | 31214      | 73              | 61        | 62        | 47         | 58            | 77        | -24.3              | 629    | -18.0              | 831    |
| Tobacco manufacturing  | 3122       | 237             | 199       | 252       | 235        | 259           | 294       | -12.0              | 2,906  | 5.1                | 3,301  |
| <b>313 Textile mills</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
| Fibre, yarn and thread mills   | 3131       | 43              | 50        | 51        | 53         | 40            | 43        | 7.2                | 587    | -12.6              | 547    |
| Fabric mills   | 3132       | 143             | 167       | 173       | 178        | 158           | 178       | -6.6               | 2,036  | -10.6              | 2,180  |
| Textile and fabric finishing and fabric coating  | 3133       | 47              | 55        | 54        | 57         | 50            | 60        | -6.2               | 651    | -10.8              | 694    |
| <b>314 Textile product mills</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
| Carpet and rug mills   | 31411      | 77              | 83        | 82        | 73         | 59            | 65        | 4.5                | 861    | -8.6               | 824    |
| Textile bag and canvas mills   | 31491      | 18              | 20        | 22        | 20         | 15            | 19        | -5.5               | 252    | -30.9              | 267    |
| <b>315 Clothing manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
| Hosiery and sock mills   | 31511      | 31              | 49        | 41        | 38         | 40            | 52        | -15.2              | 433    | -5.1               | 511    |
| Other clothing knitting mills  | 31519      | 40              | 55        | 54        | 48         | 47            | 64        | -5.8               | 553    | -0.4               | 587    |
| Men's and boys' cut and sew clothing manufacturing                                       | 31522      | 132             | 174       | 160       | 170        | 154           | 199       | -12.8              | 1,813  | -4.6               | 2,078  |
| Women's and girls' cut and sew clothing manufacturing                                    | 31523      | 123             | 190       | 202       | 216        | 138           | 181       | -7.4               | 2,289  | -3.5               | 2,471  |
| Clothing accessories and other clothing manufacturing                                    | 3159       | 25              | 33        | 30        | 26         | 21            | 24        | 4.0                | 301    | -4.1               | 289    |
| <b>316 Leather and allied product manufacturing</b>                                      |            |                 |           |           |            |               |           |                    |        |                    |        |
| Footwear manufacturing   | 3162       | 29              | 41        | 56        | 63         | 25            | 35        | -2.0               | 393    | -17.7              | 401    |
| <b>321 Wood product manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
| Sawmills and wood preservation   | 3211       | 1,311           | 1,450     | 1,590     | 1,760      | 1,001         | 1,141     | 24.6               | 18,644 | -16.1              | 14,961 |
| Veneer, plywood and engineered wood product manufacturing                                | 3212       | 637             | 674       | 760       | 872        | 617           | 796       | 22.8               | 9,733  | 19.5               | 7,928  |
| Other wood product manufacturing   | 3219       | 627             | 781       | 803       | 844        | 581           | 705       | 8.2                | 9,041  | 6.2                | 8,359  |
| <b>322 Paper manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
| Pulp, paper and paperboard mills   | 3221       | 1,879           | 1,893     | 1,926     | 1,917      | 1,757         | 1,777     | 2.2                | 22,981 | -6.6               | 22,490 |
| Paperboard container manufacturing   | 32221      | 390             | 456       | 444       | 450        | 397           | 445       | -6.4               | 5,184  | 6.6                | 5,538  |
| Paper bag and coated and treated paper manufacturing                                     | 32222      | 209             | 230       | 230       | 249        | 210           | 232       | -8.0               | 2,790  | 0.8                | 3,033  |
| Other converted paper product manufacturing  | 32229      | 136             | 140       | 143       | 148        | 127           | 130       | 1.7                | 1,651  | -2.7               | 1,624  |
| <b>323 Printing and related support activities</b>                                       |            |                 |           |           |            |               |           |                    |        |                    |        |
| Printing   | 32311      | 871             | 996       | 966       | 987        | 888           | 967       | 2.0                | 10,948 | -1.5               | 10,730 |
| Support activities for printing  | 32312      | 60              | 71        | 76        | 71         | 63            | 72        | -4.6               | 820    | 10.5               | 860    |
| <b>324 Petroleum and coal products manufacturing</b>                                     |            |                 |           |           |            |               |           |                    |        |                    |        |
| Petroleum refineries   | 32411      | 3,723           | 3,982     | 4,044     | 3,825      | 2,824         | 2,710     | 22.7               | 42,606 | 10.6               | 34,729 |
| <b>325 Chemical manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
| Other basic inorganic chemical manufacturing   | 32518      | 255             | 275       | 265       | 284        | 256           | 252       | 8.4                | 3,278  | 12.8               | 3,023  |
| Other basic organic chemical manufacturing   | 32519      | 313             | 312       | 318       | 317        | 294           | 281       | 13.0               | 3,869  | -6.6               | 3,423  |
| Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing | 3252       | 712             | 791       | 772       | 782        | 608           | 577       | 17.2               | 8,746  | 0.6                | 7,461  |
| Pesticide and other agricultural chemical manufacturing                                  | 32532      | 18              | 14        | 7         | 9          | 9             | 6         | 23.5               | 548    | 21.2               | 444    |
| Pharmaceutical and medicine manufacturing  | 3254       | 823             | 815       | 740       | 796        | 775           | 704       | 7.4                | 9,135  | 4.9                | 8,506  |
| Paint and coating manufacturing  | 32551      | 137             | 169       | 172       | 188        | 133           | 156       | 5.3                | 2,135  | 3.5                | 2,028  |
| Adhesive manufacturing   | 32552      | 53              | 69        | 73        | 72         | 51            | 57        | 7.0                | 826    | 8.4                | 772    |
| Soap and cleaning compound manufacturing   | 32561      | 118             | 121       | 127       | 138        | 121           | 118       | -6.9               | 1,572  | -16.2              | 1,689  |
| Toilet preparation manufacturing   | 32562      | 120             | 117       | 126       | 134        | 108           | 101       | 9.7                | 1,414  | 2.3                | 1,289  |
| Printing ink manufacturing   | 32591      | 37              | 41        | 42        | 36         | 36            | 41        | 0.4                | 469    | 1.6                | 467    |
| All other chemical product manufacturing   | 32599      | 365             | 403       | 402       | 398        | 321           | 327       | 10.8               | 4,420  | 2.8                | 3,989  |
| <b>326 Plastics and rubber products manufacturing</b>                                    |            |                 |           |           |            |               |           |                    |        |                    |        |

