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Wholesale Trade

March 2004



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Statistics Canada
Wholesale Trade

Wholesale Trade

March 2004

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Symbols

The following standard symbols are used in Statistics Canada publications:

- . 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^s 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

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- **Catherine Mamay**, Acting Chief, Wholesale Trade Section, Distributive Trades Division
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User Notes

The March 2004 wholesale trade estimates are the last to be published using the Standard Industrial Classification System (SIC 1980). The Monthly Wholesale Trade Survey will switch to the North American Industrial Classification System (NAICS 2002) starting with the release of the April 2004 reference month.

The publication (63-008-XIB) will be modified to reflect the change to the new industrial classification. An historical time series back to January 1993 will be made available with the first release. The historical data estimates will be available on CANSIM (Tables 810007 to 810010) or by custom request. For further information contact the client services section at (613) 951-3549 or toll free at 1-877-421-3067.

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Highlights

- After a disappointing start to the year, wholesale sales rebounded 4.6% in March, reaching \$37.6 billion. Apart from the increase registered in September 2003 (+6.1%) following the power blackout in August, this was the strongest gain in the past 10 years. Excluding the automotive sector, sales in March were up 3.3%.

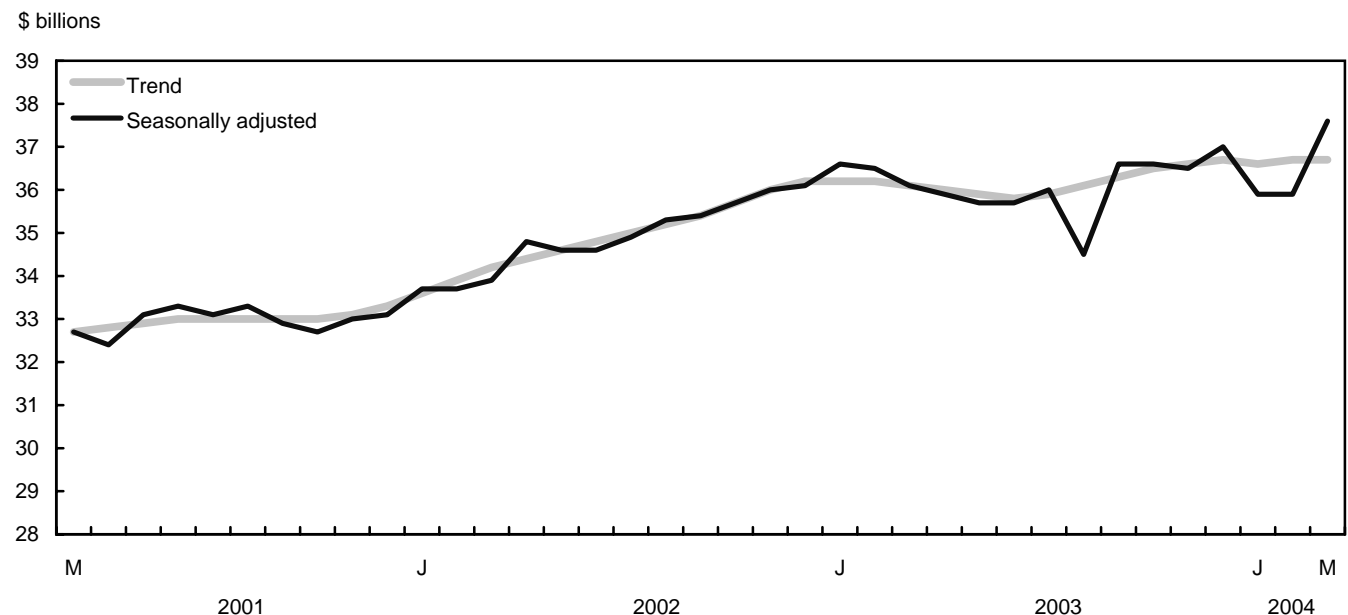
Analysis – March and first quarter 2004

After a disappointing start to the year, wholesale sales rebounded 4.6% in March, reaching \$37.6 billion. Apart from the increase registered in September 2003 (+6.1%) following the power blackout in August, this was the strongest gain in the past 10 years. Excluding the automotive sector, sales in March were up 3.3%.

Since February 2003, wholesale sales have generally been declining, with much of the decrease attributable to the automotive sector. Prior to this, wholesale sales went through a strong period of growth extending from the fall of 2001 to January 2003.

Chart 1

Wholesale sales



The increase in sales in March was mainly attributable to the automotive sector (+10.7%), lumber and building materials (+8.3%) and the other products category (+4.2%). The rise in wholesale sales was tempered by decreases in computers and electronics (-0.2%) and household goods (-0.4%).

First quarter sales were down 0.6% from the fourth quarter of 2003, a quarter that saw an increase of 2.8%. The contraction of quarterly sales was mainly attributable to the automotive sector, which despite a strong showing in March experienced a sharp drop in activity in the first two months of the year.

Note to readers

The March 2004 wholesale trade estimates are the last to be published using the 1980 Standard Industrial Classification (SIC 1980). The Monthly Wholesale Trade Survey will switch to the North American Industrial Classification System (NAICS 2002) starting with the release of the April 2004 reference month. The publication *Wholesale Trade* (63-008-XIB, \$15/\$150) will be modified to reflect the change to the new industrial classification. An historical time series back to January 1993 will be made available with the first release. The historical data estimates will be available on CANSIM (tables 810007 to 810010) or by custom request. For further information, contact Client Services (1-877-421-3067; 613-951-3549).

For information on the wholesale trade industry classification under the NAICS 2002, please consult our website. From the *Definitions, data sources and methods* page, select the *Industry* link found under the *Standard classifications* section.

In constant prices, wholesale sales rose 4.4% in March. For the first quarter of 2004, they declined 1.3%.

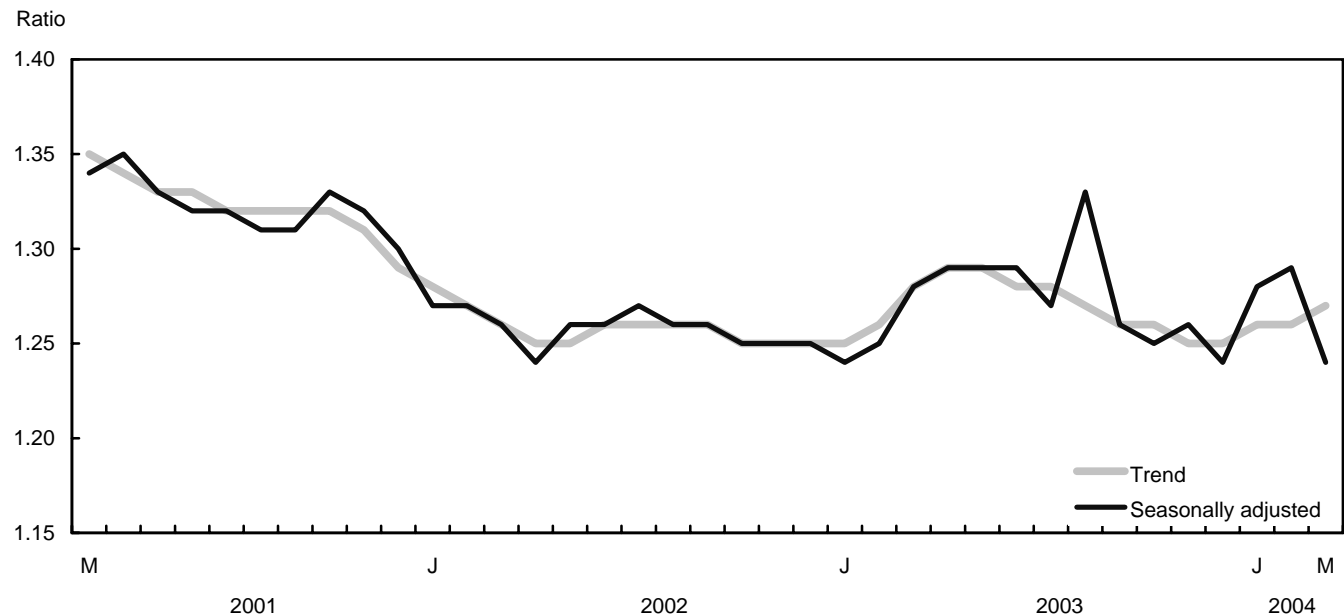
March's increase in sales masks a disappointing quarter for the automotive sector

Despite the increase registered in March, sales in the automotive sector suffered the most during the first quarter of the year. They fell 8.6% compared with the fourth quarter of 2003, largely offsetting the gains (+9.1%) registered in the previous quarter. Compared to the first quarter of 2003, sales declined steeply (-13.1%). Sales in this sector began to show signs of weakness in February 2003, after an exceptional year in 2002.

