## INVENTORIES AND SALES, SELECTED INDUSTRIES

AUSTRALIA

EMBARGO: 11:30AM (CANBERRA TIME) MON 11 DEC 2000

## Inventories \% change <br> Trend Estimates <br> in volume terms <br> 

Sales
Trend Estimates
in volume terms


Mar Jun Sep Dec Mar Jun Sep 1999

- For further information about these and related statistics, contact Stephen Butcher on 029268 4241, or the National nformation Service on 1300135070

SEPTEMBER QTR KEY FIGURES

## TREND(b)

|  | Sep 1999 | Jun 2000 | Sep 2000 | Jun 2000 to Sep 1999 to <br> Sep 2000 <br> \% change | Sep 2000 <br> \% change |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\$ m$ | $\$ m$ | $\$ m$ | 86083 | 0.7 |

## SEASONALLYADJUSTED(b)

|  | $\begin{aligned} & \text { Sep } 1999 \\ & \$ m \end{aligned}$ | $\begin{aligned} & \text { Jun } 2000 \\ & \$ m \end{aligned}$ | Sep 2000 <br> \$m | Jun 2000 to Sep 2000 \% change | Sep 1999 to <br> Sep 2000 <br> \% change |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Inventories | 84322 | 84975 | 86635 | 2.0 | 2.7 |
| Sales by |  |  |  |  |  |
| Manufacturers | 51615 | 53128 | 52312 | -1.5 | 1.4 |
| Wholesale trade | 51721 | 54371 | 53743 | -1.2 | 3.9 |

(a) A break in series occurred in Wholesale trade between the June and

September 1999 quarters. See paragraphs 34 and 35 of the Explanatory Notes
(b) Estimates for private businesses, in volume terms.

## SEPTEMBER QTR KEY POINTS

## INVENTORIES

- The trend estimate (in volume terms) of inventories held by private businesses for September quarter 2000 is $\$ 86,083 \mathrm{~m}$, an increase of $\$ 614 \mathrm{~m}(0.7 \%)$ from the revised June quarter 2000 estimate. The September quarter 2000 estimate is $1.8 \%$ higher than September quarter 1999 with small increases reported in each of the past four quarters.
- The industries contributing to the increase in inventories in the September quarter 2000 were Manufacturing (up $\$ 437 \mathrm{~m}, 1.4 \%$ ) and Wholesale trade (up $\$ 277 \mathrm{~m}$, $0.9 \%$ ). The rate of growth in Manufacturing has increased from $0.1 \%$ in the March quarter 2000 to $1.4 \%$ in the September quarter 2000 whilst growth rates in Wholesale trade remain steady.


## SALES

- The trend estimate of Manufacturers' sales increased by $0.1 \%$ to $\$ 52,743 \mathrm{~m}$ in the September quarter 2000 but growth rates have decreased in the past two quarters. The trend estimate of Wholesale trade sales has continued to increase, but growth rates have decreased in the past three quarters.

FORTHCOMING ISSUES

CHANGES TO THIS ISSUE

FORTHCOMING CHANGES

SAMPLING ERRORS

REVISIONS TO TREND

ISSUE (Quarter)
December 2000
March 2001

RELEASE DATE
5 March 2001
4 June 2001

The appendix to the June quarter 2000 issue of this publication introduced experimental estimates of income from sales of goods and services for the service industries. These estimates are now incorporated in Table 11 in this publication, along with estimates of income from sales of goods and services for the Manufacturing and Wholesale trade industries. Refer to paragraphs $19-22$ in the Explanatory Notes for more information.

From March quarter 2001, the Manufacturers' sales series will be replaced by a new series comprising income from sales of goods and services for the manufacturing industry. In addition to sales of goods manufactured, the new series includes sales of other goods and income from services, and is consistent with the estimates for Wholesale trade sales and the experimental estimates of income from sales of goods and services for the service industries, included in this publication. The new series will comprise original, seasonally adjusted and trend estimates in both current price and chain volume terms and will also be available as a time series going back at least five years. If you require more information, please ring the contact officer for this publication.

The estimates in this publication are based on a sample survey of businesses. Because data are not collected from all businesses, the published estimates are subject to sampling variability.

Standard errors for estimates contained in this publication are shown on pages 23-24.

Readers should exercise care in the interpretation of the trend data as the data for the last three quarters in particular are likely to be revised with the addition of subsequent quarters' data. For further information and examples showing the sensitivity of trend data, refer to Trend Estimates in paragraph 33 of the Explanatory Notes.

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Australian Statistician
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ALL SELECTED INDUSTRIES(b)

MINING

MANUFACTURING

The trend estimate (in volume terms) of inventories held by private businesses has continued to grow, with small increases in the rate of growth in the past two quarters.


Mining inventories have fallen over the last nine quarters, from the peak in the June quarter 1998. The current estimate of $\$ 3,613 \mathrm{~m}$ is $\$ 280 \mathrm{~m}(7.2 \%)$ lower than the September quarter 1999 and $\$ 692 \mathrm{~m}(16.1 \%)$ lower than the September quarter 1998.


After six quarters of decreasing growth rates culminating in the December quarter 1999 $(-0.2 \%)$, there has been an increase in the growth rates over the last three quarters $(0.1 \%, 1.0 \%$, and $1.4 \%$ respectively). The major contributors to the increase in September quarter 2000 were Machinery and equipment (up $\$ 246 \mathrm{~m}, 3.0 \%$ ), and Food, beverage and tobacco (up $\$ 177 \mathrm{~m}, 2.4 \%$ ), continuing the strong growth reported in previous quarters in these industries.

(a) Reference year for chain volume measures is 1998-1999.
(b) A break in series occurred in Wholesale trade between the June and September 1999 quarters. See paragraphs 34 and 35 of the Explanatory Notes.

WHOLESALE TRADE(b)

RETAIL TRADE

The trend estimate for Wholesale trade increased by $\$ 277 \mathrm{~m}(0.9 \%)$ in the September quarter 2000, continuing the growth reported in each successive quarter since the March quarter 1996.


Inventories held by Retail trade have shown little change over the last three quarters following decreases in the rate of growth between March quarter 1999 (3.0\%) and December quarter 1999 ( $0.9 \%$ ). The current estimate of $\$ 18,978 \mathrm{~m}$ is $\$ 134 \mathrm{~m}(0.7 \%)$ higher than September quarter 1999.


Inventories held by Other selected industries have decreased over the last three quarters after fifteen successive quarters of growth. The current estimate of $\$ 977 \mathrm{~m}$ is $\$ 7 \mathrm{~m}(0.8 \%)$ lower than June quarter 2000 and $\$ 12 \mathrm{~m}$ (1.2\%) lower than September quarter 1999.

(a) Reference year for chain volume measures is 1998-1999.
(b) A break in series occurred in Wholesale trade between the June and September 1999 quarters. See paragraphs 34 and 35 of the Explanatory Notes.

## SALES: Trend estimates-Chain volume measures(a)

MANUFACTURERS' SALES

WHOLESALE TRADE SALES(b)

Manufacturers' sales has recorded four successive quarters of growth, however the rate of growth has been decreasing in the past two quarters. The increases in the September quarter 2000 were driven by Food, beverage and tobacco (up $\$ 284 \mathrm{~m}, 2.2 \%$ ), Non-metallic mineral products (up $\$ 209 \mathrm{~m}, 7.4 \%$ ) and Machinery and equipment (up $\$ 134 \mathrm{~m}, 1.3 \%$ ). Two of the industries reporting decreases in the September quarter 2000 were Wood and paper products (down $\$ 263 \mathrm{~m}, 6.8 \%$ ) and Metal products (down $\$ 260 \mathrm{~m}, 3.4 \%$ ) continuing the decreases reported in previous quarters.


Wholesale trade sales have increased for the last 20 quarters but growth rates have slowed in the past three quarters.

(a) Reference year for chain volume measures is 1998-1999.
(b) A break in series occurred in Wholesale trade between the June and September 1999 quarters. See paragraphs 34 and 35 of the Explanatory Notes.