Table 8-1 – continued

## Shipments for selected industries - Unadjusted

|  | NAICS Code | Current periods |           |           |            | Previous year |           | Year to date       |        | Annual             |        |
|--|------------|-----------------|-----------|-----------|------------|---------------|-----------|--------------------|--------|--------------------|--------|
|  |            | Dec. 2004       | Nov. 2004 | Oct. 2004 | Sept. 2004 | Dec. 2003     | Nov. 2003 | % Change from 2003 | 2004   | % Change from 2002 | 2003   |
| <b>Plastics pipe, pipe fitting, and unlaminated profile shape manufacturing</b>                    |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 32612      | 121             | 172       | 179       | 193        | 106           | 138       | 10.6               | 2,030  | 2.5                | 1,836  |
| <b>Polystyrene foam product manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 32614      | 48              | 64        | 64        | 64         | 41            | 49        | 15.0               | 645    | 7.3                | 561    |
| <b>Other plastic product manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 32619      | 878             | 1,051     | 1,119     | 1,103      | 834           | 1,003     | 4.5                | 12,411 | 2.5                | 11,881 |
| <b>Other rubber product manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 32629      | 121             | 142       | 150       | 147        | 130           | 140       | -1.3               | 1,728  | -11.6              | 1,750  |
| <b>327 Non-metallic mineral product manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>Clay product and refractory manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3271       | 40              | 58        | 62        | 61         | 48            | 60        | -3.1               | 700    | 5.4                | 722    |
| <b>Glass and glass product manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3272       | 127             | 172       | 172       | 182        | 128           | 173       | -2.3               | 2,037  | 0.0                | 2,084  |
| <b>Cement manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 32731      | 92              | 152       | 171       | 176        | 84            | 125       | 8.2                | 1,600  | 1.2                | 1,479  |
| <b>Ready-mix concrete manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 32732      | 191             | 320       | 352       | 355        | 162           | 239       | 13.2               | 3,124  | 5.1                | 2,761  |
| <b>Other concrete product manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 32739      | 84              | 123       | 135       | 147        | 89            | 119       | 9.3                | 1,249  | 9.6                | 1,143  |
| <b>Abrasive product manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 32791      | 20              | 25        | 26        | 22         | 19            | 20        | 3.9                | 305    | -13.5              | 294    |
| <b>All other non-metallic mineral product manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 32799      | 138             | 170       | 175       | 172        | 136           | 146       | 8.1                | 1,820  | 12.3               | 1,683  |
| <b>331 Primary metal manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>Iron and steel mills and ferro-alloy manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3311       | 1,072           | 1,152     | 1,205     | 1,172      | 753           | 817       | 28.1               | 12,652 | -1.3               | 9,877  |
| <b>Iron and steel pipes and tubes manufacturing from purchased steel</b>                           |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33121      | 341             | 339       | 357       | 339        | 243           | 260       | 27.7               | 3,712  | 6.2                | 2,908  |
| <b>Foundries</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3315       | 207             | 250       | 268       | 262        | 226           | 246       | -4.9               | 3,066  | 1.4                | 3,223  |
| <b>332 Fabricated metal product manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>Cutlery and hand tool manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3322       | 55              | 66        | 65        | 59         | 48            | 52        | 17.9               | 688    | 4.4                | 583    |
| <b>Plate work and fabricated structural product manufacturing</b>                                  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33231      | 483             | 592       | 590       | 635        | 404           | 436       | 19.4               | 5,884  | 4.6                | 4,928  |
| <b>Power boiler and heat exchanger manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33241      | 109             | 117       | 95        | 97         | 81            | 116       | -1.8               | 1,252  | 31.9               | 1,275  |
| <b>Spring and wire product manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3326       | 106             | 137       | 133       | 139        | 104           | 118       | -3.0               | 1,527  | -12.0              | 1,575  |
| <b>Coating, engraving, heat treating and allied activities</b>                                     |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3328       | 255             | 315       | 326       | 318        | 224           | 250       | 13.6               | 3,457  | -0.6               | 3,043  |
| <b>Other fabricated metal product manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3329       | 273             | 356       | 345       | 351        | 243           | 277       | 7.6                | 3,751  | -6.5               | 3,486  |
| <b>333 Machinery manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>Agricultural implement manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33311      | 141             | 154       | 175       | 161        | 159           | 141       | 6.9                | 2,091  | -12.0              | 1,956  |
| <b>Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing</b> |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3334       | 195             | 261       | 252       | 262        | 192           | 227       | 5.3                | 2,597  | -7.2               | 2,465  |
| <b>All other general-purpose machinery manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33399      | 196             | 230       | 208       | 219        | 181           | 195       | 6.8                | 2,496  | -1.9               | 2,336  |
| <b>334 Computer and electronic product manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>Computer and peripheral equipment manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3341       | 236             | 200       | 167       | 228        | 303           | 253       | -16.7              | 2,537  | -22.7              | 3,046  |
| <b>Communications equipment manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3342       | 821             | 612       | 547       | 740        | 741           | 545       | 19.4               | 7,379  | -20.2              | 6,180  |
| <b>Audio and video equipment manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3343       | 20              | 15        | 11        | 14         | 20            | 20        | -14.9              | 180    | -12.2              | 211    |
| <b>335 Electrical equipment, appliance and component manufacturing</b>                             |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>Lighting fixture manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33512      | 68              | 79        | 77        | 82         | 70            | 83        | -1.2               | 956    | -9.3               | 968    |
| <b>Small electrical appliance manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33521      | 18              | 26        | 23        | 28         | 21            | 27        | 2.6                | 270    | -1.7               | 263    |
| <b>Major appliance manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33522      | 120             | 146       | 140       | 142        | 119           | 149       | 1.8                | 1,785  | -3.4               | 1,754  |
| <b>Battery manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33591      | 19              | 24        | 23        | 21         | 17            | 21        | 18.2               | 257    | 19.0               | 217    |
| <b>Communication and energy wire and cable manufacturing</b>                                       |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33592      | 173             | 194       | 198       | 210        | 170           | 195       | 7.2                | 2,327  | -14.5              | 2,170  |
| <b>All other electrical equipment and component manufacturing</b>                                  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 33599      | 35              | 36        | 38        | 42         | 39            | 37        | 9.0                | 468    | -0.1               | 429    |
| <b>336 Transportation equipment manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>Motor vehicle manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3361       | 5,134           | 6,240     | 5,923     | 6,533      | 4,818         | 5,477     | 4.5                | 72,391 | -6.4               | 69,258 |
| <b>Motor vehicle parts manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3363       | 2,277           | 2,711     | 2,865     | 2,998      | 2,321         | 2,639     | 5.2                | 33,070 | -0.1               | 31,433 |
| <b>Aerospace product and parts manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3364       | 966             | 978       | 1,085     | 827        | 1,085         | 848       | 7.9                | 12,496 | 1.5                | 11,586 |
| <b>Railroad rolling stock manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3365       | 211             | 191       | 243       | 218        | 201           | 212       | -1.4               | 2,337  | -7.7               | 2,370  |
| <b>Ship and boat building</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3366       | 81              | 93        | 91        | 98         | 95            | 82        | 10.9               | 1,220  | -5.4               | 1,100  |
| <b>337 Furniture and related product manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>Household and institutional furniture and kitchen cabinet manufacturing</b>                     |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3371       | 690             | 790       | 752       | 731        | 625           | 645       | 6.6                | 8,261  | -1.3               | 7,751  |
| <b>Office furniture (including fixtures) manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3372       | 402             | 470       | 457       | 446        | 386           | 424       | 1.3                | 5,174  | 5.3                | 5,107  |
| <b>339 Miscellaneous manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
| <b>Medical equipment and supplies manufacturing</b>  |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3391       | 201             | 211       | 196       | 218        | 220           | 216       | 11.0               | 2,540  | 10.7               | 2,287  |
| <b>Other miscellaneous manufacturing</b>   |            |                 |           |           |            |               |           |                    |        |                    |        |
|  | 3399       | 383             | 443       | 413       | 439        | 430           | 438       | -2.4               | 5,082  | 0.6                | 5,208  |