Wholesale sales of lumber and building materials advanced 8.3% in March. This increase enabled the sector to make a strong showing for the first quarter, rising 3.9% compared with the fourth quarter of 2003. This gain is partly attributable to a rise in the prices of certain building materials and a booming housing market. The lumber and building materials sector has generally been booming since the fourth quarter of 2001.

Chart 2

Inventory-to-sales ratio



Wholesalers of household goods register a fifth consecutive monthly decline

Wholesalers of household goods saw their sales fall 0.4% in March. This is the fifth consecutive decline. Compared with March 2003, the sales of this sector were down 4.6%. Nevertheless, since January 2003, wholesalers of household goods have seen their purchasing costs fall substantially as a result of the appreciation of the Canadian dollar. This has led to a reduction in their selling prices, coupled by an increase in their sales volumes.

Almost all provinces register an increase

In March, wholesale sales rose in nine provinces. The largest gains were reported in Prince Edward Island (+6.7%), Saskatchewan (+6.2%) and Quebec (+5.7%).

Wholesalers in both Prince Edward Island and Quebec benefited from increased sales in food products and the other products category. Saskatchewan wholesalers saw increases in the other products category (chemicals and other agricultural supplies) and the automotive sector.

Wholesale sales in Manitoba declined in March (-0.5%). Despite this decrease, sales made a strong showing in the first quarter, increasing 4.0% compared with the fourth quarter of 2003. This rebound in wholesale sales followed two especially difficult quarters. Compared with the same period in 2003, first quarter sales were up 3.1%.

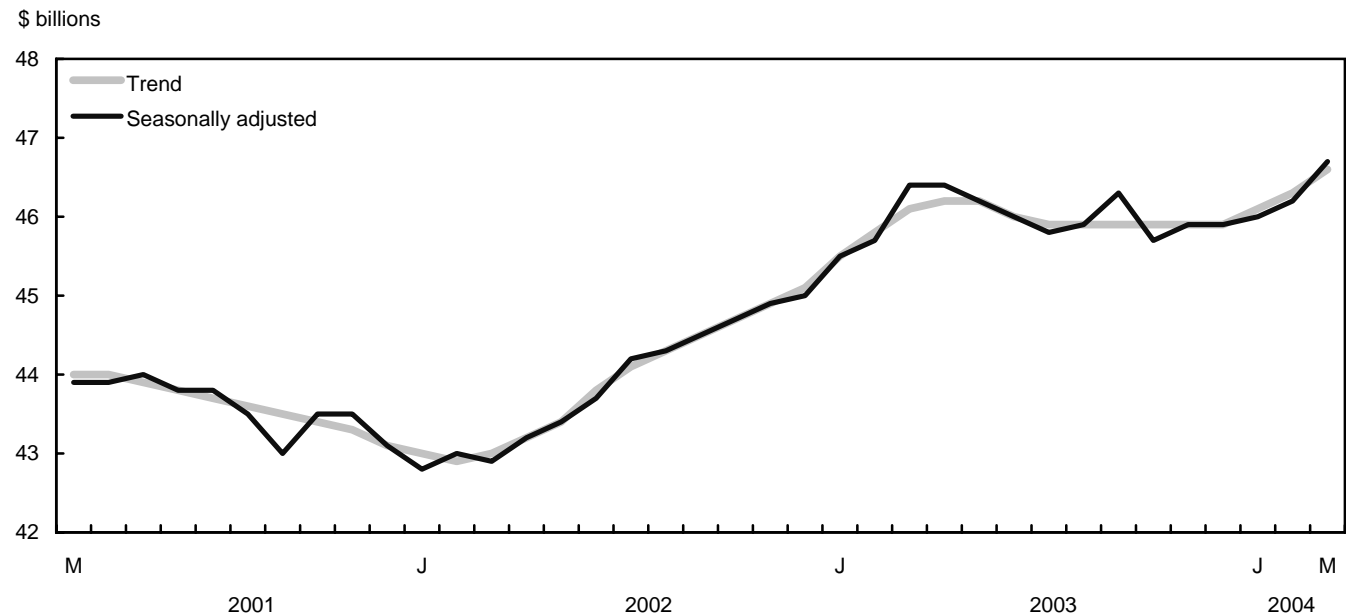
Wholesalers build up their inventories

Wholesalers' inventories rose substantially in March (+1.0%) to \$46.7 billion. This rise was largely attributable to the automotive sector and the metals and hardware sector. This increase follows a period of relative stability that began in early 2003. Prior to this, wholesalers had strongly increased their inventories in 2002.

Despite the rise in inventories, the much larger increase in sales caused the inventory-to-sales ratio to fall sharply, dropping from 1.29 in February to 1.24 in March.

Chart 3

Inventories



Related products

Selected CANSIM tables from Statistics Canada

| | |
|----------|---|
| 081-0001 | Wholesale trade, inventories by trade group |
| 081-0002 | Wholesale trade, sales by trade group |

Note on CANSIM

All current and historical statistics on Wholesale Trade (tables 0810001-0810002) as well as many other series are available to the public from Statistics Canada's computerized data bank CANSIM (Canadian Socio-Economic Information Management System) via terminal, on computer printouts, or in machine readable form

For further information, please visit CANSIM.

Selected surveys from Statistics Canada

| | |
|------|----------------------------------|
| 2401 | Wholesale Trade Survey (Monthly) |
|------|----------------------------------|

Selected tables of Canadian statistics from Statistics Canada

- *Canadian Statistics - Wholesale merchants' sales*
- *Canadian Statistics - Wholesale merchants' inventories*
- *Canadian Statistics - Wholesale sales*
- *Canadian Statistics - Wholesale sales, Canada, the provinces and territories*
- *Canadian Statistics - Wholesale inventories*

Statistical Tables

Table 1-1

Wholesale merchant sales, by trade group and region, seasonally adjusted - Sales

| | March ^p 2004 | February ^r 2004 | January ^r 2004 | December 2003 | Year-to-date 2004 |
|--|----------------------------|-------------------------------|------------------------------|------------------|----------------------|
| | millions of dollars | | | | |
| Trade Group - Canada | | | | | |
| Food products | 5,763 | 5,688 | 5,702 | 5,620 | 17,153 |
| Beverage, drug and tobacco products | 3,649 | 3,541 | 3,617 | 3,566 | 10,807 |
| Apparel and dry goods | 627 | 609 | 610 | 649 | 1,847 |
| Household goods | 999 | 1,003 | 1,017 | 1,031 | 3,018 |
| Motor vehicles, parts and accessories | 6,545 | 5,912 | 6,146 | 7,008 | 18,603 |
| Metals, hardware, plumbing and heating equipment and supplies | 2,380 | 2,293 | 2,197 | 2,158 | 6,870 |
| Lumber and building materials | 3,444 | 3,180 | 3,027 | 3,129 | 9,651 |
| Farm machinery, equipment and supplies | 740 | 687 | 653 | 661 | 2,080 |
| Industrial and other machinery, equipment and supplies | 5,240 | 5,051 | 4,923 | 5,066 | 15,214 |
| Computers, packaged software and other electronic machinery | 2,720 | 2,726 | 2,810 | 2,810 | 8,256 |
| Other products | 5,462 | 5,241 | 5,221 | 5,269 | 15,923 |
| Total, all trade groups | 37,568 | 35,931 | 35,922 | 36,967 | 109,421 |
| Regions | | | | | |
| Newfoundland and Labrador | 240 | 228 | 231 | 236 | 699 |
| Prince Edward Island | 66 | 62 | 60 | 60 | 189 |
| Nova Scotia | 651 | 618 | 593 | 613 | 1,861 |
| New Brunswick | 463 | 449 | 452 | 446 | 1,365 |
| Quebec | 7,956 | 7,530 | 7,415 | 7,526 | 22,900 |
| Ontario | 18,434 | 17,532 | 17,767 | 18,450 | 53,733 |
| Manitoba | 1,076 | 1,082 | 1,044 | 1,027 | 3,203 |
| Saskatchewan | 1,004 | 946 | 973 | 995 | 2,924 |
| Alberta | 4,120 | 4,030 | 3,945 | 3,974 | 12,096 |
| British Columbia | 3,524 | 3,426 | 3,413 | 3,611 | 10,364 |
| Yukon Territory | 10 | 10 | 10 | 10 | 30 |
| Northwest Territories | 21 | 16 | 17 | 19 | 54 |
| Nunavut | 1 | 1 | 1 | 1 | 4 |