INVENTORIES, By Industry-Current prices

|  | Mining | Manufacturing | Wholesale trade(a) | Retail trade | Other selected industries(b) | Total selected industries(a) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| At end of | \$m | \$m | \$m | \$m | \$m | \$m |


|  | ORIGINAL |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | 4508 | 29405 | 23457 | 16418 | 757 | 74546 |
| June 1999 | 3857 | 31185 | 24966 | 18197 | 937 | 79141 |
| June 2000 | 4188 | 33914 | 29572 | 18663 | 1024 | 87361 |
| 1998-1999 |  |  |  |  |  |  |
| September | 4334 | 30270 | 24342 | 16926 | 810 | 76683 |
| December | 4105 | 30280 | 24387 | 17706 | 950 | 77428 |
| March | 3951 | 31015 | 24493 | 18322 | 941 | 78721 |
| June | 3857 | 31185 | 24966 | 18197 | 937 | 79141 |
| 1999-2000 |  |  |  |  |  |  |
| September | 4052 | 31524 | 27750 | 18940 | 981 | 83246 |
| December | 4104 | 31361 | 30686 | 19627 | 1136 | 86914 |
| March | 4195 | 33160 | 30062 | 19682 | 1007 | 88106 |
| June | 4188 | 33914 | 29572 | 18663 | 1024 | 87361 |
| 2000-2001 |  |  |  |  |  |  |
| September | 4222 | 35105 | 30439 | 19076 | 966 | 89806 |


|  | SEASONALLY ADJUSTED |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | 4534 | 29332 | 23812 | 16782 | 790 | 75250 |
| June 1999 | 3873 | 31110 | 25554 | 18595 | 980 | 80112 |
| June 2000 | 4204 | 33844 | 30551 | 19068 | 1071 | 88738 |
| 1998-1999 |  |  |  |  |  |  |
| September | 4305 | 30286 | 24252 | 16918 | 831 | 76592 |
| December | 4111 | 30741 | 24339 | 17448 | 879 | 77518 |
| March | 3952 | 30608 | 24811 | 18200 | 954 | 78525 |
| June | 3873 | 31110 | 25554 | 18595 | 980 | 80112 |
| 1999-2000 |  |  |  |  |  |  |
| September | 4026 | 31542 | 28029 | 18946 | 1006 | 83549 |
| December | 4113 | 31849 | 29579 | 19342 | 1049 | 85932 |
| March | 4196 | 32703 | 29360 | 19539 | 1022 | 86820 |
| June | 4204 | 33844 | 30551 | 19068 | 1071 | 88738 |
| 2000-2001 |  |  |  |  |  |  |
| September | 4195 | 35126 | 30974 | 19089 | 991 | 90375 |

## TREND ESTIMATES

| June 1998 | 4453 | 29417 | 23796 | 16766 | 808 | 75240 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1999 | 3925 | 31065 | 25559 | 18602 | 984 | 80135 |
| June 2000 | 4201 | 33852 | 30302 | 19236 | 1036 | 88627 |
| 1998-1999 |  |  |  |  |  |  |
| September | 4331 | 30145 | 24125 | 17022 | 834 | 76457 |
| December | 4116 | 30586 | 24446 | 17489 | 884 | 77521 |
| March | 3957 | 30832 | 24865 | 18080 | 939 | 78673 |
| June | 3925 | 31065 | 25559 | 18602 | 984 | 80135 |
| 1999-2000 |  |  |  |  |  |  |
| September | 3997 | 31429 | 28371 | 19031 | 1013 | 83841 |
| December | 4107 | 31962 | 29088 | 19306 | 1035 | 85498 |
| March | 4175 | 32796 | 29744 | 19346 | 1043 | 87104 |
| June | 4201 | 33852 | 30302 | 19236 | 1036 | 88627 |
| 2000-2001 |  |  |  |  |  |  |
| September | 4214 | 34959 | 30971 | 19069 | 1019 | 90232 |

[^0]INVENTORIES, By Industry-Chain volume measures(a)

|  | Mining | Manufacturing | Wholesale trade(b) | Retail trade | Other selected industries(c) | Total sel industrie |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| At end of | \$m | \$m | \$m | \$m | \$m | \$m |
| ORIGINAL |  |  |  |  |  |  |
| June 1998 | 4450 | 29243 | 23456 | 16512 | 777 | 74456 |
| June 1999 | 3881 | 31690 | 25243 | 18075 | 925 | 79814 |
| June 2000 | 3707 | 31886 | 29434 | 18223 | 960 | 84210 |
| 1998-1999 |  |  |  |  |  |  |
| September | 4303 | 29901 | 24005 | 16980 | 821 | 76023 |
| December | 4109 | 30112 | 24260 | 17734 | 945 | 77161 |
| March | 4007 | 31212 | 24526 | 18255 | 931 | 78933 |
| June | 3881 | 31690 | 25243 | 18075 | 925 | 79814 |
| 1999-2000 |  |  |  |  |  |  |
| September | 3952 | 31673 | 28412 | 18754 | 959 | 83749 |
| December | 3840 | 30945 | 31922 | 19369 | 1094 | 87169 |
| March | 3790 | 31832 | 30536 | 19348 | 953 | 86459 |
| June | 3707 | 31886 | 29434 | 18223 | 960 | 84210 |
| 2000-2001 |  |  |  |  |  |  |
| September | 3607 | 32454 | 30065 | 19192 | 942 | 86260 |


|  | SEASONALLY ADJUSTED |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | 4475 | 29166 | 23810 | 16878 | 812 | 75160 |
| June 1999 | 3898 | 31608 | 25628 | 18470 | 968 | 80572 |
| June 2000 | 3721 | 31804 | 29827 | 18619 | 1005 | 84975 |
| 1998-1999 |  |  |  |  |  |  |
| September | 4274 | 29917 | 23767 | 16972 | 842 | 75792 |
| December | 4116 | 30573 | 24028 | 17476 | 874 | 77083 |
| March | 4009 | 30801 | 24650 | 18134 | 943 | 78542 |
| June | 3898 | 31608 | 25628 | 18470 | 968 | 80572 |
| 1999-2000 |  |  |  |  |  |  |
| September | 3926 | 31695 | 28958 | 18760 | 984 | 84322 |
| December | 3848 | 31421 | 29649 | 19088 | 1010 | 85016 |
| March | 3791 | 31400 | 29577 | 19207 | 968 | 84943 |
| June | 3721 | 31804 | 29827 | 18619 | 1005 | 84975 |
| 2000-2001 |  |  |  |  |  |  |
| September | 3584 | 32482 | 30396 | 19206 | 966 | 86635 |


|  | TREND ESTIMATES |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | 4390 | 29165 | 23681 | 16889 | 825 | 74967 |
| June 1999 | 3933 | 31436 | 25275 | 18479 | 970 | 80092 |
| June 2000 | 3701 | 31858 | 29944 | 18981 | 984 | 85469 |
| 1998-1999 |  |  |  |  |  |  |
| September | 4305 | 29884 | 23819 | 17081 | 843 | 75952 |
| December | 4133 | 30486 | 24173 | 17492 | 884 | 77186 |
| March | 4000 | 31031 | 24716 | 18025 | 930 | 78708 |
| June | 3933 | 31436 | 25275 | 18479 | 970 | 80092 |
| 1999-2000 |  |  |  |  |  |  |
| September | 3893 | 31579 | 29285 | 18844 | 989 | 84589 |
| December | 3856 | 31503 | 29457 | 19012 | 994 | 84821 |
| March | 3789 | 31547 | 29652 | 19017 | 991 | 84996 |
| June | 3701 | 31858 | 29944 | 18981 | 984 | 85469 |
| 2000-2001 |  |  |  |  |  |  |
| September | 3613 | 32295 | 30221 | 18978 | 977 | 86083 |

(a) Reference year for chain volume measures is 1998-1999.
(c) Includes Electricity and gas supply; Accommodation, cafes and restaurants.
(b) A break in series occurred in Wholesale trade between the June and September 1999 quarters. See paragraphs 34 and 35 of the Explanatory Notes.

PERCENTAGE CHANGES IN INVENTORIES, By Industry-Chain volume measures(a)
-•••

|  |  | Wholesale | Total selected <br> Trade(b) | Other selected <br> industries(c) |
| :--- | :--- | :--- | :--- | :--- |
| Year to/Quarter to | Mining | $\%$ | $\%$ | $\%$ |


|  | ORIGINAL |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | -0.8 | 4.2 | 8.1 | -5.3 | 7.8 | 2.8 |
| June 1999 | -12.8 | 8.4 | 7.6 | 9.5 | 19.0 | 7.2 |
| June 2000 | -4.5 | 0.6 | 16.6 | 0.8 | 3.8 | 5.5 |
| 1998-1999 |  |  |  |  |  |  |
| September | -3.3 | 2.2 | 2.3 | 2.8 | 5.6 | 2.1 |
| December | -4.5 | 0.7 | 1.1 | 4.4 | 15.2 | 1.5 |
| March | -2.5 | 3.7 | 1.1 | 2.9 | -1.6 | 2.3 |
| June | -3.1 | 1.5 | 2.9 | -1.0 | -0.5 | 1.1 |
| 1999-2000 |  |  |  |  |  |  |
| September | 1.8 | -0.1 | 12.6 | 3.8 | 3.6 | 4.9 |
| December | -2.8 | -2.3 | 12.4 | 3.3 | 14.1 | 4.1 |
| March | -1.3 | 2.9 | -4.3 | -0.1 | -12.9 | -0.8 |
| June | -2.2 | 0.2 | -3.6 | -5.8 | 0.7 | -2.6 |
| 2000-2001 |  |  |  |  |  |  |
| September | $-2.7$ | 1.8 | 2.1 | 5.3 | -2.0 | 2.4 |


|  | SEASONALLY ADJUSTED |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | -1.0 | 4.3 | 8.1 | $-5.3$ | 7.9 | 2.8 |
| June 1999 | -12.9 | 8.4 | 7.6 | 9.4 | 19.2 | 7.2 |
| June 2000 | -4.6 | 0.6 | 16.4 | 0.8 | 3.8 | 5.5 |
| 1998-1999 |  |  |  |  |  |  |
| September | -4.5 | 2.6 | -0.2 | 0.6 | 3.7 | 0.8 |
| December | -3.7 | 2.2 | 1.1 | 3.0 | 3.8 | 1.7 |
| March | -2.6 | 0.7 | 2.6 | 3.8 | 7.9 | 1.9 |
| June | -2.8 | 2.6 | 4.0 | 1.9 | 2.6 | 2.6 |
| 1999-2000 |  |  |  |  |  |  |
| September | 0.7 | 0.3 | 13.0 | 1.6 | 1.7 | 4.7 |
| December | -2.0 | -0.9 | 2.4 | 1.8 | 2.7 | 0.8 |
| March | -1.5 | -0.1 | -0.2 | 0.6 | -4.2 | -0.1 |
| June | -1.9 | 1.3 | 0.8 | -3.1 | 3.9 | 0.0 |
| 2000-2001 |  |  |  |  |  |  |
| September | $-3.7$ | 2.1 | 1.9 | 3.2 | $-3.8$ | 2.0 |