Table 8-2

## Inventory owned for selected industries - Unadjusted

|  | NAICS Code | Current periods |           |           |            | Previous year |           | Year to date       |              | Average per month  |       |
|--|------------|-----------------|-----------|-----------|------------|---------------|-----------|--------------------|--------------|--------------------|-------|
|  |            | Dec. 2004       | Nov. 2004 | Oct. 2004 | Sept. 2004 | Dec. 2003     | Nov. 2003 | % Change from 2003 | Average 2004 | % Change from 2002 | 2003  |
| \$ millions  |            |                 |           |           |            |               |           |                    |              |                    |       |
| <b>311 Food manufacturing</b>  |            |                 |           |           |            |               |           |                    |              |                    |       |
| Animal food manufacturing  | 3111       | 286             | 294       | 292       | 306        | 276           | 290       | 6.6                | 300          | 4.2                | 281   |
| Starch and vegetable fat and oil manufacturing   | 31122      | 148             | 146       | 148       | 124        | 213           | 185       | 2.5                | 185          | 4.6                | 180   |
| Sugar and confectionery product manufacturing  | 3113       | 379             | 365       | 360       | 344        | 308           | 329       | 5.4                | 327          | 5.0                | 310   |
| Fruit and vegetable preserving and specialty food manufacturing                          | 3114       | 995             | 1,072     | 1,071     | 1,010      | 910           | 954       | 7.9                | 920          | 5.3                | 853   |
| Dairy product manufacturing  | 3115       | 817             | 873       | 870       | 844        | 807           | 805       | 6.0                | 862          | -3.6               | 813   |
| Meat product manufacturing   | 3116       | 849             | 932       | 905       | 869        | 706           | 795       | 5.3                | 839          | -5.5               | 797   |
| Cookie, cracker and pasta manufacturing  | 31182      | 116             | 125       | 123       | 121        | 123           | 124       | -4.9               | 122          | 7.1                | 128   |
| Other food manufacturing   | 3119       | 486             | 500       | 506       | 522        | 470           | 487       | 8.3                | 492          | 2.9                | 455   |
| <b>312 Beverage and tobacco product manufacturing</b>                                    |            |                 |           |           |            |               |           |                    |              |                    |       |
| Soft drink and ice manufacturing   | 31211      | 206             | 246       | 240       | 245        | 205           | 244       | -1.1               | 248          | 7.8                | 250   |
| Breweries  | 31212      | 171             | 204       | 201       | 196        | 182           | 192       | 5.8                | 196          | 0.8                | 185   |
| Wineries   | 31213      | 262             | 267       | 276       | 263        | 247           | 255       | 3.6                | 261          | 4.8                | 251   |
| Distilleries   | 31214      | 491             | 515       | 508       | 485        | 471           | 483       | -6.7               | 493          | 3.3                | 528   |
| Tobacco manufacturing  | 3122       | 451             | 461       | 409       | 404        | 439           | 463       | 3.4                | 449          | -1.1               | 434   |
| <b>313 Textile mills</b>   |            |                 |           |           |            |               |           |                    |              |                    |       |
| Fibre, yarn and thread mills   | 3131       | 59              | 57        | 61        | 64         | 68            | 68        | -8.0               | 63           | 0.3                | 69    |
| Fabric mills   | 3132       | 320             | 327       | 332       | 339        | 338           | 349       | -11.7              | 333          | -12.3              | 378   |
| Textile and fabric finishing and fabric coating  | 3133       | 74              | 74        | 74        | 79         | 68            | 69        | 5.6                | 77           | 11.7               | 73    |
| <b>314 Textile product mills</b>   |            |                 |           |           |            |               |           |                    |              |                    |       |
| Carpet and rug mills   | 31411      | 100             | 100       | 101       | 96         | 86            | 94        | -7.7               | 94           | 2.2                | 101   |
| Textile bag and canvas mills   | 31491      | 38              | 38        | 40        | 43         | 38            | 39        | -6.0               | 40           | -32.1              | 42    |
| <b>315 Clothing manufacturing</b>  |            |                 |           |           |            |               |           |                    |              |                    |       |
| Hosiery and sock mills   | 31511      | 102             | 104       | 109       | 111        | 136           | 134       | -17.0              | 118          | 6.8                | 142   |
| Other clothing knitting mills  | 31519      | 145             | 149       | 157       | 165        | 139           | 147       | -2.2               | 160          | 6.1                | 164   |
| Men's and boys' cut and sew clothing manufacturing                                       | 31522      | 353             | 359       | 372       | 409        | 456           | 461       | -19.9              | 406          | 6.1                | 507   |
| Women's and girls' cut and sew clothing manufacturing                                    | 31523      | 378             | 377       | 378       | 384        | 399           | 401       | -8.1               | 382          | 1.0                | 416   |
| Clothing accessories and other clothing manufacturing                                    | 3159       | 56              | 55        | 58        | 61         | 61            | 61        | -3.5               | 59           | 8.0                | 62    |
| <b>316 Leather and allied product manufacturing</b>                                      |            |                 |           |           |            |               |           |                    |              |                    |       |
| Footwear manufacturing   | 3162       | 81              | 82        | 85        | 96         | 71            | 74        | -4.4               | 88           | -7.3               | 92    |
| <b>321 Wood product manufacturing</b>  |            |                 |           |           |            |               |           |                    |              |                    |       |
| Sawmills and wood preservation   | 3211       | 2,420           | 2,246     | 2,318     | 2,315      | 2,490         | 2,284     | -7.4               | 2,564        | -5.3               | 2,769 |
| Veneer, plywood and engineered wood product manufacturing                                | 3212       | 838             | 788       | 790       | 798        | 725           | 694       | 6.6                | 811          | 5.4                | 761   |
| Other wood product manufacturing   | 3219       | 1,055           | 1,084     | 1,054     | 1,052      | 950           | 977       | 2.7                | 1,030        | 8.0                | 1,003 |
| <b>322 Paper manufacturing</b>   |            |                 |           |           |            |               |           |                    |              |                    |       |
| Pulp, paper and paperboard mills   | 3221       | 2,526           | 2,516     | 2,563     | 2,570      | 2,448         | 2,482     | 0.3                | 2,517        | -3.1               | 2,508 |
| Paperboard container manufacturing   | 32221      | 446             | 463       | 480       | 512        | 455           | 479       | 0.4                | 481          | 2.8                | 479   |
| Paper bag and coated and treated paper manufacturing                                     | 32222      | 372             | 387       | 375       | 377        | 383           | 378       | -4.4               | 374          | 4.9                | 391   |
| Other converted paper product manufacturing  | 32229      | 158             | 147       | 145       | 145        | 137           | 144       | -0.3               | 146          | 0.9                | 146   |
| <b>323 Printing and related support activities</b>                                       |            |                 |           |           |            |               |           |                    |              |                    |       |
| Printing   | 32311      | 832             | 848       | 871       | 882        | 813           | 829       | 1.1                | 841          | -0.5               | 832   |
| Support activities for printing  | 32312      | 35              | 37        | 37        | 35         | 35            | 35        | -9.1               | 34           | -32.0              | 37    |
| <b>324 Petroleum and coal products manufacturing</b>                                     |            |                 |           |           |            |               |           |                    |              |                    |       |
| Petroleum refineries   | 32411      | 1,787           | 1,957     | 2,056     | 2,049      | 1,545         | 1,607     | 12.9               | 1,923        | 1.4                | 1,703 |
| <b>325 Chemical manufacturing</b>  |            |                 |           |           |            |               |           |                    |              |                    |       |
| Other basic inorganic chemical manufacturing   | 32518      | 262             | 246       | 252       | 244        | 250           | 250       | 3.8                | 252          | 8.7                | 243   |
| Other basic organic chemical manufacturing   | 32519      | 281             | 277       | 289       | 315        | 314           | 325       | -8.4               | 317          | 8.8                | 346   |
| Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing | 3252       | 644             | 612       | 594       | 605        | 549           | 559       | 7.7                | 609          | 3.2                | 566   |
| Pesticide and other agricultural chemical manufacturing                                  | 32532      | 138             | 120       | 106       | 92         | 88            | 87        | 15.0               | 96           | 29.1               | 84    |
| Pharmaceutical and medicine manufacturing  | 3254       | 2,981           | 2,872     | 2,892     | 2,837      | 2,720         | 2,717     | 11.7               | 2,842        | 14.4               | 2,543 |
| Paint and coating manufacturing  | 32551      | 246             | 257       | 257       | 258        | 249           | 261       | -1.8               | 263          | 2.8                | 268   |
| Adhesive manufacturing   | 32552      | 112             | 110       | 110       | 111        | 100           | 99        | 13.3               | 108          | 12.8               | 95    |
| Soap and cleaning compound manufacturing   | 32561      | 92              | 96        | 96        | 96         | 95            | 99        | -9.7               | 96           | -29.0              | 106   |
| Toilet preparation manufacturing   | 32562      | 187             | 193       | 195       | 192        | 183           | 191       | -1.5               | 191          | 8.6                | 194   |
| Printing ink manufacturing   | 32591      | 89              | 85        | 87        | 89         | 83            | 71        | 17.0               | 86           | 12.0               | 74    |
| All other chemical product manufacturing   | 32599      | 418             | 419       | 415       | 411        | 376           | 370       | 1.1                | 403          | 1.3                | 399   |
| <b>326 Plastics and rubber products manufacturing</b>                                    |            |                 |           |           |            |               |           |                    |              |                    |       |