Table 1-2

Wholesale merchant sales, by trade group and region, seasonally adjusted - % change from previous month

| | March ^p 2004 | February ^r 2004 | January ^r 2004 | December 2003 |
|--|----------------------------|-------------------------------|------------------------------|------------------|
| | percentage | | | |
| Trade Group - Canada | | | | |
| Food products | 1.3 | -0.2 | 1.5 | -1.7 |
| Beverage, drug and tobacco products | 3.0 | -2.1 | 1.4 | 2.5 |
| Apparel and dry goods | 3.0 | -0.2 | -5.9 | 2.7 |
| Household goods | -0.4 | -1.4 | -1.4 | -1.1 |
| Motor vehicles, parts and accessories | 10.7 | -3.8 | -12.3 | 5.3 |
| Metals, hardware, plumbing and heating equipment and supplies | 3.8 | 4.4 | 1.8 | 2.9 |
| Lumber and building materials | 8.3 | 5.0 | -3.3 | 2.0 |
| Farm machinery, equipment and supplies | 7.6 | 5.2 | -1.2 | -2.1 |
| Industrial and other machinery, equipment and supplies | 3.8 | 2.6 | -2.8 | -0.7 |
| Computers, packaged software and other electronic machinery | -0.2 | -3.0 | 0.0 | -1.1 |
| Other products | 4.2 | 0.4 | -0.9 | 0.7 |
| Total, all trade groups | 4.6 | 0.0 | -2.8 | 1.2 |
| Regions | | | | |
| Newfoundland and Labrador | 5.5 | -1.5 | -2.1 | 1.6 |
| Prince Edward Island | 6.7 | 3.4 | 0.1 | 1.7 |
| Nova Scotia | 5.3 | 4.3 | -3.3 | -2.3 |
| New Brunswick | 3.2 | -0.8 | 1.5 | -2.0 |
| Quebec | 5.7 | 1.5 | -1.5 | 1.1 |
| Ontario | 5.1 | -1.3 | -3.7 | 1.5 |
| Manitoba | -0.5 | 3.6 | 1.7 | -1.3 |
| Saskatchewan | 6.2 | -2.8 | -2.2 | -7.8 |
| Alberta | 2.2 | 2.2 | -0.7 | 1.7 |
| British Columbia | 2.9 | 0.4 | -5.5 | 3.3 |
| Yukon Territory | -1.3 | 9.5 | 0.1 | 3.5 |
| Northwest Territories | 30.2 | -5.0 | -10.8 | 16.1 |
| Nunavut | -12.2 | -3.5 | 33.5 | -18.3 |

Table 1-3

Wholesale merchant sales, by trade group and region, seasonally adjusted - % change from previous year

| | March ^p 2004 | February ^r 2004 | January ^r 2004 | December 2003 | Year-to-date 2004 |
|--|----------------------------|-------------------------------|------------------------------|------------------|----------------------|
| | percentage | | | | |
| Trade Group - Canada | | | | | |
| Food products | -0.4 | -1.8 | -2.0 | -3.3 | -1.4 |
| Beverage, drug and tobacco products | 17.3 | 14.2 | 17.4 | 19.6 | 16.3 |
| Apparel and dry goods | -4.2 | -1.8 | -9.9 | -1.4 | -5.4 |
| Household goods | -4.6 | -1.1 | -4.2 | -3.2 | -3.3 |
| Motor vehicles, parts and accessories | -5.1 | -17.7 | -16.2 | -2.7 | -13.1 |
| Metals, hardware, plumbing and heating equipment and supplies | 7.8 | 5.7 | -0.9 | 0.6 | 4.2 |
| Lumber and building materials | 23.0 | 10.9 | 3.9 | 8.1 | 12.5 |
| Farm machinery, equipment and supplies | -4.4 | -6.4 | -10.0 | -8.4 | -6.9 |
| Industrial and other machinery, equipment and supplies | 6.1 | 3.3 | 0.0 | 3.8 | 3.1 |
| Computers, packaged software and other electronic machinery | -1.0 | -8.3 | -0.7 | 5.7 | -3.4 |
| Other products | 5.4 | 1.8 | 3.2 | 3.7 | 3.5 |
| Total, all trade groups | 3.9 | -1.5 | -2.0 | 2.4 | 0.1 |
| Regions | | | | | |
| Newfoundland and Labrador | 11.4 | 7.9 | 8.9 | 9.7 | 9.4 |
| Prince Edward Island | 14.0 | 5.3 | 12.6 | 7.6 | 10.6 |
| Nova Scotia | 4.2 | -2.3 | -7.1 | -1.9 | -1.8 |
| New Brunswick | 3.5 | -0.5 | 0.2 | 0.5 | 1.1 |
| Quebec | 9.3 | 4.1 | 0.0 | 4.8 | 4.4 |
| Ontario | 1.8 | -4.9 | -3.7 | 1.5 | -2.3 |
| Manitoba | 1.7 | 3.3 | 4.5 | -1.1 | 3.1 |
| Saskatchewan | -5.0 | -11.8 | -7.7 | -8.2 | -8.2 |
| Alberta | 9.6 | 6.8 | 5.9 | 5.6 | 7.4 |
| British Columbia | 0.4 | -3.6 | -5.5 | 3.7 | -2.9 |
| Yukon Territory | 2.9 | 5.8 | -13.0 | 0.5 | -1.8 |
| Northwest Territories | 14.4 | 22.4 | -3.2 | 8.1 | 10.3 |
| Nunavut | -38.2 | -27.3 | -37.2 | -49.0 | -34.5 |

Table 2-1

Wholesale merchants sales, by trade group and region, not seasonally adjusted - Sales

| | March ^p 2004 | February ^r 2004 | January 2004 | December 2003 | Year-to-date 2004 |
|--|----------------------------|-------------------------------|-----------------|------------------|----------------------|
| | millions of dollars | | | | |
| Trade Group - Canada | | | | | |
| Food products | 5,677 | 5,049 | 5,310 | 6,200 | 16,036 |
| Beverage, drug and tobacco products | 3,641 | 3,150 | 3,312 | 3,677 | 10,103 |
| Apparel and dry goods | 745 | 636 | 478 | 421 | 1,859 |
| Household goods | 1,009 | 807 | 799 | 1,091 | 2,615 |
| Motor vehicles, parts and accessories | 7,788 | 5,819 | 5,312 | 5,880 | 18,919 |
| Metals, hardware, plumbing and heating equipment and supplies | 2,528 | 2,091 | 1,911 | 1,834 | 6,530 |
| Lumber and building materials | 3,087 | 2,407 | 2,257 | 2,508 | 7,751 |
| Farm machinery, equipment and supplies | 725 | 482 | 422 | 575 | 1,630 |
| Industrial and other machinery, equipment and supplies | 5,985 | 4,736 | 4,511 | 5,272 | 15,232 |
| Computers, packaged software and other electronic machinery | 3,417 | 2,541 | 2,677 | 3,435 | 8,635 |
| Other products | 5,729 | 4,650 | 4,473 | 4,764 | 14,852 |
| Total, all trade groups | 40,332 | 32,367 | 31,463 | 35,657 | 104,161 |
| Regions | | | | | |
| Newfoundland and Labrador | 225 | 177 | 186 | 223 | 587 |
| Prince Edward Island | 54 | 43 | 45 | 56 | 142 |
| Nova Scotia | 631 | 488 | 492 | 668 | 1,610 |
| New Brunswick | 445 | 367 | 373 | 420 | 1,185 |
| Quebec | 8,384 | 6,746 | 6,428 | 7,087 | 21,559 |
| Ontario | 20,448 | 16,187 | 15,646 | 17,839 | 52,281 |
| Manitoba | 1,046 | 892 | 846 | 943 | 2,785 |
| Saskatchewan | 978 | 729 | 783 | 883 | 2,491 |
| Alberta | 4,243 | 3,554 | 3,537 | 4,122 | 11,333 |
| British Columbia | 3,838 | 3,158 | 3,105 | 3,390 | 10,101 |
| Yukon Territory | 9 | 8 | 7 | 8 | 23 |
| Northwest Territories | 31 | 18 | 13 | 16 | 61 |
| Nunavut | 1 | 1 | 1 | 1 | 3 |