## TREND ESTIMATES

| June 1998 | -1.2 | 4.3 | 7.1 | -4.0 | 16.5 | 3.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1999 | -10.4 | 7.8 | 6.7 | 9.4 | 17.5 | 6.8 |
| June 2000 | -5.9 | 1.3 | 18.5 | 2.7 | 1.5 | 6.7 |
| 1998-1999 |  |  |  |  |  |  |
| September | -1.9 | 2.5 | 0.6 | 1.1 | 2.2 | 1.3 |
| December | -4.0 | 2.0 | 1.5 | 2.4 | 4.9 | 1.6 |
| March | -3.2 | 1.8 | 2.2 | 3.0 | 5.3 | 2.0 |
| June | -1.7 | 1.3 | 2.3 | 2.5 | 4.2 | 1.8 |
| 1999-2000 ${ }^{\text {20 }}$ |  |  |  |  |  |  |
| September | -1.0 | 0.5 | n.p. | 2.0 | 2.0 | n.p. |
| December | -1.0 | -0.2 | 0.6 | 0.9 | 0.5 | 0.3 |
| March | -1.7 | 0.1 | 0.7 | 0.0 | -0.3 | 0.2 |
| June | -2.3 | 1.0 | 1.0 | -0.2 | -0.7 | 0.6 |
|  |  |  |  |  |  |  |
| September | -2.4 | 1.4 | 0.9 | 0.0 | -0.8 | 0.7 |

(a) Reference year for chain volume measures is 1998-1999.
(c) Includes Electricity and gas supply; Accommodation, cafes and restaurants.
(b) A break in series occurred in Wholesale trade between the June and September 1999 quarters. See paragraphs 34 and 35 of the Explanatory Notes.

INVENTORIES, By Manufacturing industries-Current prices

|  | Food, beverage and tobacco | Textiles, clothing, footwear and leather(a) | Wood and paper products | Printing, publishing and recorded media | Petroleum, coal, chemical and assoc. products | Nonmetallic mineral product | Metal product | Machinery and equipment | Other manufacturing | Total manufacturing |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| At end of | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |


| ORIGINAL |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | 6528 | 1803 | 2015 | 882 | 5569 | 1138 | 4427 | 6330 | 714 | 29405 |
| June 1999 | 6990 | 1719 | 2200 | 843 | 6000 | 1320 | 4787 | 6643 | 682 | 31185 |
| June 2000 | 7731 | 1532 | 2143 | 955 | 6971 | 1164 | 4277 | 8387 | 755 | 33914 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| September | 6290 | 1947 | 2045 | 954 | 5858 | 1257 | 4588 | 6551 | 782 | 30270 |
| December | 6321 | 1835 | 2009 | 952 | 5691 | 1276 | 4688 | 6669 | 840 | 30280 |
| March | 6489 | 1831 | 2204 | 948 | 6068 | 1295 | 4701 | 6685 | 794 | 31015 |
| June | 6990 | 1719 | 2200 | 843 | 6000 | 1320 | 4787 | 6643 | 682 | 31185 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | 6811 | 1646 | 2100 | 922 | 6137 | 1094 | 4622 | 7415 | 777 | 31524 |
| December | 6670 | 1729 | 2125 | 865 | 6243 | 980 | 4308 | 7716 | 725 | 31361 |
| March | 7249 | 1708 | 2135 | 900 | 6922 | 1082 | 4441 | 7917 | 808 | 33160 |
| June | 7731 | 1532 | 2143 | 955 | 6971 | 1164 | 4277 | 8387 | 755 | 33914 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | 7613 | 1604 | 2226 | 978 | 7657 | 1268 | 4400 | 8597 | 763 | 35105 |

SEASONALLY ADJUSTED

| June 1998 | 6278 | 1811 | 1989 | 902 | 5601 | 1129 | 4483 | 6408 | 731 | 29332 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1999 | 6719 | 1728 | 2172 | 864 | 6042 | 1309 | 4845 | 6729 | 702 | 31110 |
| June 2000 | 7428 | 1539 | 2115 | 982 | 7023 | 1154 | 4328 | 8497 | 778 | 33844 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| September | 6337 | 1954 | 2064 | 947 | 5837 | 1249 | 4560 | 6563 | 775 | 30286 |
| December | 6579 | 1838 | 2032 | 949 | 5795 | 1305 | 4700 | 6691 | 852 | 30741 |
| March | 6445 | 1812 | 2188 | 935 | 5942 | 1285 | 4660 | 6572 | 769 | 30608 |
| June | 6719 | 1728 | 2172 | 864 | 6042 | 1309 | 4845 | 6729 | 702 | 31110 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | 6863 | 1655 | 2118 | 915 | 6116 | 1087 | 4595 | 7425 | 768 | 31542 |
| December | 6948 | 1729 | 2151 | 863 | 6358 | 1003 | 4322 | 7738 | 737 | 31849 |
| March | 7195 | 1691 | 2119 | 885 | 6775 | 1073 | 4399 | 7785 | 781 | 32703 |
| June | 7428 | 1539 | 2115 | 982 | 7023 | 1154 | 4328 | 8497 | 778 | 33844 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | 7672 | 1613 | 2245 | 972 | 7630 | 1259 | 4375 | 8607 | 753 | 35126 |


| TREND ESTIMATES |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | 6274 | 1811 | 1993 | 927 | 5641 | 1177 | 4461 | 6390 | 743 | 29417 |
| June 1999 | 6680 | 1726 | 2161 | 899 | 6007 | 1236 | 4721 | 6892 | 743 | 31065 |
| June 2000 | 7425 | 1611 | 2155 | 946 | 7122 | 1153 | 4349 | 8321 | 770 | 33852 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| September | 6388 | 1876 | 2034 | 940 | 5738 | 1227 | 4579 | 6571 | 792 | 30145 |
| December | 6467 | 1877 | 2092 | 940 | 5852 | 1293 | 4671 | 6592 | 802 | 30586 |
| March | 6563 | 1799 | 2140 | 924 | 5928 | 1310 | 4747 | 6643 | 778 | 30832 |
| June | 6680 | 1726 | 2161 | 899 | 6007 | 1236 | 4721 | 6892 | 743 | 31065 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | 6824 | 1705 | 2153 | 878 | 6159 | 1121 | 4590 | 7264 | 735 | 31429 |
| December | 6997 | 1687 | 2123 | 881 | 6379 | 1043 | 4433 | 7663 | 756 | 31962 |
| March | 7192 | 1656 | 2127 | 909 | 6724 | 1070 | 4352 | 7997 | 769 | 32796 |
| June | 7425 | 1611 | 2155 | 946 | 7122 | 1153 | 4349 | 8321 | 770 | 33852 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | 7657 | 1567 | 2196 | 988 | 7525 | 1244 | 4365 | 8649 | 768 | 34959 |

(a) In using the seasonally adjusted series extra care should be exercised because of the difficulties associated with reliably estimating its seasonal pattern.

INVENTORIES, By Manufacturing industries-Chain volume measures(a)

|  | Food, beverage and tobacco | Textiles, clothing, footwear and leather(b) | Wood and paper products | Printing, publishing and recorded media | Petroleum, coal, chemical and assoc. products | Non- <br> metallic mineral product | Metal product | Machinery and equipment | Other manufacturing | Total manufacturing |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| At end of | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |


| ORIGINAL |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | 6477 | 1804 | 2032 | 909 | 5503 | 1135 | 4352 | 6318 | 730 | 29243 |
| June 1999 | 7124 | 1734 | 2228 | 846 | 6098 | 1339 | 4949 | 6686 | 684 | 31690 |
| June 2000 | 7596 | 1516 | 2016 | 956 | 5644 | 1146 | 4091 | 8181 | 739 | 31886 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| September | 6220 | 1944 | 2031 | 953 | 5747 | 1248 | 4484 | 6514 | 775 | 29901 |
| December | 6314 | 1826 | 1985 | 938 | 5675 | 1269 | 4640 | 6652 | 830 | 30112 |
| March | 6507 | 1826 | 2212 | 941 | 6146 | 1300 | 4789 | 6708 | 790 | 31212 |
| June | 7124 | 1734 | 2228 | 846 | 6098 | 1339 | 4949 | 6686 | 684 | 31690 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | 6882 | 1685 | 2134 | 930 | 5912 | 1104 | 4810 | 7439 | 777 | 31673 |
| December | 6636 | 1780 | 2122 | 873 | 5720 | 985 | 4432 | 7677 | 721 | 30945 |
| March | 7175 | 1732 | 2051 | 906 | 5875 | 1074 | 4409 | 7810 | 800 | 31832 |
| June | 7596 | 1516 | 2016 | 956 | 5644 | 1146 | 4091 | 8181 | 739 | 31886 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | 7439 | 1559 | 2064 | 951 | 5999 | 1231 | 4116 | 8354 | 740 | 32454 |