Table 8-2 – continued

## Inventory owned for selected industries - Unadjusted

|   | NAICS Code | Current periods |           |           |            | Previous year |           | Year to date       |              | Average per month  |       |
|---|------------|-----------------|-----------|-----------|------------|---------------|-----------|--------------------|--------------|--------------------|-------|
|   |            | Dec. 2004       | Nov. 2004 | Oct. 2004 | Sept. 2004 | Dec. 2003     | Nov. 2003 | % Change from 2003 | Average 2004 | % Change from 2002 | 2003  |
| <b>Plastics pipe, pipe fitting, and unlaminated profile shape manufacturing</b>             | 32612      | 309             | 312       | 309       | 318        | 295           | 304       | -1.3               | 336          | -8.5               | 340   |
| Polystyrene foam product manufacturing  | 32614      | 64              | 59        | 54        | 64         | 51            | 51        | 13.5               | 61           | 16.6               | 54    |
| Other plastic product manufacturing   | 32619      | 941             | 957       | 936       | 946        | 918           | 945       | 1.6                | 953          | 7.4                | 938   |
| Other rubber product manufacturing  | 32629      | 137             | 140       | 130       | 127        | 130           | 133       | -2.7               | 134          | -12.9              | 138   |
| <b>327 Non-metallic mineral product manufacturing</b>                                       |            |                 |           |           |            |               |           |                    |              |                    |       |
| Clay product and refractory manufacturing   | 3271       | 76              | 74        | 72        | 71         | 67            | 71        | -4.0               | 73           | -8.1               | 76    |
| Glass and glass product manufacturing   | 3272       | 251             | 261       | 248       | 253        | 247           | 250       | -0.7               | 251          | -2.1               | 252   |
| Cement manufacturing  | 32731      | 172             | 151       | 152       | 160        | 174           | 151       | -0.3               | 181          | -6.8               | 182   |
| Ready-mix concrete manufacturing  | 32732      | 87              | 86        | 86        | 89         | 83            | 83        | -2.1               | 85           | -7.7               | 87    |
| Other concrete product manufacturing  | 32739      | 140             | 122       | 117       | 119        | 122           | 124       | 12.9               | 132          | 11.8               | 117   |
| Abrasive product manufacturing  | 32791      | 59              | 49        | 50        | 53         | 48            | 52        | -16.6              | 51           | -19.4              | 61    |
| All other non-metallic mineral product manufacturing  | 32799      | 118             | 114       | 116       | 118        | 129           | 129       | -6.5               | 122          | 8.2                | 131   |
| <b>331 Primary metal manufacturing</b>  |            |                 |           |           |            |               |           |                    |              |                    |       |
| Iron and steel mills and ferro-alloy manufacturing  | 3311       | 2,359           | 2,269     | 2,144     | 2,022      | 1,855         | 1,859     | -2.3               | 1,904        | -1.8               | 1,950 |
| Iron and steel pipes and tubes manufacturing from purchased steel                           | 33121      | 648             | 655       | 616       | 603        | 478           | 499       | 9.8                | 544          | 2.3                | 495   |
| Foundries   | 3315       | 317             | 327       | 295       | 304        | 273           | 289       | 1.7                | 296          | 1.6                | 291   |
| <b>332 Fabricated metal product manufacturing</b>   |            |                 |           |           |            |               |           |                    |              |                    |       |
| Cutlery and hand tool manufacturing   | 3322       | 88              | 89        | 90        | 91         | 80            | 82        | 3.0                | 85           | 2.2                | 83    |
| Plate work and fabricated structural product manufacturing                                  | 33231      | 866             | 866       | 875       | 878        | 613           | 630       | 18.2               | 800          | -1.7               | 677   |
| Power boiler and heat exchanger manufacturing   | 33241      | 102             | 109       | 107       | 94         | 83            | 86        | -1.8               | 94           | 4.1                | 96    |
| Spring and wire product manufacturing   | 3326       | 180             | 174       | 166       | 173        | 138           | 141       | -3.8               | 166          | -11.6              | 172   |
| Coating, engraving, heat treating and allied activities                                     | 3328       | 185             | 183       | 174       | 176        | 167           | 159       | 3.0                | 174          | -1.9               | 169   |
| Other fabricated metal product manufacturing  | 3329       | 713             | 709       | 708       | 692        | 571           | 571       | 11.8               | 647          | 6.5                | 579   |
| <b>333 Machinery manufacturing</b>  |            |                 |           |           |            |               |           |                    |              |                    |       |
| Agricultural implement manufacturing  | 33311      | 507             | 506       | 480       | 451        | 435           | 466       | -6.3               | 444          | 1.2                | 474   |
| Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing | 3334       | 354             | 352       | 363       | 362        | 300           | 310       | 4.0                | 337          | -7.2               | 324   |
| All other general-purpose machinery manufacturing   | 33399      | 611             | 621       | 599       | 598        | 564           | 582       | 7.9                | 572          | 15.1               | 530   |
| <b>334 Computer and electronic product manufacturing</b>                                    |            |                 |           |           |            |               |           |                    |              |                    |       |
| Computer and peripheral equipment manufacturing   | 3341       | 540             | 531       | 563       | 572        | 557           | 640       | -16.7              | 557          | 1.2                | 669   |
| Communications equipment manufacturing  | 3342       | 2,026           | 2,174     | 2,200     | 2,087      | 2,217         | 2,319     | -10.5              | 2,137        | -12.2              | 2,387 |
| Audio and video equipment manufacturing   | 3343       | 46              | 48        | 48        | 46         | 56            | 58        | -15.8              | 50           | 5.0                | 59    |
| <b>335 Electrical equipment, appliance and component manufacturing</b>                      |            |                 |           |           |            |               |           |                    |              |                    |       |
| Lighting fixture manufacturing  | 33512      | 120             | 120       | 120       | 118        | 134           | 131       | -8.4               | 129          | -9.1               | 141   |
| Small electrical appliance manufacturing  | 33521      | 44              | 43        | 44        | 45         | 45            | 42        | 5.6                | 42           | 9.3                | 40    |
| Major appliance manufacturing   | 33522      | 206             | 218       | 214       | 210        | 171           | 184       | 7.8                | 200          | 11.9               | 186   |
| Battery manufacturing   | 33591      | 62              | 68        | 63        | 60         | 40            | 42        | 43.3               | 53           | -10.8              | 37    |
| Communication and energy wire and cable manufacturing                                       | 33592      | 741             | 789       | 797       | 788        | 736           | 774       | -1.3               | 798          | -0.1               | 808   |
| All other electrical equipment and component manufacturing                                  | 33599      | 99              | 103       | 97        | 100        | 98            | 101       | -2.2               | 101          | -2.0               | 103   |
| <b>336 Transportation equipment manufacturing</b>   |            |                 |           |           |            |               |           |                    |              |                    |       |
| Motor vehicle manufacturing   | 3361       | 1,278           | 1,349     | 1,458     | 1,560      | 1,183         | 1,258     | 13.5               | 1,461        | -8.6               | 1,288 |
| Motor vehicle parts manufacturing   | 3363       | 1,948           | 2,012     | 1,918     | 1,898      | 1,818         | 1,908     | 3.5                | 1,913        | 13.1               | 1,847 |
| Aerospace product and parts manufacturing   | 3364       | 4,541           | 4,528     | 4,413     | 4,793      | 4,399         | 4,668     | -8.6               | 4,456        | -30.5              | 4,875 |
| Railroad rolling stock manufacturing  | 3365       | 734             | 815       | 813       | 819        | 740           | 774       | -11.1              | 779          | -7.5               | 876   |
| Ship and boat building  | 3366       | 116             | 115       | 112       | 104        | 127           | 137       | -13.3              | 111          | -1.8               | 129   |
| <b>337 Furniture and related product manufacturing</b>                                      |            |                 |           |           |            |               |           |                    |              |                    |       |
| Household and institutional furniture and kitchen cabinet manufacturing                     | 3371       | 800             | 836       | 824       | 807        | 748           | 746       | -0.6               | 784          | 1.3                | 790   |
| Office furniture (including fixtures) manufacturing   | 3372       | 357             | 364       | 352       | 355        | 327           | 342       | 1.5                | 340          | 8.9                | 335   |
| <b>339 Miscellaneous manufacturing</b>  |            |                 |           |           |            |               |           |                    |              |                    |       |
| Medical equipment and supplies manufacturing  | 3391       | 235             | 247       | 242       | 241        | 298           | 307       | 0.1                | 255          | 13.0               | 255   |
| Other miscellaneous manufacturing   | 3399       | 916             | 938       | 956       | 978        | 909           | 934       | 0.5                | 966          | 2.0                | 962   |