Table 2-2

Wholesale merchants sales, by trade group and region, not seasonally adjusted - % change from previous year

| | March ^p 2004 | February ^r 2004 | January 2004 | December 2003 | Year-to-date 2004 |
|--|----------------------------|-------------------------------|-----------------|------------------|----------------------|
| | percentage | | | | |
| Trade Group - Canada | | | | | |
| Food products | 2.3 | -0.5 | -2.3 | 0.0 | -0.1 |
| Beverage, drug and tobacco products | 23.3 | 15.4 | 14.5 | 22.1 | 17.8 |
| Apparel and dry goods | 0.4 | -1.9 | -10.5 | 1.7 | -3.4 |
| Household goods | 0.6 | 1.1 | -6.4 | -0.8 | -1.5 |
| Motor vehicles, parts and accessories | 0.7 | -17.0 | -18.3 | -0.5 | -11.0 |
| Metals, hardware, plumbing and heating equipment and supplies | 17.1 | 8.2 | -4.8 | 4.7 | 7.1 |
| Lumber and building materials | 30.0 | 12.0 | 1.2 | 12.3 | 14.8 |
| Farm machinery, equipment and supplies | 3.3 | -3.8 | -13.6 | -7.7 | -3.7 |
| Industrial and other machinery, equipment and supplies | 13.4 | 4.7 | -3.3 | 7.4 | 5.3 |
| Computers, packaged software and other electronic machinery | 1.2 | -7.5 | -0.2 | 8.5 | -1.9 |
| Other products | 11.0 | 2.4 | 0.4 | 7.6 | 4.9 |
| Total, all trade groups | 8.9 | -0.9 | -3.9 | 5.7 | 1.7 |
| Regions | | | | | |
| Newfoundland and Labrador | 16.7 | 7.3 | 6.5 | 11.9 | 10.5 |
| Prince Edward Island | 17.6 | 4.0 | 6.0 | 4.9 | 9.4 |
| Nova Scotia | 6.0 | -1.3 | -7.9 | -1.5 | -0.8 |
| New Brunswick | 8.7 | 0.1 | -2.0 | 0.5 | 2.5 |
| Quebec | 14.5 | 4.6 | -1.9 | 7.0 | 6.1 |
| Ontario | 6.7 | -4.3 | -5.6 | 5.5 | -0.7 |
| Manitoba | 5.9 | 5.7 | 0.5 | 0.2 | 4.1 |
| Saskatchewan | 1.6 | -13.7 | -12.2 | -6.5 | -7.7 |
| Alberta | 16.2 | 8.3 | 4.3 | 9.3 | 9.8 |
| British Columbia | 4.6 | -2.5 | -6.9 | 6.3 | -1.4 |
| Yukon Territory | 9.6 | 11.7 | -11.8 | -1.0 | 3.2 |
| Northwest Territories | 35.4 | 4.4 | -5.2 | 25.8 | 14.9 |
| Nunavut | -20.5 | -27.0 | -33.2 | -27.9 | -26.5 |

Table 3-1

Wholesale merchants sample, weighted response rate (current periods)

| | March ^p 2004 | February ^r 2004 | January 2004 | December 2003 |
|--|----------------------------|-------------------------------|-----------------|------------------|
| | percentage | | | |
| Trade Group - Canada | | | | |
| Food products | 92.6 | 94.5 | 94.2 | 94.7 |
| Beverage, drug and tobacco products | 91.0 | 96.5 | 95.5 | 95.3 |
| Apparel and dry goods | 83.0 | 88.5 | 86.3 | 87.4 |
| Household goods | 92.3 | 95.9 | 96.5 | 96.1 |
| Motor vehicles, parts and accessories | 97.4 | 97.7 | 97.9 | 96.1 |
| Metals, hardware, plumbing and heating equipment and supplies | 93.3 | 92.2 | 93.6 | 91.8 |
| Lumber and building materials | 94.3 | 90.1 | 90.0 | 90.8 |
| Farm machinery, equipment and supplies | 81.9 | 81.4 | 85.5 | 83.7 |
| Industrial and other machinery, equipment and supplies | 80.5 | 86.7 | 81.5 | 79.7 |
| Computers, packaged software and other electronic machinery | 71.3 | 93.0 | 92.3 | 89.7 |
| Other products | 87.0 | 91.0 | 89.3 | 90.3 |
| Total, all trade groups | 88.8 | 92.8 | 91.8 | 91.1 |
| Regions | | | | |
| Newfoundland and Labrador | 89.7 | 90.7 | 90.8 | 86.3 |
| Prince Edward Island | 75.4 | 75.7 | 76.8 | 79.6 |
| Nova Scotia | 90.3 | 90.4 | 89.8 | 89.6 |
| New Brunswick | 91.3 | 92.6 | 93.2 | 90.9 |
| Quebec | 86.7 | 93.1 | 92.8 | 92.6 |
| Ontario | 89.9 | 94.3 | 92.8 | 91.9 |
| Manitoba | 88.3 | 87.1 | 87.5 | 88.0 |
| Saskatchewan | 86.9 | 87.7 | 86.3 | 84.5 |
| Alberta | 88.7 | 90.7 | 90.3 | 90.4 |
| British Columbia | 87.6 | 90.0 | 88.9 | 87.9 |
| Yukon Territory | 88.2 | 92.1 | 85.7 | 85.3 |
| Northwest Territories | 92.0 | 90.4 | 85.6 | 85.2 |
| Nunavut | 64.3 | 61.7 | 74.2 | 68.6 |

Table 3-2

Wholesale merchants sample, coefficient of variation (current periods)

| | March ^p 2004 | February ^r 2004 | January 2004 | December 2003 |
|--|----------------------------|-------------------------------|-----------------|------------------|
| | percentage | | | |
| Trade Group - Canada | | | | |
| Food products | 2.3 | 2.3 | 2.3 | 2.2 |
| Beverage, drug and tobacco products | 2.1 | 2.5 | 1.8 | 1.9 |
| Apparel and dry goods | 9.7 | 8.2 | 10.0 | 7.6 |
| Household goods | 6.2 | 6.5 | 6.3 | 5.1 |
| Motor vehicles, parts and accessories | 1.8 | 1.9 | 1.8 | 1.9 |
| Metals, hardware, plumbing and heating equipment and supplies | 4.6 | 5.9 | 5.3 | 5.5 |
| Lumber and building materials | 5.1 | 4.8 | 4.0 | 3.8 |
| Farm machinery, equipment and supplies | 6.2 | 6.9 | 5.2 | 5.2 |
| Industrial and other machinery, equipment and supplies | 3.3 | 3.3 | 3.1 | 2.9 |
| Computers, packaged software and other electronic machinery | 3.7 | 5.1 | 5.3 | 5.1 |
| Other products | 4.4 | 4.3 | 3.9 | 3.6 |
| Total, all trade groups | 1.1 | 1.2 | 1.1 | 1.1 |
| Regions | | | | |
| Newfoundland and Labrador | 3.5 | 3.7 | 3.8 | 3.8 |
| Prince Edward Island | 9.5 | 10.1 | 10.7 | 7.7 |
| Nova Scotia | 6.8 | 6.0 | 4.8 | 8.4 |
| New Brunswick | 2.5 | 2.7 | 2.1 | 2.9 |
| Quebec | 3.7 | 3.6 | 3.2 | 3.0 |
| Ontario | 1.4 | 1.4 | 1.3 | 1.3 |
| Manitoba | 3.0 | 4.2 | 4.2 | 4.5 |
| Saskatchewan | 5.4 | 4.6 | 6.6 | 5.7 |
| Alberta | 2.9 | 3.4 | 3.0 | 2.5 |
| British Columbia | 3.1 | 4.2 | 4.8 | 4.5 |
| Yukon Territory | 0.8 | 0.8 | 1.0 | 0.8 |
| Northwest Territories | 0.0 | 0.0 | 0.0 | 0.0 |
| Nunavut | 0.0 | 0.0 | 0.0 | 0.0 |