| SEASONALLY ADJUSTED |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | 6230 | 1812 | 2007 | 929 | 5535 | 1126 | 4406 | 6396 | 744 | 29166 |
| June 1999 | 6847 | 1743 | 2199 | 868 | 6141 | 1328 | 5010 | 6772 | 700 | 31608 |
| June 2000 | 7298 | 1523 | 1990 | 982 | 5687 | 1137 | 4140 | 8289 | 758 | 31804 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| September | 6267 | 1951 | 2050 | 946 | 5726 | 1240 | 4457 | 6526 | 770 | 29917 |
| December | 6571 | 1828 | 2008 | 935 | 5779 | 1298 | 4651 | 6674 | 844 | 30573 |
| March | 6463 | 1807 | 2195 | 928 | 6019 | 1290 | 4747 | 6594 | 766 | 30801 |
| June | 6847 | 1743 | 2199 | 868 | 6141 | 1328 | 5010 | 6772 | 700 | 31608 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | 6935 | 1694 | 2152 | 924 | 5891 | 1096 | 4782 | 7450 | 771 | 31695 |
| December | 6913 | 1780 | 2148 | 870 | 5824 | 1008 | 4446 | 7698 | 734 | 31421 |
| March | 7121 | 1715 | 2035 | 891 | 5750 | 1066 | 4368 | 7681 | 773 | 31400 |
| June | 7298 | 1523 | 1990 | 982 | 5687 | 1137 | 4140 | 8289 | 758 | 31804 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | 7497 | 1568 | 2081 | 945 | 5978 | 1222 | 4093 | 8364 | 733 | 32482 |


(a) Reference year for chain volume measures is 1998-1999.
(b) In using the seasonally adjusted series extra care should be exercised because of the difficulties associated with reliably estimating its seasonal pattern.

|  | Food, beverage and tobacco | Textiles, clothing, footwear and leather | Wood and paper products | Printing, publishing and recorded media | Petroleum, coal, chemical and assoc. products | Nonmetallic mineral product | Metal product | Machinery <br> and <br> equipment | Other manufacturing | Total manufacturing |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year to/Quarter to | \% | \% | \% | \% | \% | \% | \% | \% | \% | \% |

ORIGINAL

| June 1998 | 8.1 | 3.3 | 5.6 | 4.6 | 1.4 | -14.9 | 5.9 | 5.0 | 15.1 | 4.2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1999 | 10.0 | -3.9 | 9.7 | -6.9 | 10.8 | 17.9 | 13.7 | 5.8 | -6.3 | 8.4 |
| June 2000 | 6.6 | -12.6 | -9.5 | 13.0 | -7.4 | -14.4 | -17.3 | 22.4 | 8.1 | 0.6 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| September | -4.0 | 7.8 | 0.0 | 4.9 | 4.4 | 9.9 | 3.0 | 3.1 | 6.1 | 2.2 |
| December | 1.5 | -6.1 | -2.3 | -1.7 | -1.2 | 1.7 | 3.5 | 2.1 | 7.2 | 0.7 |
| March | 3.1 | 0.0 | 11.4 | 0.4 | 8.3 | 2.5 | 3.2 | 0.8 | -4.8 | 3.7 |
| June | 9.5 | -5.0 | 0.8 | -10.1 | -0.8 | 3.0 | 3.3 | -0.3 | -13.4 | 1.5 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | -3.4 | -2.8 | -4.2 | 10.0 | -3.1 | -17.6 | -2.8 | 11.3 | 13.5 | -0.1 |
| December | -3.6 | 5.6 | -0.6 | -6.2 | -3.2 | -10.7 | -7.9 | 3.2 | -7.1 | -2.3 |
| March | 8.1 | -2.7 | -3.3 | 3.8 | 2.7 | 9.0 | -0.5 | 1.7 | 10.9 | 2.9 |
| June | 5.9 | -12.5 | -1.7 | 5.5 | -3.9 | 6.7 | -7.2 | 4.8 | -7.6 | 0.2 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | -2.1 | 2.9 | 2.4 | -0.5 | 6.3 | 7.4 | 0.6 | 2.1 | 0.1 | 1.8 |

## SEASONALLY ADJUSTED

| June 1998 | 7.9 | 3.5 | 5.6 | 5.1 | 1.5 | -14.8 | 5.9 | 5.1 | 15.7 | 4.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1999 | 9.9 | -3.8 | 9.6 | -6.6 | 10.9 | 18.0 | 13.7 | 5.9 | -5.9 | 8.4 |
| June 2000 | 6.6 | -12.6 | -9.5 | 13.2 | -7.4 | -14.4 | -17.4 | 22.4 | 8.3 | 0.6 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| September | 0.6 | 7.7 | 2.2 | 1.9 | 3.5 | 10.1 | 1.1 | 2.0 | 3.6 | 2.6 |
| December | 4.9 | -6.3 | -2.1 | -1.2 | 0.9 | 4.7 | 4.4 | 2.3 | 9.6 | 2.2 |
| March | -1.6 | -1.1 | 9.3 | -0.7 | 4.1 | -0.6 | 2.1 | -1.2 | -9.2 | 0.7 |
| June | 6.0 | -3.6 | 0.2 | -6.5 | 2.0 | 2.9 | 5.5 | 2.7 | -8.7 | 2.6 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | 1.3 | -2.8 | -2.1 | 6.5 | -4.1 | -17.5 | -4.5 | 10.0 | 10.2 | 0.3 |
| December | -0.3 | 5.1 | -0.2 | -5.9 | -1.1 | -8.0 | -7.0 | 3.3 | -4.7 | -0.9 |
| March | 3.0 | -3.7 | -5.2 | 2.5 | -1.3 | 5.7 | -1.8 | -0.2 | 5.3 | -0.1 |
| June | 2.5 | -11.2 | -2.2 | 10.2 | -1.1 | 6.7 | -5.2 | 7.9 | -2.0 | 1.3 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | 2.7 | 3.0 | 4.6 | -3.8 | 5.1 | 7.4 | -1.1 | 0.9 | -3.2 | 2.1 |

TREND ESTIMATES

| June 1998 | 7.8 | 2.0 | 5.4 | 8.2 | 1.6 | -11.2 | 3.7 | 5.6 | 21.7 | 4.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1999 | 8.7 | -3.5 | 9.2 | -5.5 | 9.2 | 6.4 | 11.8 | 8.7 | -1.4 | 7.8 |
| June 2000 | 7.8 | -8.3 | -7.2 | 4.5 | -4.2 | -9.2 | -14.3 | 17.4 | 1.5 | 1.3 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| September | 1.9 | 3.6 | 1.0 | -1.1 | 2.6 | 3.8 | 2.9 | 2.7 | 5.2 | 2.5 |
| December | 1.8 | -0.1 | 2.7 | -1.3 | 3.2 | 5.7 | 3.3 | 0.6 | 0.6 | 2.0 |
| March | 2.5 | -3.9 | 3.2 | -1.5 | 2.4 | 2.1 | 3.7 | 1.2 | -2.9 | 1.8 |
| June | 2.3 | -3.0 | 2.1 | -1.8 | 0.7 | -5.1 | 1.3 | 4.0 | -4.0 | 1.3 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | 1.8 | 0.0 | -0.5 | -1.6 | -1.3 | -9.2 | -2.3 | 5.1 | -0.9 | 0.5 |
| December | 1.5 | -0.8 | -3.1 | 0.6 | -2.5 | -7.6 | -4.8 | 4.7 | 2.5 | -0.2 |
| March | 1.8 | -3.1 | -2.5 | 2.6 | -1.0 | 1.4 | -4.7 | 3.4 | 0.8 | 0.1 |
| June | 2.5 | -4.5 | -1.3 | 2.9 | 0.6 | 6.7 | -3.3 | 3.2 | -0.9 | 1.0 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | 2.4 | -3.8 | 0.0 | 2.2 | 1.3 | 5.5 | -2.4 | 3.0 | -0.8 | 1.4 |

(a) Reference year for chain volume measures is 1998-1999.