Table 9

## Inventories owned by stage of fabrication

| Period covered | Unadjusted    |                  |                   |                   | Seasonally adjusted |                  |                   |                   |
|----------------|---------------|------------------|-------------------|-------------------|---------------------|------------------|-------------------|-------------------|
|                | Raw materials | Goods in process | Finished products | Total Inventories | Raw materials       | Goods in process | Finished products | Total Inventories |
|                | \$ millions   |                  |                   |                   |                     |                  |                   |                   |
| December 2003  | 24,883        | 12,896           | 19,415            | 57,195            | 24,981              | 13,184           | 20,137            | 58,301            |
| January 2004   | 25,505        | 12,991           | 19,737            | 58,233            | 25,272              | 13,253           | 20,046            | 58,572            |
| February 2004  | 25,911        | 13,416           | 20,424            | 59,751            | 25,197              | 13,238           | 20,237            | 58,671            |
| March 2004     | 26,051        | 13,320           | 20,710            | 60,081            | 25,483              | 13,224           | 20,130            | 58,838            |
| April 2004     | 25,943        | 13,449           | 20,795            | 60,186            | 25,724              | 13,317           | 20,263            | 59,304            |
| May 2004       | 25,970        | 13,777           | 20,949            | 60,696            | 26,128              | 13,505           | 20,521            | 60,154            |
| June 2004      | 25,932        | 13,543           | 20,727            | 60,203            | 26,370              | 13,512           | 20,610            | 60,492            |
| July 2004      | 26,552        | 13,375           | 20,387            | 60,314            | 26,818              | 13,528           | 20,592            | 60,938            |
| August 2004    | 26,919        | 14,111           | 20,749            | 61,779            | 27,029              | 14,014           | 20,780            | 61,823            |
| September 2004 | 26,911        | 14,061           | 20,964            | 61,936            | 27,168              | 14,010           | 21,090            | 62,268            |
| October 2004   | 26,988        | 13,866           | 21,012            | 61,866            | 27,096              | 13,886           | 21,352            | 62,333            |
| November 2004  | 27,006        | 13,904           | 21,238            | 62,147            | 27,152              | 13,891           | 21,304            | 62,346            |
| December 2004  | 26,895        | 13,676           | 20,846            | 61,417            | 27,000              | 13,989           | 21,603            | 62,592            |