Table 4-1

Wholesale merchants inventories, by trade group, seasonally adjusted - Inventories

| | March ^p 2004 | February ^r 2004 | January ^r 2004 | December 2003 |
|--|----------------------------|-------------------------------|------------------------------|------------------|
| | millions of dollars | | | |
| Trade Group - Canada | | | | |
| Food products | 3,730 | 3,664 | 3,679 | 3,682 |
| Beverage, drug and tobacco products | 3,755 | 3,759 | 3,780 | 3,804 |
| Apparel and dry goods | 1,284 | 1,289 | 1,296 | 1,304 |
| Household goods | 1,746 | 1,723 | 1,748 | 1,753 |
| Motor vehicles, parts and accessories | 7,191 | 7,020 | 6,899 | 6,917 |
| Metals, hardware, plumbing and heating equipment and supplies | 3,876 | 3,781 | 3,742 | 3,649 |
| Lumber and building materials | 4,831 | 4,785 | 4,719 | 4,658 |
| Farm machinery, equipment and supplies | 2,158 | 2,158 | 2,074 | 2,073 |
| Industrial and other machinery, equipment and supplies | 9,979 | 9,967 | 9,913 | 9,904 |
| Computers, packaged software and other electronic machinery | 1,823 | 1,822 | 1,848 | 1,936 |
| Other products | 6,313 | 6,274 | 6,267 | 6,261 |
| Total, all trade groups | 46,687 | 46,242 | 45,964 | 45,941 |

Table 4-2

Wholesale merchants inventories, by trade group, seasonally adjusted - % change from previous month

| | March ^p 2004 | February ^r 2004 | January ^r 2004 | December 2003 |
|--|----------------------------|-------------------------------|------------------------------|------------------|
| | percentage | | | |
| Trade Group - Canada | | | | |
| Food products | 1.8 | -0.4 | -0.1 | -0.5 |
| Beverage, drug and tobacco products | -0.1 | -0.6 | -0.6 | 4.4 |
| Apparel and dry goods | -0.3 | -0.6 | -0.6 | -1.7 |
| Household goods | 1.3 | -1.5 | -0.3 | -0.1 |
| Motor vehicles, parts and accessories | 2.4 | 1.8 | -0.3 | -2.4 |
| Metals, hardware, plumbing and heating equipment and supplies | 2.5 | 1.0 | 2.5 | 1.6 |
| Lumber and building materials | 1.0 | 1.4 | 1.3 | 0.8 |
| Farm machinery, equipment and supplies | 0.0 | 4.1 | 0.0 | 0.1 |
| Industrial and other machinery, equipment and supplies | 0.1 | 0.5 | 0.1 | -0.6 |
| Computers, packaged software and other electronic machinery | 0.0 | -1.4 | -4.6 | 0.0 |
| Other products | 0.6 | 0.1 | 0.1 | 1.0 |
| Total, all trade groups | 1.0 | 0.6 | 0.1 | 0.1 |

Table 4-3

Wholesale merchants inventories, by trade group, seasonally adjusted - % change from previous year

| | March ^p 2004 | February ^r 2004 | January ^r 2004 | December 2003 |
|--|----------------------------|-------------------------------|------------------------------|------------------|
| | percentage | | | |
| Trade Group - Canada | | | | |
| Food products | 5.9 | 7.8 | 9.1 | 8.0 |
| Beverage, drug and tobacco products | 2.0 | 5.2 | 7.6 | 11.4 |
| Apparel and dry goods | -5.2 | -2.2 | -5.9 | -2.0 |
| Household goods | -2.3 | -0.1 | 2.7 | 0.7 |
| Motor vehicles, parts and accessories | 0.3 | 2.6 | -1.0 | 3.9 |
| Metals, hardware, plumbing and heating equipment and supplies | 1.5 | -0.3 | -1.0 | -3.3 |
| Lumber and building materials | 3.8 | 4.5 | 3.9 | 4.5 |
| Farm machinery, equipment and supplies | 10.8 | 12.3 | 9.1 | 11.2 |
| Industrial and other machinery, equipment and supplies | -1.8 | -1.0 | -2.1 | -2.8 |
| Computers, packaged software and other electronic machinery | -2.9 | -6.9 | -6.7 | -7.3 |
| Other products | -2.0 | -3.2 | 0.6 | 2.3 |
| Total, all trade groups | 0.6 | 1.3 | 1.1 | 2.0 |

Table 5-1

Wholesale merchants inventories, by trade group, not seasonally adjusted - Inventories

| | March ^p 2004 | February ^r 2004 | January 2004 | December 2003 |
|--|----------------------------|-------------------------------|-----------------|------------------|
| | millions of dollars | | | |
| Trade Group - Canada | | | | |
| Food products | 3,667 | 3,572 | 3,627 | 3,868 |
| Beverage, drug and tobacco products | 3,823 | 3,737 | 3,711 | 3,856 |
| Apparel and dry goods | 1,262 | 1,343 | 1,307 | 1,242 |
| Household goods | 1,661 | 1,688 | 1,644 | 1,669 |
| Motor vehicles, parts and accessories | 7,692 | 7,352 | 6,963 | 6,691 |
| Metals, hardware, plumbing and heating equipment and supplies | 3,911 | 3,780 | 3,710 | 3,602 |
| Lumber and building materials | 5,092 | 4,810 | 4,547 | 4,428 |
| Farm machinery, equipment and supplies | 2,270 | 2,204 | 2,003 | 1,957 |
| Industrial and other machinery, equipment and supplies | 9,920 | 9,951 | 9,822 | 9,737 |
| Computers, packaged software and other electronic machinery | 1,862 | 1,881 | 1,916 | 1,991 |
| Other products | 6,794 | 6,438 | 6,234 | 6,088 |
| Total, all trade groups | 47,954 | 46,756 | 45,484 | 45,128 |

Table 5-2

Wholesale merchants inventories, by trade group, not seasonally adjusted - % change from previous year

| | March ^p 2004 | February ^r 2004 | January 2004 | December 2003 |
|--|----------------------------|-------------------------------|-----------------|------------------|
| | percentage | | | |
| Trade Group - Canada | | | | |
| Food products | 6.7 | 7.1 | 8.9 | 8.0 |
| Beverage, drug and tobacco products | 1.9 | 5.0 | 7.9 | 12.9 |
| Apparel and dry goods | -5.3 | -3.5 | -5.7 | -2.6 |
| Household goods | -2.0 | 0.7 | 3.0 | 1.0 |
| Motor vehicles, parts and accessories | 0.9 | 1.8 | -1.7 | 2.5 |
| Metals, hardware, plumbing and heating equipment and supplies | 2.1 | -1.3 | -1.4 | -3.5 |
| Lumber and building materials | 4.2 | 5.2 | 3.7 | 4.3 |
| Farm machinery, equipment and supplies | 11.5 | 14.1 | 8.8 | 10.6 |
| Industrial and other machinery, equipment and supplies | -1.9 | -1.9 | -2.2 | -3.2 |
| Computers, packaged software and other electronic machinery | -2.5 | -6.9 | -6.6 | -6.1 |
| Other products | -1.5 | -0.8 | 0.9 | 2.8 |
| Total, all trade groups | 0.9 | 1.2 | 0.8 | 1.9 |

Table 6-1

Wholesale merchants, inventories/sales ratio, seasonally adjusted, by trade group

| | Inventories/sales ratio | | | |
|--|----------------------------|-------------------------------|------------------------------|------------------|
| | March ^p 2004 | February ^r 2004 | January ^r 2004 | December 2003 |
| Trade Group - Canada | | | | |
| Food products | 0.00 | 0.64 | 0.64 | 0.66 |
| Beverage, drug and tobacco products | 0.00 | 1.07 | 1.05 | 1.07 |
| Apparel and dry goods | 0.00 | 2.09 | 2.12 | 2.01 |
| Household goods | 0.00 | 1.70 | 1.72 | 1.70 |
| Motor vehicles, parts and accessories | 0.00 | 1.18 | 1.12 | 0.99 |
| Metals, hardware, plumbing and heating equipment and supplies | 0.00 | 1.63 | 1.70 | 1.69 |
| Lumber and building materials | 0.00 | 1.50 | 1.56 | 1.49 |
| Farm machinery, equipment and supplies | 0.00 | 3.06 | 3.18 | 3.14 |
| Industrial and other machinery, equipment and supplies | 0.00 | 1.98 | 2.01 | 1.95 |
| Computers, packaged software and other electronic machinery | 0.00 | 0.67 | 0.66 | 0.69 |
| Other products | 0.00 | 1.19 | 1.20 | 1.19 |
| Total, all trade groups | 0.00 | 1.28 | 1.28 | 1.24 |