## MANUFACTURING.

WHOLESALE
TRADE

| Food, beverage and tobacco | Textiles, clothing, footwear and leather | Wood and paper products | Printing, publishing and recorded media | Petroleum, coal,chemical and assoc. products | Non- <br> metallic <br> mineral <br> product | Metal product | Machinery <br> and <br> equipment | Other manufacturing | Total manufacturing | Total wholesale(a) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |

$\qquad$

| ORIGINAL |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year to |  |  |  |  |  |  |  |  |  |  |  |
| June 1998 | 46348 | 8991 | 13851 | 11083 | 36019 | 9508 | 29994 | 39010 | 6753 | 201556 | 178534 |
| June 1999 | 47110 | 9494 | 14462 | 11206 | 35681 | 11097 | 31019 | 41615 | 7067 | 208750 | 189811 |
| June 2000 | 49878 | 8333 | 16242 | 12213 | 35762 | 10509 | 32102 | 41936 | 6422 | 213398 | 214611 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 12161 | 2552 | 3720 | 2752 | 9015 | 2707 | 7978 | 10472 | 1666 | 53021 | 47088 |
| December | 12930 | 2427 | 3731 | 2794 | 9171 | 2900 | 7990 | 11034 | 2063 | 55040 | 49724 |
| March | 11209 | 2257 | 3335 | 2775 | 8450 | 2657 | 7168 | 9818 | 1726 | 49394 | 45085 |
| June | 10811 | 2259 | 3676 | 2885 | 9044 | 2833 | 7883 | 10291 | 1612 | 51295 | 47915 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | 11561 | 2327 | 3889 | 3185 | 8803 | 2587 | 7996 | 10656 | 1726 | 52731 | 51408 |
| December | 13403 | 2116 | 4235 | 3191 | 9144 | 2492 | 8113 | 10597 | 1724 | 55015 | 54735 |
| March | 12152 | 1960 | 4038 | 2827 | 8587 | 2578 | 7714 | 9961 | 1335 | 51152 | 51980 |
| June | 12761 | 1931 | 4082 | 3010 | 9228 | 2852 | 8279 | 10722 | 1636 | 54500 | 56489 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 13924 | 1904 | 3563 | 2976 | 9874 | 3152 | 7801 | 11126 | 1330 | 55650 | 56781 |


| Year to |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1998 | 46346 | 8999 | 13852 | 11117 | 36031 | 9516 | 29961 | 39027 | 6762 | 201612 | 178645 |
| June 1999 | 47140 | 9517 | 14465 | 11196 | 35630 | 11064 | 31064 | 41640 | 7077 | 208796 | 190403 |
| June 2000 | 49827 | 8294 | 16224 | 12200 | 35701 | 10510 | 31979 | 41863 | 6427 | 213025 | 215781 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 12000 | 2482 | 3634 | 2684 | 8967 | 2623 | 7833 | 10181 | 1596 | 52000 | 46818 |
| December | 11633 | 2345 | 3567 | 2668 | 9133 | 2864 | 7754 | 10693 | 1896 | 52553 | 47594 |
| March | 12067 | 2401 | 3548 | 2903 | 8704 | 2737 | 7693 | 10526 | 1896 | 52475 | 47856 |
| June | 11441 | 2289 | 3716 | 2942 | 8827 | 2840 | 7783 | 10240 | 1690 | 51768 | 48135 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | 11282 | 2212 | 3800 | 3168 | 8902 | 2572 | 7787 | 10361 | 1666 | 51750 | 51084 |
| December | 12232 | 2094 | 4048 | 3021 | 8968 | 2429 | 7860 | 10262 | 1580 | 52494 | 53292 |
| March | 12796 | 2031 | 4251 | 2943 | 8825 | 2652 | 8165 | 10572 | 1462 | 53697 | 54596 |
| June | 13516 | 1958 | 4125 | 3068 | 9006 | 2858 | 8167 | 10668 | 1718 | 55084 | 56809 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 13733 | 1838 | 3482 | 2908 | 9932 | 3114 | 7637 | 10819 | 1269 | 54732 | 56330 |


| TREND ESTIMATES |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year to |  |  |  |  |  |  |  |  |  |  |  |
| June 1998 | 46239 | 9105 | 13814 | 11050 | 35982 | 9592 | 30078 | 39080 | 6700 | 201638 | 178347 |
| June 1999 | 47009 | 9455 | 14483 | 11294 | 35698 | 10946 | 31006 | 41679 | 7157 | 208723 | 190717 |
| June 2000 | 49848 | 8286 | 16062 | 12109 | 35882 | 10611 | 31840 | 41821 | 6292 | 212753 | 214742 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 11881 | 2382 | 3627 | 2722 | 9064 | 2619 | 7758 | 10292 | 1743 | 52088 | 46994 |
| December | 11894 | 2406 | 3597 | 2726 | 8948 | 2766 | 7768 | 10507 | 1815 | 52427 | 47438 |
| March | 11710 | 2372 | 3583 | 2846 | 8855 | 2829 | 7744 | 10508 | 1831 | 52278 | 47747 |
| June | 11523 | 2295 | 3675 | 3000 | 8831 | 2732 | 7735 | 10371 | 1768 | 51930 | 48538 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | 11591 | 2207 | 3854 | 3065 | 8864 | 2589 | 7804 | 10281 | 1633 | 51888 | 51045 |
| December | 12069 | 2110 | 4082 | 3053 | 8860 | 2527 | 7965 | 10357 | 1585 | 52608 | 53142 |
| March | 12798 | 2027 | 4135 | 3013 | 8942 | 2639 | 8057 | 10512 | 1565 | 53688 | 54811 |
| June | 13390 | 1942 | 3991 | 2978 | 9217 | 2856 | 8015 | 10671 | 1509 | 54569 | 55744 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 13829 | 1865 | 3716 | 2959 | 9620 | 3088 | 7864 | 10831 | 1426 | 55198 | 57063 |

(a) A break in series occurred in Wholesale trade between the June and September 1999 quarters.

See paragraphs 34 and 35 of the Explanatory Notes.

|  | MANUFACTURING. |  |  |  |  |  |  |  |  |  | WHOLESALE TRADE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Food, beverage and tobacco | Textiles, clothing, footwear and leather | Wood and paper products | Printing, publishing and recorded media | Petroleum, coal, chemical and assoc. products | Non- <br> metallic <br> mineral <br> product | Metal product | Machinery <br> and equipment | Other manufacturing | Total manufacturing | Total wholesale(b) |
| Period | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
|  | ORIGINAL |  |  |  |  |  |  |  |  |  |  |
| Year to |  |  |  |  |  |  |  |  |  |  |  |
| June 1998 | 46703 | 8964 | 14038 | 11451 | 35146 | 9563 | 29492 | 39107 | 6851 | 201304 | 176432 |
| June 1999 | 47110 | 9494 | 14462 | 11206 | 35680 | 11097 | 31020 | 41614 | 7067 | 208750 | 189811 |
| June 2000 | 49219 | 8290 | 15940 | 11811 | 34445 | 10469 | 31156 | 41501 | 6267 | 209098 | 212448 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 12062 | 2559 | 3721 | 2758 | 8909 | 2701 | 7799 | 10427 | 1666 | 52608 | 46051 |
| December | 12911 | 2421 | 3735 | 2798 | 9073 | 2897 | 7964 | 11038 | 2064 | 54891 | 49519 |
| March | 11191 | 2254 | 3339 | 2771 | 8560 | 2658 | 7248 | 9845 | 1731 | 49593 | 45577 |
| June | 10946 | 2260 | 3667 | 2880 | 9138 | 2841 | 8008 | 10303 | 1606 | 51658 | 48664 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | 11585 | 2336 | 3854 | 3085 | 8718 | 2583 | 8040 | 10636 | 1698 | 52534 | 51930 |
| December | 13245 | 2118 | 4199 | 3089 | 8948 | 2490 | 7996 | 10501 | 1700 | 54286 | 54692 |
| March | 11976 | 1932 | 3942 | 2738 | 8199 | 2562 | 7367 | 9842 | 1300 | 49860 | 51426 |
| June | 12413 | 1903 | 3945 | 2899 | 8580 | 2835 | 7753 | 10522 | 1568 | 52419 | 54399 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 13585 | 1880 | 3408 | 2774 | 8852 | 3123 | 7250 | 10933 | 1271 | 53076 | 54091 |
| SEASONALLY ADJUSTED |  |  |  |  |  |  |  |  |  |  |  |
| Year to |  |  |  |  |  |  |  |  |  |  |  |
| June 1998 | 46703 | 8964 | 14038 | 11451 | 35146 | 9563 | 29492 | 39107 | 6851 | 201304 | 176432 |
| June 1999 | 47110 | 9494 | 14462 | 11206 | 35680 | 11097 | 31020 | 41614 | 7067 | 208750 | 189811 |
| June 2000 | 49219 | 8290 | 15940 | 11811 | 34445 | 10469 | 31156 | 41501 | 6267 | 209098 | 212448 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 11894 | 2481 | 3633 | 2689 | 8868 | 2623 | 7643 | 10129 | 1594 | 51560 | 45722 |
| December | 11603 | 2331 | 3569 | 2674 | 9047 | 2870 | 7710 | 10687 | 1893 | 52389 | 47371 |
| March | 12035 | 2392 | 3552 | 2903 | 8831 | 2748 | 7764 | 10548 | 1898 | 52662 | 48096 |
| June | 11578 | 2290 | 3708 | 2941 | 8934 | 2856 | 7902 | 10251 | 1682 | 52140 | 48622 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | 11310 | 2226 | 3769 | 3072 | 8831 | 2571 | 7846 | 10351 | 1639 | 51615 | 51721 |
| December | 12102 | 2106 | 4020 | 2928 | 8790 | 2427 | 7778 | 10186 | 1558 | 51893 | 52539 |
| March | 12633 | 2015 | 4157 | 2854 | 8438 | 2634 | 7839 | 10469 | 1424 | 52462 | 53818 |
| June | 13175 | 1943 | 3994 | 2958 | 8386 | 2837 | 7693 | 10495 | 1647 | 53128 | 54371 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 13426 | 1827 | 3336 | 2713 | 8917 | 3083 | 7140 | 10657 | 1212 | 52312 | 53743 |
| TREND ESTIMATES |  |  |  |  |  |  |  |  |  |  |  |
| Year to |  |  |  |  |  |  |  |  |  |  |  |
| June 1998 | 46571 | 9069 | 13998 | 11372 | 35098 | 9638 | 29593 | 39159 | 6783 | 201273 | 175929 |
| June 1999 | 46974 | 9439 | 14479 | 11295 | 35710 | 10975 | 30988 | 41654 | 7150 | 208663 | 190333 |
| June 2000 | 49316 | 8278 | 15783 | 11724 | 34610 | 10574 | 31054 | 41473 | 6141 | 208946 | 211758 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 11813 | 2379 | 3630 | 2745 | 8947 | 2621 | 7625 | 10255 | 1750 | 51769 | 46166 |
| December | 11844 | 2398 | 3598 | 2735 | 8932 | 2772 | 7718 | 10494 | 1815 | 52307 | 47068 |
| March | 11732 | 2364 | 3582 | 2843 | 8926 | 2839 | 7800 | 10522 | 1827 | 52433 | 48001 |
| June | 11585 | 2298 | 3668 | 2972 | 8905 | 2743 | 7845 | 10384 | 1758 | 52154 | 49097 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | 11615 | 2217 | 3833 | 2999 | 8839 | 2593 | 7854 | 10263 | 1615 | 51827 | 51353 |
| December | 11984 | 2115 | 4034 | 2965 | 8673 | 2522 | 7856 | 10291 | 1555 | 51996 | 52743 |
| March | 12606 | 2019 | 4049 | 2910 | 8541 | 2625 | 7766 | 10399 | 1520 | 52429 | 53623 |
| June | 13112 | 1927 | 3868 | 2850 | 8556 | 2834 | 7578 | 10520 | 1452 | 52694 | 54039 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 13396 | 1861 | 3605 | 2799 | 8673 | 3043 | 7318 | 10654 | 1371 | 52743 | 54221 |
|  | (a) Reference year for chain volume measures is 1998-1999. |  |  |  | (b) A break in series occurred in Wholesale trade between the June and September 1999 quarters. See paragraphs 34 and 35 of the Explanatory Notes. |  |  |  |  |  |  |