Table 10

## Shipments by major group and province - Unadjusted

| Province  | Current year |           |           |            | Previous year |           | Year to date       |         | Annual             |         |
|---|--------------|-----------|-----------|------------|---------------|-----------|--------------------|---------|--------------------|---------|
|   | Dec. 2004    | Nov. 2004 | Oct. 2004 | Sept. 2004 | Dec. 2003     | Nov. 2003 | % Change from 2003 | 2004    | % Change from 2002 | 2003    |
| \$ millions   |              |           |           |            |               |           |                    |         |                    |         |
| <b>Total</b>  |              |           |           |            |               |           |                    |         |                    |         |
| Newfoundland and Labrador                             | 243          | 244       | 289       | 273        | 203           | 208       | 9.2                | 3,087   | 12.5               | 2,827   |
| Prince Edward Island                                  | 113          | 112       | 119       | 127        | 105           | 119       | 4.9                | 1,423   | 2.2                | 1,356   |
| Nova Scotia   | 742          | 789       | 820       | 832        | 695           | 712       | 7.5                | 9,161   | 2.7                | 8,524   |
| New Brunswick   | 1,134        | 1,314     | 1,210     | 1,273      | 1,055         | 1,062     | 11.1               | 14,294  | 2.7                | 12,864  |
| Quebec  | 10,892       | 11,770    | 12,101    | 11,974     | 10,476        | 10,750    | 6.6                | 137,048 | -1.3               | 128,514 |
| Ontario   | 23,636       | 26,777    | 26,669    | 27,886     | 22,070        | 23,810    | 7.0                | 309,559 | -1.7               | 289,216 |
| Manitoba  | 1,029        | 1,119     | 1,098     | 1,112      | 953           | 936       | 10.4               | 12,605  | 1.3                | 11,413  |
| Saskatchewan  | 793          | 794       | 824       | 857        | 632           | 629       | 22.4               | 9,686   | 3.7                | 7,913   |
| Alberta   | 4,471        | 4,647     | 4,626     | 4,564      | 3,874         | 3,793     | 14.6               | 52,538  | 5.0                | 45,838  |
| British Columbia                                      | 3,364        | 3,474     | 3,553     | 3,817      | 2,920         | 2,959     | 13.5               | 42,242  | -3.3               | 37,223  |
| <b>311 Food manufacturing</b>                         |              |           |           |            |               |           |                    |         |                    |         |
| Newfoundland and Labrador                             | 87           | 78        | 104       | 112        | 66            | 77        | 11.5               | 1,177   | -9.3               | 1,056   |
| Prince Edward Island                                  | 76           | 72        | 75        | 74         | 72            | 76        | -1.0               | 893     | -1.0               | 902     |
| Nova Scotia   | 184          | 174       | 183       | 183        | 177           | 165       | 2.2                | 2,043   | -0.7               | 1,999   |
| New Brunswick   | 183          | 207       | 213       | 259        | 153           | 175       | 13.4               | 2,307   | 0.6                | 2,035   |
| Quebec  | 1,361        | 1,400     | 1,406     | 1,364      | 1,261         | 1,330     | 7.1                | 16,244  | 5.2                | 15,170  |
| Ontario   | 2,277        | 2,250     | 2,312     | 2,377      | 2,197         | 2,168     | 6.9                | 26,728  | 1.9                | 25,005  |
| Manitoba  | 244          | 274       | 252       | 262        | 223           | 214       | 18.8               | 2,918   | 1.0                | 2,457   |
| Saskatchewan  | 184          | 180       | 167       | 168        | 175           | 167       | 8.9                | 2,121   | 4.0                | 1,947   |
| Alberta   | 705          | 749       | 763       | 732        | 680           | 695       | 13.8               | 9,077   | -3.5               | 7,976   |
| British Columbia                                      | 439          | 428       | 435       | 448        | 401           | 384       | 3.1                | 5,043   | 3.5                | 4,890   |
| <b>312 Beverage and tobacco product manufacturing</b> |              |           |           |            |               |           |                    |         |                    |         |
| Nova Scotia   | x            | x         | x         | x          | x             | x         | x                  | x       | 0.0                | x       |
| Quebec  | 334          | 267       | 283       | 297        | 362           | 329       | -8.8               | 3,617   | 9.4                | 3,965   |
| Ontario   | 479          | 411       | 436       | 449        | 448           | 442       | 1.8                | 5,414   | 0.6                | 5,316   |
| Saskatchewan  | 3            | 3         | 3         | 3          | 3             | 2         | 3.8                | 34      | -48.8              | 33      |
| British Columbia                                      | 104          | 89        | 87        | 94         | 99            | 81        | 3.8                | 1,133   | 0.4                | 1,091   |
| <b>313 Textile mills</b>                              |              |           |           |            |               |           |                    |         |                    |         |
| Quebec  | 138          | 158       | 163       | 168        | 147           | 168       | -6.9               | 1,905   | -13.6              | 2,046   |
| Ontario   | 73           | 85        | 84        | 88         | 77            | 85        | -0.3               | 1,024   | -10.0              | 1,028   |
| <b>314 Textile product mills</b>                      |              |           |           |            |               |           |                    |         |                    |         |
| Quebec  | 65           | 83        | 84        | 77         | 63            | 77        | -4.4               | 872     | -11.0              | 912     |
| Ontario   | 87           | 95        | 97        | 95         | 72            | 76        | 3.0                | 1,069   | -9.7               | 1,038   |
| Alberta   | x            | x         | x         | x          | x             | x         | x                  | x       | 0.0                | x       |
| British Columbia                                      | x            | x         | x         | x          | x             | x         | x                  | x       | 0.0                | x       |
| <b>315 Clothing manufacturing</b>                     |              |           |           |            |               |           |                    |         |                    |         |
| Quebec  | 243          | 348       | 345       | 359        | 266           | 338       | -7.8               | 3,917   | -7.0               | 4,247   |
| Ontario   | 119          | 167       | 155       | 152        | 143           | 184       | -9.4               | 1,742   | -6.1               | 1,923   |
| Manitoba  | 15           | 23        | 25        | 25         | 20            | 25        | -0.6               | 262     | -5.0               | 264     |
| Saskatchewan  | 3            | 3         | 3         | 3          | 3             | 3         | -0.6               | 28      | 7.6                | 28      |
| Alberta   | 6            | 7         | 6         | 6          | 9             | 16        | -28.7              | 99      | -1.2               | 139     |
| British Columbia                                      | x            | x         | x         | x          | x             | x         | x                  | x       | 0.0                | x       |
| <b>316 Leather and allied product manufacturing</b>   |              |           |           |            |               |           |                    |         |                    |         |
| Quebec  | 27           | 37        | 46        | 55         | 22            | 32        | -5.2               | 370     | -9.4               | 390     |
| Ontario   | 8            | 10        | 15        | 14         | 24            | 23        | -39.8              | 144     | -15.5              | 239     |
| <b>321 Wood product manufacturing</b>                 |              |           |           |            |               |           |                    |         |                    |         |
| Nova Scotia   | 49           | 55        | 59        | 65         | 33            | 46        | 20.3               | 654     | -1.8               | 544     |
| Quebec  | 626          | 796       | 833       | 941        | 578           | 762       | 12.4               | 9,941   | -0.9               | 8,848   |
| Ontario   | 454          | 515       | 564       | 588        | 403           | 513       | 7.9                | 6,536   | -2.0               | 6,058   |
| Manitoba  | 57           | 62        | 68        | 77         | 50            | 59        | 19.0               | 830     | 4.5                | 697     |
| Saskatchewan  | 61           | 52        | 56        | 82         | 38            | 50        | 48.7               | 696     | 14.6               | 468     |
| Alberta   | 248          | 268       | 289       | 323        | 250           | 284       | 26.6               | 3,711   | 11.3               | 2,932   |
| British Columbia                                      | 945          | 1,002     | 1,106     | 1,211      | 724           | 769       | 31.0               | 12,991  | -12.0              | 9,913   |
| <b>322 Paper manufacturing</b>                        |              |           |           |            |               |           |                    |         |                    |         |
| Nova Scotia   | 73           | 75        | 77        | 92         | 64            | 81        | 6.1                | 929     | 1.3                | 875     |
| Quebec  | 846          | 909       | 909       | 882        | 794           | 821       | -1.8               | 10,433  | -8.4               | 10,620  |
| Ontario   | 811          | 884       | 890       | 894        | 789           | 862       | -3.3               | 10,472  | -1.9               | 10,825  |
| Alberta   | 156          | 141       | 141       | 144        | 149           | 135       | -0.2               | 1,785   | 1.4                | 1,788   |
| British Columbia                                      | 497          | 465       | 461       | 501        | 459           | 448       | 4.1                | 5,881   | 2.8                | 5,652   |
| <b>323 Printing and related support activities</b>    |              |           |           |            |               |           |                    |         |                    |         |