Table 6-2

Wholesale merchants, inventories/sales ratio, seasonally adjusted, by trade group

| | Inventories/sales ratio | | | |
|--|-------------------------|------------------|-----------------|------------------|
| | March 2003 | February 2003 | January 2003 | December 2002 |
| Trade Group - Canada | | | | |
| Food products | 0.61 | 0.59 | 0.58 | 0.59 |
| Beverage, drug and tobacco products | 1.18 | 1.15 | 1.14 | 1.15 |
| Apparel and dry goods | 2.07 | 2.13 | 2.03 | 2.02 |
| Household goods | 1.71 | 1.70 | 1.60 | 1.63 |
| Motor vehicles, parts and accessories | 1.04 | 0.95 | 0.95 | 0.92 |
| Metals, hardware, plumbing and heating equipment and supplies | 1.73 | 1.75 | 1.70 | 1.76 |
| Lumber and building materials | 1.66 | 1.60 | 1.56 | 1.54 |
| Farm machinery, equipment and supplies | 2.52 | 2.62 | 2.62 | 2.58 |
| Industrial and other machinery, equipment and supplies | 2.06 | 2.06 | 2.06 | 2.09 |
| Computers, packaged software and other electronic machinery | 0.68 | 0.66 | 0.70 | 0.79 |
| Other products | 1.24 | 1.26 | 1.23 | 1.20 |
| Total, all trade groups | 1.28 | 1.25 | 1.24 | 1.25 |

Table 7-1

Wholesale merchants sample, weighted response rate for inventories (current periods)

| | March ^p 2004 | February ^r 2004 | January 2004 | December 2003 |
|--|----------------------------|-------------------------------|-----------------|------------------|
| | percentage | | | |
| Trade Group - Canada | | | | |
| Food products | 81.8 | 85.7 | 82.9 | 83.9 |
| Beverage, drug and tobacco products | 90.3 | 95.1 | 93.2 | 93.7 |
| Apparel and dry goods | 62.9 | 68.1 | 69.3 | 70.8 |
| Household goods | 87.0 | 89.5 | 90.2 | 89.4 |
| Motor vehicles, parts and accessories | 89.0 | 91.7 | 90.5 | 90.1 |
| Metals, hardware, plumbing and heating equipment and supplies | 89.0 | 91.3 | 90.8 | 89.6 |
| Lumber and building materials | 80.2 | 79.7 | 81.5 | 80.8 |
| Farm machinery, equipment and supplies | 71.4 | 72.2 | 73.2 | 74.6 |
| Industrial and other machinery, equipment and supplies | 78.7 | 78.1 | 77.6 | 76.5 |
| Computers, packaged software and other electronic machinery | 64.4 | 72.7 | 67.1 | 74.1 |
| Other products | 75.0 | 78.6 | 75.7 | 79.5 |
| Total, all trade groups | 81.0 | 83.1 | 82.1 | 82.6 |

Table 7-2

Wholesale merchants sample, coefficient of variation for inventories (current periods)

| | March ^p 2004 | February ^r 2004 | January 2004 | December 2003 |
|--|----------------------------|-------------------------------|-----------------|------------------|
| | percentage | | | |
| Trade Group - Canada | | | | |
| Food products | 5.6 | 5.7 | 7.0 | 6.8 |
| Beverage, drug and tobacco products | 4.6 | 4.3 | 3.8 | 3.7 |
| Apparel and dry goods | 6.3 | 6.3 | 6.3 | 6.4 |
| Household goods | 9.6 | 9.7 | 9.4 | 9.9 |
| Motor vehicles, parts and accessories | 5.4 | 5.2 | 5.5 | 5.6 |
| Metals, hardware, plumbing and heating equipment and supplies | 6.5 | 6.5 | 7.1 | 7.3 |
| Lumber and building materials | 7.0 | 6.8 | 6.6 | 6.3 |
| Farm machinery, equipment and supplies | 8.7 | 8.8 | 8.8 | 8.3 |
| Industrial and other machinery, equipment and supplies | 4.0 | 3.9 | 3.8 | 3.8 |
| Computers, packaged software and other electronic machinery | 8.1 | 8.1 | 7.8 | 7.9 |
| Other products | 4.7 | 4.6 | 5.0 | 4.9 |
| Total, all trade groups | 1.9 | 1.8 | 1.9 | 1.8 |

Introduction

This publication presents estimates of monthly sales by wholesale merchant establishments for Canada, each province and territory. In addition to total sales, sales and inventories, as well as inventories to sales ratios appear for major trade groups based on the 1980 Standard Industrial Classification.

Sales figures are on a net basis (gross sales less returns, adjustments and discounts) whether on cash or credit, and exclude any taxes collected. Also included are commissions earned by wholesalers also acting as agents, while the sales of goods owned by others are excluded.

Inventory figures are the value of the goods owned and held for resale. Inventory in transit or on consignment is also included. Goods owned and held in inventory abroad, and inventories held on consignment from others are excluded.

The estimates contained in this publication are derived from a redesigned monthly survey which incorporates a revised list of wholesale businesses.

Establishments in wholesale trade are primarily engaged in selling merchandise to retailers, to industrial, commercial, institutional and professional users, to farmers for use in farm production, and for export; or acting as agents or brokers in buying or selling merchandise to such persons or organizations on a commission basis.

However, under the 1980 classification, sales to end-users of certain commodities (usually capital or investment goods) such as computer equipment, feed, seed or other farm supplies, lumber and building materials, trucks and commercial vehicles, and all types of machinery and equipment, are always classified to wholesale trade. A complete review of definitions and concepts appears in *Data quality, concepts and methodology — Definitions and concepts*.

Users should note that each month, unless otherwise indicated, this publication will contain preliminary estimates for the current month and revised estimates for the preceding month for the unadjusted series. The estimates of the seasonally adjusted series are revised for the preceding three months.

Definitions and concepts

The **establishment** is a statistical unit based primarily on the system of accounting used in the business. It is the smallest unit that is a separate operating entity capable of reporting those elements of input and output necessary for the calculation of gross margin, as well as employment, wages and salaries.

The **trading location** is defined as the physical outlet in which the business activity takes place. It is not necessarily dependent upon the availability of accounting-based data but must be capable of providing a limited range of statistics even though these may, in some instances, have to be estimated by the respondent. Where accounting records are available to measure the detailed business activity of the single location then the location will coincide with the establishment, otherwise two or more locations would belong to an establishment. The establishment can be an individual or a partnership, if unincorporated, or a single corporation or group of associated companies, and sometimes, the wholesaling divisions of retailing, manufacturing or other organizations.

Wholesalers may also be classified by type of operation, but this classification is independent of the industrial classification. The two main types of operations are: wholesale merchants and agents and brokers. Wholesalers primarily engaged in buying and/or selling merchandise on account of others on a commission basis (agents and brokers) as well as wholesale merchants of grain and petroleum products are excluded from this survey.

Wholesale merchants are establishments primarily engaged in selling merchandise to which they have title on their own account. In addition, they may perform one or more of the following related functions: breaking bulk, providing delivery service to customers, operating warehouse facilities for storage of the goods they sell. Included in this category are wholesalers known as: drop shippers or desk jobbers, export merchants, import merchants, mail order wholesalers, rack jobbers or voluntary general wholesale distributors. Wholesale merchants also include other wholesale operations sometimes known as assemblers of primary products which are primarily engaged in selling products from farmers, loggers, fishermen and trappers.

Agents and brokers are establishments primarily engaged in buying and/or selling, on a commission basis, products owned by others. They may be known as an auction company, commission merchant, import agent or broker, export agent or broker, manufacturers' agent, purchasing agent or resident buyer and selling agent, and may deal in any type of product including primary and petroleum products. Agricultural marketing boards engaged in the direct purchase of farm products are included as wholesalers.

Coverage. This current monthly survey covers wholesale merchant establishments. For purposes of industrial classification, wholesale merchants are classified by industry according to the principal lines of commodities sold. A description of each industry included in the accompanying statistical data is shown in Appendix I. As most businesses sell several kinds of commodities, the trade group code assigned generally reflects either the individual commodity or the commodity group which is the primary source of the establishment's receipts, or some mixture of commodities which characterizes the establishment's business. Sales to end-users of certain commodities (usually capital or investment goods) such as office furniture and computers, feed, seed or other farm supplies, lumber and building materials, trucks and commercial vehicles, fuel oil, and all types of machinery and equipment are always classified to wholesale trade.