## MANUFACTURING

WHOLESALE
TRADE

| Food, beverage and tobacco | Textiles, clothing, footwear and leather | Wood and paper products | Printing, publishing and recorded media | Petroleum, coal, chemical and assoc. products | Non- <br> metallic <br> mineral <br> product | Metal product | Machinery and equipment | Other manufacturing | Total manufacturing | Total wholesale(b) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \% | \% | \% | \% | \% | \% | \% | \% | \% | \% | \% |

$\qquad$

| NAL |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year to |  |  |  |  |  |  |  |  |  |  |  |
| June 1998 | 3.3 | -1.9 | 5.5 | 13.5 | 5.0 | -3.5 | -8.5 | -0.2 | 3.8 | 1.1 | 8.3 |
| June 1999 | 0.9 | 5.9 | 3.0 | -2.1 | 1.5 | 16.0 | 5.2 | 6.4 | 3.1 | 3.7 | 7.6 |
| June 2000 | 4.5 | -12.7 | 10.2 | 5.4 | -3.5 | -5.7 | 0.4 | -0.3 | -11.3 | 0.2 | 11.9 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 7.8 | 14.2 | 0.8 | -2.9 | -2.2 | 15.0 | 2.5 | 4.3 | -2.3 | 3.7 | 1.0 |
| December | 7.0 | -5.4 | 0.4 | 1.5 | 1.8 | 7.2 | 2.1 | 5.9 | 23.8 | 4.3 | 7.5 |
| March | -13.3 | -6.9 | -10.6 | -0.9 | -5.7 | -8.3 | -9.0 | -10.8 | -16.1 | -9.7 | -8.0 |
| June | -2.2 | 0.3 | 9.8 | 3.9 | 6.8 | 6.9 | 10.5 | 4.7 | -7.2 | 4.2 | 6.8 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | 5.8 | 3.4 | 5.1 | 7.1 | -4.6 | -9.1 | 0.4 | 3.2 | 5.7 | 1.7 | 6.7 |
| December | 14.3 | -9.3 | 9.0 | 0.1 | 2.6 | -3.6 | -0.5 | -1.3 | 0.1 | 3.3 | 5.3 |
| March | -9.6 | -8.8 | -6.1 | -11.4 | -8.4 | 2.9 | -7.9 | -6.3 | -23.5 | -8.2 | -6.0 |
| June | 3.7 | -1.5 | 0.1 | 5.9 | 4.6 | 10.7 | 5.2 | 6.9 | 20.6 | 5.1 | 5.8 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 9.4 | -1.2 | -13.6 | -4.3 | 3.2 | 10.2 | -6.5 | 3.9 | -19.0 | 1.3 | -0.6 |


| SEASONALLY ADJUSTED |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year to |  |  |  |  |  |  |  |  |  |  |  |
| June 1998 | 3.3 | -1.9 | 5.5 | 13.5 | 5.0 | -3.5 | -8.5 | -0.2 | 3.8 | 1.1 | 8.3 |
| June 1999 | 0.9 | 5.9 | 3.0 | -2.1 | 1.5 | 16.0 | 5.2 | 6.4 | 3.1 | 3.7 | 7.6 |
| June 2000 | 4.5 | -12.7 | 10.2 | 5.4 | -3.5 | -5.7 | 0.4 | -0.3 | -11.3 | 0.2 | 11.9 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 0.6 | 9.5 | -2.7 | -7.0 | -0.3 | 11.2 | 1.6 | 1.9 | -10.5 | 0.7 | 0.4 |
| December | -2.4 | -6.0 | -1.8 | -0.6 | 2.0 | 9.4 | 0.9 | 5.5 | 18.8 | 1.6 | 3.6 |
| March | 3.7 | 2.6 | -0.5 | 8.6 | -2.4 | -4.3 | 0.7 | -1.3 | 0.3 | 0.5 | 1.5 |
| June | -3.8 | -4.3 | 4.4 | 1.3 | 1.2 | 3.9 | 1.8 | -2.8 | -11.4 | -1.0 | 1.1 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | -2.3 | -2.8 | 1.6 | 4.5 | -1.2 | -10.0 | -0.7 | 1.0 | -2.6 | -1.0 | 6.4 |
| December | 7.0 | -5.4 | 6.7 | -4.7 | -0.5 | -5.6 | -0.9 | -1.6 | -4.9 | 0.5 | 1.6 |
| March | 4.4 | -4.3 | 3.4 | -2.5 | -4.0 | 8.5 | 0.8 | 2.8 | -8.6 | 1.1 | 2.4 |
| June | 4.3 | -3.6 | -3.9 | 3.6 | -0.6 | 7.7 | -1.9 | 0.2 | 15.6 | 1.3 | 1.0 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 1.9 | -6.0 | -16.5 | -8.3 | 6.3 | 8.6 | -7.2 | 1.5 | -26.4 | -1.5 | -1.2 |

TREND ESTIMATES

## Year to

| June 1998 | 3.1 | -0.2 | 5.1 | 12.3 | 4.4 | -2.6 | -7.6 | 0.1 | 3.7 | 1.2 | 7.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1999 | 0.9 | 4.1 | 3.4 | -0.7 | 1.7 | 13.9 | 4.7 | 6.4 | 5.4 | 3.7 | 8.2 |
| June 2000 | 5.0 | -12.3 | 9.0 | 3.8 | -3.1 | -3.7 | 0.2 | -0.4 | -14.1 | 0.1 | 11.3 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 0.6 | 2.4 | 0.5 | -3.4 | 0.4 | 6.2 | 1.5 | 3.5 | 3.2 | 1.5 | 2.4 |
| December | 0.3 | 0.8 | -0.9 | -0.4 | -0.2 | 5.8 | 1.2 | 2.3 | 3.7 | 1.0 | 2.0 |
| March | -0.9 | -1.4 | -0.5 | 4.0 | -0.1 | 2.4 | 1.1 | 0.3 | 0.7 | 0.2 | 2.0 |
| June | -1.2 | -2.8 | 2.4 | 4.5 | -0.2 | -3.4 | 0.6 | -1.3 | -3.8 | -0.5 | 2.3 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | 0.3 | -3.5 | 4.5 | 0.9 | -0.7 | -5.5 | 0.1 | -1.2 | -8.2 | -0.6 | n.p. |
| December | 3.2 | -4.6 | 5.2 | -1.1 | -1.9 | -2.7 | 0.0 | 0.3 | -3.7 | 0.3 | 2.7 |
| March | 5.2 | -4.6 | 0.4 | -1.8 | -1.5 | 4.1 | -1.2 | 1.1 | -2.3 | 0.8 | 1.7 |
| June | 4.0 | -4.5 | -4.5 | -2.1 | 0.2 | 8.0 | -2.4 | 1.2 | -4.4 | 0.5 | 0.8 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 2.2 | -3.4 | -6.8 | -1.8 | 1.4 | 7.4 | -3.4 | 1.3 | -5.6 | 0.1 | 0.3 |