Table 10 – continued

## Shipments by major group and province - Unadjusted

| Province   | Current year |           |           |            | Previous year |           | Year to date       |        | Annual             |        |
|--|--------------|-----------|-----------|------------|---------------|-----------|--------------------|--------|--------------------|--------|
|  | Dec. 2004    | Nov. 2004 | Oct. 2004 | Sept. 2004 | Dec. 2003     | Nov. 2003 | % Change from 2003 | 2004   | % Change from 2002 | 2003   |
| Quebec   | 223          | 263       | 252       | 250        | 220           | 238       | 2.4                | 2,824  | -3.7               | 2,758  |
| Ontario  | 524          | 586       | 575       | 587        | 532           | 587       | 2.0                | 6,550  | 0.4                | 6,423  |
| Manitoba   | 40           | 45        | 42        | 47         | 45            | 45        | -0.9               | 505    | -1.2               | 510    |
| Saskatchewan   | 10           | 12        | 15        | 15         | 12            | 11        | 0.9                | 148    | 5.4                | 147    |
| Alberta  | 50           | 62        | 61        | 56         | 55            | 58        | -1.2               | 653    | -5.6               | 662    |
| British Columbia   | 59           | 75        | 69        | 77         | 61            | 69        | 2.8                | 779    | -8.5               | 758    |
| <b>324 Petroleum and coal products manufacturing</b>                   |              |           |           |            |               |           |                    |        |                    |        |
| Quebec   | 936          | 853       | 1,021     | 911        | 657           | 656       | 23.3               | 9,873  | 12.2               | 8,007  |
| Ontario  | 1,203        | 1,351     | 1,392     | 1,350      | 896           | 936       | 25.9               | 14,697 | 6.8                | 11,670 |
| Alberta  | 875          | 975       | 1,013     | 921        | 638           | 602       | 21.4               | 9,955  | 10.2               | 8,200  |
| British Columbia   | x            | x         | x         | x          | x             | x         | x                  | x      | 0.0                | x      |
| <b>325 Chemical manufacturing</b>                                      |              |           |           |            |               |           |                    |        |                    |        |
| Quebec   | 702          | 765       | 733       | 771        | 669           | 684       | 5.7                | 9,042  | 0.0                | 8,556  |
| Ontario  | 1,959        | 2,046     | 2,040     | 2,130      | 1,728         | 1,667     | 11.4               | 23,790 | 3.1                | 21,357 |
| Manitoba   | 64           | 73        | 64        | 58         | 72            | 66        | 0.5                | 819    | 28.2               | 814    |
| Saskatchewan   | 48           | 52        | 55        | 50         | 35            | 40        | 22.8               | 981    | 16.5               | 799    |
| Alberta  | 830          | 844       | 847       | 784        | 689           | 656       | 15.6               | 9,580  | 5.5                | 8,285  |
| British Columbia   | 98           | 108       | 111       | 108        | 81            | 84        | 16.6               | 1,264  | 6.6                | 1,084  |
| <b>326 Plastics and rubber products manufacturing</b>                  |              |           |           |            |               |           |                    |        |                    |        |
| Nova Scotia  | x            | x         | x         | x          | x             | x         | x                  | x      | 0.0                | x      |
| Quebec   | 459          | 573       | 590       | 585        | 435           | 508       | 7.2                | 6,475  | 5.8                | 6,038  |
| Ontario  | 1,086        | 1,308     | 1,349     | 1,342      | 1,041         | 1,227     | 3.7                | 15,330 | -0.9               | 14,790 |
| Manitoba   | 47           | 52        | 53        | 54         | 42            | 46        | 7.1                | 609    | 5.7                | 568    |
| Saskatchewan   | 11           | 14        | 15        | 15         | 6             | 8         | 31.2               | 140    | 3.5                | 107    |
| Alberta  | 68           | 75        | 77        | 81         | 61            | 68        | 5.4                | 881    | 0.9                | 836    |
| British Columbia   | 83           | 96        | 100       | 104        | 81            | 91        | -1.3               | 1,140  | 9.6                | 1,156  |
| <b>327 Non-metallic mineral product manufacturing</b>                  |              |           |           |            |               |           |                    |        |                    |        |
| Nova Scotia  | x            | x         | x         | x          | x             | x         | x                  | x      | 0.0                | x      |
| Quebec   | 157          | 267       | 289       | 304        | 149           | 236       | 8.8                | 2,916  | 4.3                | 2,679  |
| Ontario  | 372          | 549       | 569       | 570        | 387           | 487       | 4.1                | 5,787  | 5.6                | 5,560  |
| Saskatchewan   | 4            | 7         | 10        | 11         | 2             | 3         | 14.6               | 81     | -7.7               | 71     |
| Alberta  | 124          | 170       | 180       | 185        | 100           | 111       | 9.4                | 1,703  | -0.7               | 1,556  |
| British Columbia   | 108          | 138       | 145       | 152        | 98            | 116       | 10.3               | 1,561  | 11.6               | 1,416  |
| <b>331 Primary metal manufacturing</b>                                 |              |           |           |            |               |           |                    |        |                    |        |
| Quebec   | 1,428        | 1,470     | 1,475     | 1,438      | 1,325         | 1,172     | 18.4               | 17,482 | 3.1                | 14,769 |
| Ontario  | 1,555        | 1,786     | 1,784     | 1,828      | 1,322         | 1,413     | 17.5               | 19,867 | -2.9               | 16,907 |
| Alberta  | 233          | 207       | 197       | 190        | 158           | 163       | 18.0               | 2,138  | 41.3               | 1,812  |
| <b>332 Fabricated metal product manufacturing</b>                      |              |           |           |            |               |           |                    |        |                    |        |
| Newfoundland and Labrador  | 29           | 35        | 37        | 30         | 10            | 15        | 86.4               | 286    | 49.4               | 153    |
| Prince Edward Island   | 2            | 3         | 2         | 3          | 3             | 4         | -4.2               | 26     | 19.2               | 27     |
| Nova Scotia  | x            | x         | x         | x          | x             | x         | x                  | x      | 0.0                | x      |
| New Brunswick  | x            | x         | x         | x          | x             | x         | x                  | x      | 0.0                | x      |
| Quebec   | 556          | 698       | 703       | 689        | 515           | 595       | 8.4                | 7,153  | 0.5                | 6,597  |
| Ontario  | 1,449        | 1,812     | 1,816     | 1,890      | 1,254         | 1,456     | 11.4               | 19,449 | -3.9               | 17,460 |
| Manitoba   | 57           | 64        | 65        | 72         | 49            | 48        | 18.0               | 732    | 6.0                | 620    |
| Saskatchewan   | 40           | 45        | 45        | 44         | 27            | 32        | 21.1               | 471    | 4.9                | 389    |
| Alberta  | 329          | 368       | 359       | 353        | 305           | 309       | 14.7               | 3,912  | 22.7               | 3,410  |
| British Columbia   | 149          | 184       | 182       | 201        | 128           | 131       | 18.0               | 2,031  | 0.4                | 1,721  |
| <b>333 Machinery manufacturing</b>                                     |              |           |           |            |               |           |                    |        |                    |        |
| Quebec   | 432          | 480       | 455       | 489        | 445           | 469       | 4.1                | 5,120  | -3.7               | 4,920  |
| Ontario  | 1,145        | 1,229     | 1,213     | 1,284      | 1,087         | 1,081     | 3.4                | 14,156 | -6.8               | 13,688 |
| Manitoba   | 71           | 78        | 79        | 74         | 72            | 64        | 14.3               | 916    | -9.0               | 802    |
| Saskatchewan   | 51           | 54        | 58        | 58         | 47            | 42        | 10.5               | 675    | -10.7              | 611    |
| Alberta  | 387          | 385       | 337       | 369        | 331           | 267       | 22.4               | 4,050  | 13.0               | 3,308  |
| British Columbia   | 190          | 192       | 188       | 203        | 152           | 162       | 15.9               | 2,129  | 9.1                | 1,837  |
| <b>334 Computer and electronic product manufacturing</b>               |              |           |           |            |               |           |                    |        |                    |        |
| Quebec   | 632          | 535       | 494       | 590        | 619           | 481       | 5.6                | 6,185  | -17.3              | 5,856  |
| Ontario  | 970          | 943       | 841       | 982        | 982           | 907       | 9.6                | 10,707 | -7.6               | 9,773  |
| Saskatchewan   | x            | x         | x         | x          | x             | x         | x                  | x      | 0.0                | x      |
| Alberta  | 194          | 101       | 70        | 122        | 171           | 152       | -2.3               | 1,485  | -31.8              | 1,520  |
| British Columbia   | 84           | 93        | 80        | 93         | 91            | 104       | 0.3                | 1,105  | -10.0              | 1,101  |
| <b>335 Electrical equipment, appliance and component manufacturing</b> |              |           |           |            |               |           |                    |        |                    |        |
| Quebec   | 273          | 311       | 307       | 324        | 269           | 297       | 5.6                | 3,596  | -1.3               | 3,405  |