The estimates shown for provincial sales are based on the locations operated by the wholesaler. Establishments provide a sales breakdown by province and for each territory along with the number of trading locations whereas inventories are reported for as a Canada total.

Survey methodology

The sample of the monthly wholesale trade survey is drawn from Statistics Canada's Central Frame Data Base (CFDB), part of which comprises businesses engaged in wholesale activity.

The target population is all wholesale merchant establishments, excluding those engaged in the wholesaling of grain and petroleum products. The sampling unit is the statistical company.

In December 1997, the sample design of the Monthly Wholesale Trade Survey was reviewed and changes were made to improve the efficiency of the sample. The first step was to exclude from the frame businesses that were no longer in operation in wholesale trade. The stratification of the businesses was revised in a manner that reflected the most up-to-date information available from Statistic Canada's Central Frame Data Base. Each stratum is first defined by the 1980 Standard Industrial Classification and geographic region. Each combination of industry and geography is divided into three substrata according to their size. The first substratum includes both large and complex businesses and is self-representing as businesses are included in the sample with certainty (a census) while the other two strata are only partially sampled. Some thresholds that separate the substrata were modified to reflect economic growth since the last survey redesign in 1988. It was ensured that the sampling rates would be sufficient to attain the desired precision for the estimates. A new sample was selected in order to maximize overlap with the old sample. Effective April 1998, estimates for the monthly wholesale trade survey were produced using this new sample. These improvements to the sample design look to provide a series of estimates for wholesale sales of higher quality.

In addition, the opportunity to incorporate historical revisions was also taken during the sample review and update. Consequently, monthly estimates were revised back to January 1993. Annual revisions were introduced with the January 1999 publication, and are now an on-going process.

Respondents are sent either a questionnaire or contacted by telephone to obtain their monthly sales. New entities to the survey are included in the New Entrant Survey, and are contacted by telephone to obtain information along with sales data.

Staff within Statistics Canada's five Regional Offices perform the telephone interviews, data capture activities, and follow-up of non-respondents. As well, preliminary editing of the captured data, and subsequent telephone follow-ups which may result due to edit failures, are performed within the Regional Offices. The edited data are transmitted regularly to the head office in Ottawa.

Further edits are performed at a more aggregate level (trade group by geographic level) to detect records which deviate from the expected, either by exhibiting large month-to-month change, or differing significantly from the remaining companies. All data failing these edits are subject to manual inspection and possible corrective action.

Once these edits are complete, imputation is applied to missing records. A variety of imputation methods are available. The imputation system automatically selects the appropriate method depending on the availability of the data. Possible imputation methods may be month-to-month trends, year-to-year trends, historical data, annual data, etc.

Reported or imputed data are then weighted to reflect the population. The weights applied to the survey data are equal to the ratio of the population and sample counts at the sample selection level. The selection level for the Monthly Wholesale Trade Survey is trade group by geographic area by size.

Domain estimation is used to produce the survey estimates. A domain is defined by the most recent classification data available from the frame (CFDB) for the statistical entity and reference period. Therefore, these domains may differ from the original sampling characteristics because records may have changed industry, location or size. These changes are reflected in the estimates as they occur on the CFDB. After the estimates are produced, a listing of the

top contributors to the estimates is produced. Individual records that make up a large proportion of the estimates are checked for consistency. Following validation and correction, the database is created.

Two sets of estimates are produced each month to incorporate late responses. Preliminary estimates are usually available 45 days following the reference month. Revised estimates are published the following month.

Data reliability

This publication presents estimates derived from a sample survey; as in any survey, they are subject to errors. The following section describes the sources of errors that may occur in a survey and is intended to assist the reader in the interpretation of the estimates.

Sources of errors

When a survey is conducted, numerous errors may affect the quality of the estimates obtained. These errors fall into two categories: sampling errors and non-sampling errors. The accuracy of the estimates obtained will depend on the combined effect of these two sources of errors.

Sampling errors

Sampling errors occur because data are collected for a part of the population only as opposed to the whole population, as would be the case in a census. The results derived from this survey will therefore likely be different than if a complete census had been taken under the same general survey conditions.

Sampling errors depend on factors such as the size of the sample, variability in the population, sample design and estimation method. For example, for a given size of sample, the sampling error will depend on the choice of sampling units, the stratification method, the allocation of the sample and the selection method.

Non-sampling errors

These errors are present whether a sample or a complete census of the population is taken. Non-sampling errors stem from several sources, the most important of which are described below.

Coverage error. This error stems from an incomplete sampling frame which results in inadequate coverage of the target population. For example, a unit that is missing from the list of wholesale merchants will not be represented in the sample.

Response error. This error may be due to questionnaire design and the characteristics of the question, inability or unwillingness of the respondent to provide correct information. It may also stem from misinterpretation of the questions because of definitional difficulties and the tendency of interviewers to explain questions or interpret responses differently.

Non-Response error. Some respondents may refuse to answer questions, some are unable to respond, while others may be too late in responding. The gaps left in the estimate by these non-respondents are filled by the assignment of an approximate response. The procedure used to assign these approximate values to units which do not respond and to units whose response was deemed unacceptable is called imputation. The data are imputed from earlier data provided by respondents. 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 imputed units in the survey. This error generally increases with the non-response rate and attempts are therefore made to obtain as high a response rate as possible.

Processing error. This error may occur at the various stages of processing such as coding, data entry, editing, etc.

Non-sampling errors are difficult to measure. Within the limitations of the budget and the human resources available, all attempts have been made to minimize this type of error in calculating the estimates contained in this publication. Units have been defined using the most up-to-date listing; the questionnaires have been designed so as to minimize differences of interpretation; testing has been carried out for the different stages of editing and processing. Moreover, non-respondents are followed up in order to reduce the non-response rate.

Measures of sampling and non-sampling error

Sampling error measure

The particular sample used in this survey is one of a large number of possible samples of the same size that could have been selected using the same sample design under the same conditions.

Coefficient of variation (CV) is a common measure which takes into account variation among estimates from all possible sample combinations. The CV is defined as the standard error expressed as a percentage of the estimate. By applying the CV of interest from Table 3-2, it is possible, through derivation of a confidence interval to predict, with a known probability, the range that the estimate would cover taking into account all possible samples. This range or interval is expected to cover the unknown value being estimated with the predicted probability.

For example, to establish a 95% confidence interval for not seasonally adjusted sales in Ontario one would use:

1. The provincial sales from Table 2-1; and
2. The coefficient of variation for the estimate from Table 3-2.

A 95% confidence interval is then constructed by adding or subtracting twice the value represented by applying the CV to the estimate, for example:

$$12,829,900 + \frac{(2 \times 1.5 (12,829,900))}{100}$$

or

$$12,829,900 - \frac{(2 \times 1.5 (12,829,900))}{100}$$

Thus, the confidence interval for this example would be:

\$12,445,003 to \$13,214,797.

Summarizing these findings, the best estimate for not seasonally adjusted sales in Ontario will be found in Table 2-1. One can be 95% confident that the unknown true value of sales lies in the interval between \$12,445,003 and \$13,214,797.

Non-sampling error measures

One source of non-sampling error is the non-response error. There are several measures that can help the user evaluate this type of error, among others; the response rate and the response fraction.

The **response rate** is a measure of the proportion of those sample units which have responded in time for inclusion in the estimate. To calculate the response rate, one should exclude from the sample, deaths as well as seasonal establishments closed during the month in question.

The **response fraction**, which is a measure of the data response rate, is the proportion of the estimate which is based upon actual reported data.

An example illustrates the two above measures. For example, a cell with 20 active sample units in which 10 respond for a particular month would have a response rate of 50%. However, if the 10 reporting units represented \$9 million out of a total of \$12 million, the response fraction would be 75%. Thus 25% of the estimate came from imputed data.

Joint interpretation of measures of error

The two measures 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. A lower coefficient of variation combined with a higher response rate and response fraction, will result in a better estimate.

Response fractions and coefficients of variation associated with each estimate appear in Table 3-2 and Table 7-2.

Other survey related issues

Seasonal adjustment

Socio-economic time series contain four basic components: the trend-cycle, the seasonal, the trading-day and the irregular components. The component of interest is usually the trend-cycle, which reflects the more fundamental evolution of the series (e.g. the business cycle), whereas the other components reflect short-term transient movements. Seasonal variations are caused by the direct and indirect effects of climatic and institutional seasons (e.g. Christmas); they tend to repeat from year to year. Trading-day variations originate from the fact that the relative importance of the days vary systematically within the week and that the number of each day in a given month varies from year to year. For instance, Sundays is typically less active than other days, and the number of Sundays, Mondays, etc., in July (say) changes from year to year. Finally, the irregular component is a residual which captures measurement errors and events which occur in an irregular manner.