[^1], - •

WHOLESALE
MANUFACTURING $\qquad$ TRADE



| June 1998 | 0.53 | 0.80 | 0.53 | 0.32 | 0.62 | 0.48 | 0.59 | 0.64 | 0.42 | 0.57 | 0.51 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| June 1999 | 0.59 | 0.75 | 0.58 | 0.29 | 0.68 | 0.46 | 0.62 | 0.66 | 0.42 | 0.60 | 0.53 |
| June 2000 | 0.55 | 0.79 | 0.51 | 0.32 | 0.78 | 0.40 | 0.53 | 0.80 | 0.45 | 0.61 | 0.54 |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |  |
| September | 0.53 | 0.79 | 0.57 | 0.35 | 0.65 | 0.48 | 0.58 | 0.64 | 0.49 | 0.58 | 0.52 |
| December | 0.57 | 0.78 | 0.57 | 0.36 | 0.63 | 0.46 | 0.61 | 0.63 | 0.45 | 0.58 | 0.51 |
| March | 0.53 | 0.75 | 0.62 | 0.32 | 0.68 | 0.47 | 0.61 | 0.62 | 0.41 | 0.58 | 0.52 |
| June | 0.59 | 0.75 | 0.58 | 0.29 | 0.68 | 0.46 | 0.62 | 0.66 | 0.42 | 0.60 | 0.53 |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |  |
| September | 0.61 | 0.75 | 0.56 | 0.29 | 0.69 | 0.42 | 0.59 | 0.72 | 0.46 | 0.61 | 0.55 |
| December | 0.57 | 0.83 | 0.53 | 0.29 | 0.71 | 0.41 | 0.55 | 0.75 | 0.47 | 0.61 | 0.56 |
| March | 0.56 | 0.83 | 0.50 | 0.30 | 0.77 | 0.40 | 0.54 | 0.74 | 0.53 | 0.61 | 0.54 |
| June | 0.55 | 0.79 | 0.51 | 0.32 | 0.78 | 0.40 | 0.53 | 0.80 | 0.45 | 0.61 | 0.54 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |  |
| September | 0.56 | 0.88 | 0.64 | 0.33 | 0.77 | 0.40 | 0.57 | 0.80 | 0.59 | 0.64 | 0.55 |

(a) Seasonally adjusted series.
(b) A break in series occurred in Wholesale trade between the June and September 1999 quarters. See paragraphs 34 and 35 of the Explanatory Notes.
$\left.\begin{array}{llllllllll} & & & & & & & \text { Property } & \text { Cultural } \\ \text { and }\end{array}\right]$


| ORIGINAL ESTIMATES (\$million) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| March | n.a. | n.a. | 12573 | 1540 | 11682 | 2421 | 22051 | 4452 | 756 | n.a. |
| June | n.a. | n.a. | 12954 | 1610 | 12039 | 2518 | 23122 | 4745 | 858 | n.a. |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | 57991 | 51408 | 13230 | 1664 | 13380 | 2432 | 26458 | 5240 | 1006 | 172809 |
| December | 61798 | 54735 | 13557 | 1777 | 14202 | 2698 | 24677 | 4985 | 1002 | 179431 |
| March | 57893 | 51980 | 13802 | 1781 | 13747 | 2816 | 23987 | 5011 | 1000 | 172017 |
| June | 62132 | 56489 | 13748 | 1821 | 14426 | 2930 | 26195 | 5297 | 950 | 183988 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | 63292 | 56781 | 12221 | 1927 | 14463 | 3142 | 25026 | 4934 | 960 | 182746 |


| CHANGE FROM PREVIOUS QUARTER (\%) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1998-1999 |  |  |  |  |  |  |  |  |  |  |
| June | n.a. | n.a. | 3.0 | 4.5 | 3.1 | 4.0 | 4.9 | 6.6 | 13.5 | n.a. |
| 1999-2000 |  |  |  |  |  |  |  |  |  |  |
| September | n.a. | n.a. | 2.1 | 3.4 | 11.1 | -3.4 | 14.4 | 10.4 | 17.2 | n.a. |
| December | 6.6 | 6.5 | 2.5 | 6.8 | 6.1 | 10.9 | -6.7 | -4.9 | -0.3 | 3.8 |
| March | -6.3 | -5.0 | 1.8 | 0.2 | -3.2 | 4.4 | -2.8 | 0.5 | -0.2 | -4.1 |
| June | 7.3 | 8.7 | -0.4 | 2.2 | 4.9 | 4.0 | 9.2 | 5.7 | -5.0 | 7.0 |
| 2000-2001 |  |  |  |  |  |  |  |  |  |  |
| September | 1.9 | 0.5 | -11.1 | 5.8 | 0.3 | 7.2 | -4.5 | -6.9 | 1.1 | -0.7 |

1 This publication contains estimates of the book value of inventories, sales of goods manufactured or assembled by manufacturers in Australia, and income from sales of goods and services for selected industries in Australia. The series have been compiled from data collected by the Australian Bureau of Statistics (ABS) in its quarterly Survey of Inventories, Sales and Services. The survey collects data from private businesses only.

2 The Survey of Inventories, Sales and Services includes the following industries classified according to the Australian and New Zealand Standard Industrial Classification 1993[ANZSIC]:


3 The scope excludes public sector business units (i.e. all departments, authorities and other organisations owned and controlled by Commonwealth, State and Local Government).

## SAMPLE REVISION

## STATISTICAL UNIT

4 The Survey of Inventories, Sales and Services, like most ABS economic collections, takes its frame from the ABS Business Register which is primarily based on registrations to the Australian Taxation Office's Group Employer scheme. The frame is updated quarterly to take account of new businesses, cessations, changes in employment levels, changes in industry and other general business changes. Cessations include businesses which have cancelled their Group Employer registration or have not remitted to the Australian Taxation Office for five quarters or more.

5 The statistics in this publication exclude non-employing businesses which had not registered as group employers with the Australian Taxation Office. Though a substantial number, it is expected that these businesses would not contribute significantly to the estimates, although the impact would vary from industry to industry.

6 The survey is conducted by mail on a quarterly basis. It is based on a random sample of approximately 10,000 units which is stratified by industry, state/territory and number of employees. All private sector units with over 250 employees, and other statistically significant units, such as joint venture partners, are included in the sample.

7 Respondents are asked to provide data on the same basis as their own management accounts. Where a selected unit does not respond in a given survey period, a value is estimated. If data are subsequently provided, the estimated value is replaced with the reported data. Aggregates are calculated from all data using the 'number raised' estimation technique. Data are edited at both individual unit level and at aggregate level.

8 Surveys are conducted in respect of each quarter and returns are completed during the 8 or 9 week period after the end of the quarter to which survey data relate e.g. December quarter survey returns are completed during January and February.

9 The survey frames and samples are revised each quarter to ensure that they remain representative of the survey population. The timing for creating each quarter's survey frame is consistent with that of other ABS surveys. This provides for greater consistency when comparing data across surveys.
10 Additionally, with these revisions to the sample, some of the units from the sampled sector are rotated out of the survey and are replaced by others, to spread the reporting workload equitably.

11 Adjustments are included in the estimates to allow for lags in processing new businesses to the ABS business register, and the omission of some businesses from the business register. The majority of businesses affected and to which the adjustments apply are small in size. The adjustments contributed $3.5 \%$ to the current quarter's estimate of reported inventories and $3.0 \%$ to reported Manufacturers' and Wholesale trade sales.

12 This survey uses the management unit as the statistical unit. The management unit is the highest-level accounting unit within a business, having regard to industry homogeneity, for which accounts are maintained. In nearly all cases it coincides with the legal entity owning the business (i.e. company, partnership, trust, sole operator, etc.). In the case of large diversified businesses, however, there may be more than one management unit, each coinciding with a 'division' or 'line of business'. A division or line of business is recognised where separate and comprehensive accounts are compiled for it.

## EXPLANATORYNOTES

DESCRIPTION OF TERMS

13 The Australian and New Zealand Standard Industrial Classification has been developed for use in both countries for the production and analysis of industry statistics. For more information, users are referred to Australian $\&$ New Zealand Standard Industrial Classification, 1993, ANZSIC, (Cat. no. 1292.0)

14 In order to classify inventories and income from sales of goods and services data by industry, each statistical unit (as defined above) is classified to the Australian and New Zealand Standard Industrial Classification industry in which it mainly operates.

15 Income from sales of goods and services. This includes income from sales of goods by the business and income from services provided such as commission income, repair and service income and fees, management fees, rent leasing and hiring income, delivery and installation charges, income from consulting services, sponsorship income, membership/subscription fees and royalties income.

16 Manufacturers' Sales. All sales of goods manufactured and assembled by the business. Excludes commission earned by the business for manufacturing work done on customers' materials and sales of goods not manufactured (e.g. merchanted goods) by the business.
17 Wholesale Trade Sales. From September quarter 1999, the Wholesale trade sales estimate comprises all income from sales of goods and services (as defined above) by businesses classified to the Wholesale trade industry. Prior to September quarter 1999, only the sales of goods by wholesalers was collected. No break in series was identified with this change.

18 Inventories. All inventories of materials etc., work in progress and finished goods owned by the business, whether held at locations of the business or elsewhere.