Table 10 – continued

**Shipments by major group and province - Unadjusted**

| Province   | Current year |           |           |            | Previous year |           | Year to date       |         | Annual             |         |
|--|--------------|-----------|-----------|------------|---------------|-----------|--------------------|---------|--------------------|---------|
|  | Dec. 2004    | Nov. 2004 | Oct. 2004 | Sept. 2004 | Dec. 2003     | Nov. 2003 | % Change from 2003 | 2004    | % Change from 2002 | 2003    |
| Ontario  | 428          | 474       | 459       | 498        | 434           | 464       | 2.8                | 5,613   | -7.9               | 5,458   |
| Manitoba   | 10           | 13        | 12        | 14         | 13            | 14        | -12.7              | 145     | -22.0              | 166     |
| Saskatchewan   | 12           | 16        | 15        | 15         | 12            | 12        | 17.9               | 171     | -31.9              | 145     |
| Alberta  | 27           | 32        | 34        | 34         | 31            | 36        | 10.9               | 395     | 9.7                | 356     |
| British Columbia                                       | x            | x         | x         | x          | x             | x         | x                  | x       | 0.0                | x       |
| <b>336 Transportation equipment manufacturing</b>      |              |           |           |            |               |           |                    |         |                    |         |
| Nova Scotia  | 62           | 71        | 73        | 63         | 65            | 61        | 10.1               | 779     | -10.6              | 707     |
| Quebec   | 1,007        | 997       | 1,171     | 938        | 1,155         | 983       | 3.5                | 13,012  | -7.1               | 12,570  |
| Ontario  | 7,668        | 9,210     | 9,076     | 9,759      | 7,381         | 8,340     | 5.0                | 108,690 | -3.3               | 103,510 |
| Manitoba   | 144          | 148       | 158       | 160        | 131           | 122       | 5.3                | 1,786   | 3.6                | 1,697   |
| Saskatchewan   | 21           | 24        | 24        | 25         | 19            | 17        | 11.3               | 268     | -11.5              | 240     |
| Alberta  | 64           | 66        | 60        | 58         | 58            | 60        | -4.5               | 745     | 9.0                | 780     |
| British Columbia                                       | 78           | 81        | 84        | 84         | 75            | 74        | 7.1                | 1,062   | -36.7              | 991     |
| <b>337 Furniture and related product manufacturing</b> |              |           |           |            |               |           |                    |         |                    |         |
| Quebec   | 286          | 364       | 351       | 342        | 299           | 331       | -0.5               | 3,919   | -5.6               | 3,940   |
| Ontario  | 684          | 764       | 736       | 722        | 601           | 625       | 7.0                | 8,160   | 6.2                | 7,627   |
| Manitoba   | 46           | 50        | 47        | 44         | 42            | 45        | 0.0                | 544     | -1.0               | 544     |
| Saskatchewan   | 5            | 6         | 6         | 6          | 5             | 5         | 0.6                | 69      | 8.7                | 68      |
| Alberta  | 60           | 72        | 75        | 71         | 67            | 69        | -2.2               | 832     | -10.5              | 851     |
| British Columbia                                       | 82           | 85        | 81        | 82         | 63            | 63        | 11.7               | 893     | 5.6                | 799     |
| <b>339 Miscellaneous manufacturing</b>                 |              |           |           |            |               |           |                    |         |                    |         |
| Newfoundland and Labrador                              | x            | x         | x         | x          | x             | x         | x                  | x       | 0.0                | x       |
| Quebec   | 160          | 196       | 190       | 201        | 225           | 244       | -3.0               | 2,154   | -1.1               | 2,221   |
| Ontario  | 285          | 303       | 266       | 288        | 272           | 265       | 2.1                | 3,634   | 2.6                | 3,560   |
| Manitoba   | 18           | 23        | 26        | 19         | 15            | 17        | 23.0               | 216     | -2.1               | 175     |
| Saskatchewan   | 5            | 5         | 5         | 6          | 5             | 5         | 8.0                | 59      | 13.6               | 55      |
| Alberta  | 37           | 47        | 41        | 54         | 43            | 42        | 7.2                | 572     | 44.3               | 534     |
| British Columbia                                       | 52           | 50        | 49        | 58         | 64            | 57        | 0.6                | 655     | 1.7                | 651     |

## About the Monthly Survey of Manufacturing

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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

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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), Clothing (315), 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 Wood Products (NAICS 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

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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**

Only a subset of the sample establishments is sent out for data collection. For the remaining units, information from administrative data files is used as a source for deriving shipment data. For those establishments that are surveyed, 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.

### **Use of Administrative Data**

Managing response burden is an ongoing challenge for Statistics Canada. In an attempt to alleviate response burden, especially for small businesses, STC has been investigating various alternatives to survey taking. Administrative data files are a rich source of information for business data and STC is working at mining this rich data source to its full potential. As such, effective the August 2004 reference month, the MSM has reduced the number of simple establishments in the sample that are surveyed directly and instead, derives shipments data for these establishments from Goods and Services Tax (GST) files using a statistical model. The model accounts for the difference between shipments and sales (reported for GST purposes) as well as the time lag between the reference period of the survey and the reference period of the GST file.

Inventories and unfilled orders estimates for establishments where shipments are GST-based are derived using the MSM's imputation system. The imputation system applies to the previous month values, the month-to-month and year-to-year changes in similar firms which are surveyed.

Detailed information on the methodology used for modelling shipment from administrative data sources can be found in the '*Monthly Survey of Manufacturing: Use of Administrative Data*' (Catalogue no. 31-533-XIE) document.

# Data quality

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## 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 Annual Survey of Manufactures (ASM) released estimates for reference year 2002 and revisions for 2000 and 2001 on June 16, 2004. In the future, the Monthly Survey of Manufacturing (MSM) will re-benchmark to the ASM data for reference years 2000 and 2001 and benchmark to ASM 2002. Until these revisions take place, the MSM is currently benchmarked to the former ASM levels of 2000 and 2001.

As of January 2004, the Monthly Survey of Manufacturing (MSM) data were revised back to January 1999. Although the historical month-to-month movements were preserved, there were adjustments made to the levels.

The adjustments made to the MSM data were the result of several factors: the use of new and revised data; updates to the industrial classification (NAICS); the updating of the seasonal adjustment factors; and most significantly, the benchmarking of the MSM to the 2000 and 2001 ASM levels.

Starting with reference year 2000, the ASM incorporated some significant conceptual and methodological changes. The most important change was the expansion to include all manufacturing establishments in Canada. Previously only incorporated establishments that had employees and had sales greater than \$30,000 were covered by the ASM. Consequently, by benchmarking to the 2000 and 2001 ASM, the previously released MSM shipments data (which had been benchmarked to the 1998 ASM levels) were revised upwards by about 5.5% at the Canada level.



## 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 nonsampling 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 text table 1 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](mailto:manufact@statcan.ca).

Text Table 1

## National Level CVs by Characteristic

| Month          | Shipments | Raw material Inventories | Goods in process Inventories | Finished products Inventories | Unfilled orders |
|----------------|-----------|--------------------------|------------------------------|-------------------------------|-----------------|
|                | %         |                          |                              |                               |                 |
| December 2003  | 0.58      | 1.06                     | 1.06                         | 1.35                          | 2.00            |
| January 2004   | 0.57      | 1.08                     | 1.04                         | 1.36                          | 1.89            |
| February 2004  | 0.55      | 1.10                     | 1.00                         | 1.37                          | 1.91            |
| March 2004     | 0.59      | 1.10                     | 0.98                         | 1.37                          | 2.12            |
| April 2004     | 0.61      | 1.16                     | 0.97                         | 1.31                          | 2.28            |
| May 2004       | 0.61      | 1.13                     | 0.94                         | 1.28                          | 2.32            |
| June 2004      | 0.58      | 1.13                     | 0.96                         | 1.29                          | 2.39            |
| July 2004      | 0.60      | 1.19                     | 0.97                         | 1.25                          | 2.40            |
| August 2004    | 0.60      | 1.14                     | 0.94                         | 1.28                          | 2.61            |
| September 2004 | 0.62      | 1.12                     | 0.91                         | 1.29                          | 2.68            |
| October 2004   | 0.62      | 1.11                     | 0.95                         | 1.32                          | 2.75            |
| November 2004  | 0.61      | 1.13                     | 0.92                         | 1.33                          | 2.72            |
| December 2004  | 0.64      | 1.09                     | 0.98                         | 1.31                          | 2.73            |

## 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 nonresponse 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 text table 2 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.

Text Table 2

**National weighted rates by source and characteristic**

| Characteristics   | Survey source |            |         | Administrative data source |            |         |
|-------------------|---------------|------------|---------|----------------------------|------------|---------|
|                   | Response      | Imputation | Editing | Modeled                    | Imputation | Editing |
|                   | %             |            |         |                            |            |         |
| Shipments         | 92.78         | 5.81       | 4.27    | 7.20                       | 0.40       | 0.57    |
| Raw Materials     | 79.45         | 13.20      | 3.81    | 0.00                       | 9.72       | 0.12    |
| Goods in process  | 67.34         | 9.09       | 21.46   | 0.00                       | 5.51       | 0.34    |
| Finished products | 80.31         | 11.32      | 5.31    | 0.00                       | 7.89       | 0.40    |
| Unfilled Orders   | 64.63         | 9.38       | 24.01   | 0.00                       | 3.85       | 0.74    |

**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.