Thus the seasonal, trading-day and irregular components all conceal the fundamental trend-cycle component of the series. Seasonal adjustment consists of removing the seasonal and the trading-day components from the series. Seasonal adjustment thus helps reveal the trend-cycle. However, one must bear in mind that the seasonally adjusted series contains not only the trend-cycle but also the irregular component (which is technically difficult to isolate for the current months). The month-to-month comparisons of the seasonally adjusted series are thus affected by the irregular fluctuations.

Many users of time series data view same-month comparisons as a substitute for seasonal adjustment. They should be aware of the limitations of such comparisons, especially in the presence of trading-day variations. A fall between October 1993 and October 1994, for instance, may entirely be due to the fact that October 1993 contained five of the more active days and four of the less active days of the week; and October 1994, four of the more active days of the week and five of the less active days. In the absence of trading-day variations (which is the case if all 7 days have same importance), same-month comparisons are still of limited value, because they measure the average movement over the 12-month period and not the most recent movements. For instance, same-month comparisons may indicate a continuing growth of activity, while in fact the trend-cycle has been falling for the last few months (which seasonal adjustment would reveal).

In order to seasonally adjust its time series, Statistics Canada uses the X-11-ARIMA method. The method is a combination of the ARIMA forecasting method and of the X-11 seasonal adjustment method, which is a ratio-to-moving average method.

During the transition period between the old and the new survey introduced in January 1989, the seasonally adjusted series obtained from the X-11-ARIMA method were smoothed by a three-month moving average. The need for such smoothing, which aimed at eliminating the disruptions introduced by the new survey design and methodology, has now disappeared. In 1991, the practice was discontinued, both for the current and the past estimates.

January 1999 introduced a re-examined and modified seasonally adjusted series. Improvements to the basis of the time series were introduced, as well as adjustments in the calculation of the Canada grand total series.

Wholesale Trade forms a system of 25 series: the Canada grand total, the 11 trade groups totals, and the 13 provincial / territorial totals. For non-seasonally adjusted series, the eleven trade group totals are summed to a Canada grand total for each month. Unfortunately, seasonal adjustment removes the additivity of a system of series; small discrepancies, which generally vary between -1% and 1%, are observed between the sum of the seasonally adjusted components and the seasonally adjusted grand total. Responding to the need of the series users, Statistics Canada now applies an harmonization process to the seasonally adjusted Wholesale Trade series, in order to restore their additivity. The process is such:

- (a) that the components are modified as little as possible in percentage;
- (b) that the components add to the grand total for each month and;
- (c) that, for each component, the monthly values add up to the yearly totals of the non-adjusted series.

As the seasonally adjusted grand total is obtained indirectly, i.e. by summing up the seasonally adjusted trade group series, the additivity is retained along this breakdown by definition. However, the seasonally adjusted provincial totals do not add to this grand total and they need to be harmonized (raked) to restore additivity.

Comparison to other sources

In December 1997, the sample design was reviewed and changes were made to improve the efficiency of the sample and the accuracy and reliability of the estimates.

The survey design is described in *Data quality, concepts and methodology — Survey methodology*. Notable improvements include the updating of the sample size and allocation, originally determined in 1988, to take into account the most up-to-date information on the characteristics of wholesale trade businesses. A parallel production of four months with the new sample indicated a change in the level of estimates. To avoid a break in the series, wholesale estimates were adjusted at the trade group by province level back to January 1993.

Also, from January 1993 to date, revisions have been made to the monthly wholesale trade micro data for a variety of reasons including: anomalies detected in the data, questionnaires received after the monthly deadline, retroactive information about the status of the business, and reconciliation between various sources of data.

Annual revisions were also introduced with the January 1999 publication, and continue as an on-going process.

From 1981 to the present, CANSIM contains converted monthly trade group and geographical data. Wholesale trade data can be found in tables 081-0001 and 081-0002.

Appendix I

Trade group coverage

011 Food Products

- 5211 Confectionery
- 5212 Frozen Foods (Packaged)
- 5213 Dairy Products
- 5214 Poultry and Eggs
- 5215 Fish and Seafood
- 5216 Fresh Fruit and Vegetables
- 5217 Meat and Meat Products
- 5219 Other Foods

012 Beverage, Drug and Tobacco Products

- 5221 Non-Alcoholic Beverages
- 5222 Alcoholic Beverages
- 5231 Drugs
- 5232 Toilet Soaps and Preparations
- 5239 Drug Sundries and Other Drugs and Toilet Preparations
- 5241 Tobacco Products

020 Apparel and Dry Goods

- 5311 Men's and Boy's Clothing and Furnishings
- 5312 Women's, Misses' and Children's Outerwear
- 5313 Women's, Misses' and Children's Hosiery, Underwear and Apparel Accessories
- 5314 Footwear
- 5319 Other Apparel
- 5321 Piece Goods
- 5329 Notions and Other Dry Goods

030 Household Goods

- 5411 Electrical Household Appliances
- 5412 Electronic Household Appliances
- 5421 Household Furniture
- 5431 China, Glassware, Crockery and Pottery
- 5432 Floor Coverings
- 5433 Linens, Draperies and Other Textile Furnishings
- 5439 Other Household Furnishings

040 Motor Vehicles, Parts and Accessories

- 5511 Automobiles
- 5512 Truck and Buses
- 5519 Other Motor Vehicles and Trailers
- 5521 Tires and Tubes
- 5529 Other Motor Vehicle Parts and Accessories

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| 050 | Metals, Hardware, Plumbing and Heating Equipment and Supplies |
| 5611 | Iron and Steel Primary Forms and Structural Shapes |
| 5612 | Other Iron and Steel Products |
| 5613 | Non-Ferrous Metal and Metal Products |
| 5619 | Combination Metal and Metal Products |
| 5621 | Hardware |
| 5622 | Plumbing, Heating and Air Conditioning Equipment and Supplies |
| 060 | Lumber and Building Materials |
| 5631 | Lumber, Plywood and Millwork |
| 5632 | Paint, Glass and Wallpaper |
| 5639 | Other Building Materials |
| 070 | Farm Machinery, Equipment and Supplies |
| 5711 | Farm Machinery, Equipment and Supplies |
| 081 | Industrial and Other Machinery, Equipment and Supplies |
| 5721 | Construction and Forestry Machinery, Equipment and Supplies |
| 5722 | Mining Machinery, Equipment and Supplies |
| 5731 | Industrial Machinery, Equipment and Supplies |
| 5741 | Electrical Wiring Supplies and Electrical Construction Material |
| 5742 | Electrical Generating and Transmission Equipment and Supplies |
| 5749 | Other Electrical and Electronic Machinery, Equipment and Supplies |
| 5791 | Office and Store Machinery, Equipment and Supplies |
| 5792 | Service Machinery, Equipment and Supplies |
| 5793 | Professional Machinery, Equipment and Supplies |
| 5799 | Other Machinery, Equipment and Supplies n.e.c. |
| 082 | Computers, Packaged Software and Other Electronic Machinery |
| 5743 | Electronic Machinery, Equipment and Supplies (except computer and related equipment) |
| 5744 | Computer and Related Machinery, Equipment and Packaged Software |
| 090 | Other Products |
| 5011 | Livestock |
| 5019 | Other Farm Products |
| 5911 | Automobile Wrecking |
| 5919 | Other Waste Materials |
| 5921 | Newsprint |
| 5922 | Stationery and Office Supplies |
| 5929 | Other Paper and Paper Products |
| 5931 | Agricultural Feeds |
| 5932 | Seeds and Seed Processing |
| 5939 | Agricultural Chemical and Other Farm Supplies |
| 5941 | Toys, Novelties and Fireworks |
| 5942 | Amusement and Sporting Goods |
| 5951 | Photographic Equipment and Supplies |
| 5952 | Musical Instruments and Accessories |
| 5961 | Jewellery and Watches |
| 5971 | Industrial and Household Chemicals |
| 5981 | General Merchandise |
| 5991 | Books, Periodicals and Newspapers |
| 5992 | Second-Hand Goods (except Machinery and Automotive) |
| 5993 | Forest Products |
| 5999 | Other Products n.e.c. |