19 As part of a strategy to increase the range of information available relating to service industries, the ABS introduced quarterly experimental estimates relating to income from sales of goods and services for most service industries in the June quarter 2000 issue of this publication. This information was first collected in the March quarter 1999. Previously, quarterly data relating to sales had only been released in respect of the Manufacturing and Wholesale trade industries.

20 Income from sales of goods and services is the most readily available measure of output across different industries. This measure is consistent with that used in the Wholesale trade sales series currently released in this publication. The Manufacturers' sales series currently released in this publication only includes sales of goods manufactured by the business or manufactured for it on commission. However, additional information on sales of other goods as well as income from services has been collected from Manufacturers since September quarter 1999. Table 11 presents experimental estimates of income from sales of goods and services for private sector businesses in the newly-measured service industries, as well as comparable data for the Manufacturing and Wholesale trade industries.
21 Users should treat the estimates in table 11 with caution. They are experimental at this stage and further analysis is required to ensure that they are robust and reliable indicators for measuring income in the selected service industries over time.

22 If you have any comments on the usefulness, presentation or possible application of these experimental estimates, please contact Stephen Butcher on Sydney (02) 92684241.

23 The chain volume measures appearing in this publication are annually reweighted chain Laspeyres indexes referenced to current price values in the chosen reference year (currently 1998-1999). Chain volume measures were introduced in September quarter 1998, replacing constant price estimates. The current price value may be thought of as being the product of a price and a quantity. The value in chain volume terms can be derived by linking together movements in volumes, calculated using the average prices of the previous financial year and applying the compounded movements to the current price estimates of the reference year. Each year's quarter-to-quarter growth rates in the chain volume series are based on the prices of the previous financial year, except for those of the quarters of the latest incomplete year which are based upon the second most recent financial year. With each release of the June quarter of this publication, a new base year will be introduced and the reference year will be advanced one year to coincide with it. This means that with the release of the June quarter 2001 issue of this publication, the chain volume measures for 2000-2001 will have 1999-2000 (the previous financial year) as their base year rather than 1998-1999, and the reference year will be 1999-2000. A change in reference year changes levels but not growth rates for all periods. A change in the base year can result in revisions, small in most cases, to growth rates for recent quarters.

24 Chain volume measures are not generally additive. In other words, component chain volume measures do not, in general, sum to a total in the way original current price components do. For inventories and sales data, this means that the original chain volume estimates for industry groups will not add to total inventories and sales for Australia. In order to minimise the impact of this, the ABS uses the latest base year as the reference year. By adopting this approach, additivity does exist for the quarters following the reference year and non-additivity is relatively small for the quarters in the reference year and those immediately preceding it. For further information on chain volume measures refer to the Information Paper: Introduction of Chain Volume Measures in the Australian National Accounts (Cat. no. 5248.0).

25 Estimates provided in this publication are subject to non-sampling and sampling errors. Details of sampling errors are on pages 23 and 24 of this publication.

26 Non-sampling errors may arise as a result of errors in the reporting, recording or processing of the data and can occur even if there is a complete enumeration of the population. These errors can be introduced through inadequacies in the questionnaire, treatment of non-response, inaccurate reporting by respondents, errors in the application of survey procedures, incorrect recording of answers, and errors in data entry and processing.

27 It is difficult to measure the size of non-sampling errors. However, every effort is made in the design of the survey and development of survey procedures to minimise their effects.

28 The quarterly inventories and sales series in this publication are affected to some extent by seasonal influences and it is useful to recognise and take account of this element of variation.

29 Seasonal adjustment is a means of removing the estimated effects of normal seasonal variations for the series so that the effects of other influences can be more clearly recognised.

30 In the seasonal adjustment of the series, account has been taken of both normal seasonal factors (eg increase in retail inventories due to Christmas period) and, in the case of sales, also 'trading' day effects (arising from the varying lengths of the quarters and the varying numbers of Sundays, Mondays, Tuesdays etc. in each quarter). Seasonal adjustment does not remove from the series the effect of irregular or non-seasonal influences (e.g. change in interest rates), and reflects the sampling and other errors to which the original figures are subject. Particular care should be taken in interpreting quarterly movements in the adjusted figures in this publication, especially for detailed industry estimates.

31 At least once each year the seasonally adjusted series are revised to take account of the latest available data. The most recent reanalysis takes into account data collected up to and including the March quarter 2000 survey. Data for periods after March quarter 2000 are seasonally adjusted on the basis of extrapolation of historical patterns. The nature of the seasonal adjustment is such that the magnitude of some revisions resulting from reanalysis may be quite significant especially for data for more recent quarters.

32 Seasonally adjusted data is not available for income from sales of goods and services in table 11 as at least five years of data are required to discern a seasonal pattern.

33 The trend estimates are derived by applying a 7 -term Henderson moving average to the seasonally adjusted series. The 7 -term Henderson average (like all Henderson averages) is symmetric, but as the end of a time series is approached, asymmetric forms of the average are applied. Unlike the weights of the standard 7-term Henderson moving average, the weights employed here have been tailored to suit the particular characteristics of individual series. While the asymmetric weights enable trend estimates for recent quarters to be produced, it does result in revisions to the estimates for the most recent three quarters as additional observations become available. There may also be revisions because of changes in the original data and as a result of the re-estimation of the seasonal factors. For further information, see A Guide to Interpreting Time Series-Monitoring ‘Trend’ An Overview (Cat. no. 1348.0) or contact the Assistant Director, Time Series Analysis on (02) 62526345.

34 Three significant privatised marketing authorities came into scope of the Survey of Inventories, Sales and Services from the September quarter 1999. The introduction of these units resulted in a break in series between the June and September quarters 1999 and comparison of the series over time should be undertaken with care.

35 The methodology used by the ABS has ensured that the trend series has not been distorted by the introduction of these units, although the shift in level is still evident between the June and September quarters 1999. For this reason, the trend estimates of movement have not been published for the Wholesale trade inventories, Total inventories and Wholesale trade sales series in respect of the September quarter 1999.

36 The data collected in the Survey of Inventories, Sales and Services are used to compile estimates of the increase in book value of non-farm inventories in the quarterly and annual national accounts. Income from the sales of goods and services for the Manufacturing and Wholesale trade industries are used to help derive quarterly chain volume measures of gross value added for these industries. For further details see Australian National Accounts: Concepts, Sources and Methods (Cat. no. 5216.0).

COMPARABILITY WITH NATIONAL ACCOUNTS ESTIMATES continued

37 The statistics shown for the movement in the book value of inventories in this publication will differ from corresponding data for private non-farm inventories shown in the national accounts publications because the national accounts estimates are benchmarked to the annual supply and use tables and include estimates for the construction and transport industries.

38 Income from sales of goods and services now collected from the service industries is eventually expected to lead to an improvement in the quality of the quarterly national accounts chain volume estimates of gross value added for the service industries involved, after the series have been subject to further analysis.

39 Users may also wish to refer to the following publications:

- Australian Business Expectations (Cat. no. 5250.0)
- Australian National Accounts: Concepts, Sources and Methods (Cat. no. 5216.0)
- Australian National Accounts: National Income, Expenditure and Product (Cat. no. 5206.0)
- Business Operations and Industry Performance, Australia (Cat. no. 8140.0).
- Company Profits, Australia (Cat. no. 5651.0)
- Introduction of Chain Volume Measures in the Australian National Accounts (Cat. no. 5248.0)
- Manufacturing Production, Australia (Cat. no. 8301.0)
- Private New Capital Expenditure and Expected Expenditure, Australia (Cat. no. 5625.0)
- Retail Trade, Australia (Cat. no. 8501.0)
- State Estimates of Private New Capital Expenditure (Cat. no. 5646.0)

40 Current publications produced by the ABS are listed in the Catalogue of Publications and Products, Australia (Cat. no. 1101.0). The ABS also issues on Tuesdays and Fridays a Release Advice (Cat. no. 1105.0) which lists publications to be released in the next few days. The Catalogue and Release Advice are available from any ABS office.

41 In addition to the data contained in this and related publications, more detailed industry information may be available on request.
n.a. not available
n.p. not available for publication

## STANDARD ERRORS

INTRODUCTION

LEVEL ESTIMATES

The estimates in this publication are based on a sample drawn from units in the surveyed population. Because the entire population is not surveyed, the published estimates are subject to sampling error. The most common way of quantifying such sampling error is to calculate the standard error for the published estimate or statistic.

To illustrate, let us say that the published level estimate for total inventories is $\$ 77,000 \mathrm{~m}$ and the calculated standard error in this case is $\$ 965 \mathrm{~m}$. The standard error is then used to interpret the level estimate of $\$ 77,000 \mathrm{~m}$

For instance, the standard error of $\$ 965 \mathrm{~m}$ indicates that:

- There are approximately two chances in three that the real value falls within the range $\$ 76,035 \mathrm{~m}$ to $\$ 77,965 \mathrm{~m}(\$ 77,000 \mathrm{~m} \pm \$ 965 \mathrm{~m})$
- There are approximately nineteen chances in twenty that the real value falls within the ranges $\$ 75,070 \mathrm{~m}$ and $\$ 78,930 \mathrm{~m}(\$ 77,000 \mathrm{~m} \pm \$ 1,930 \mathrm{~m})$

The real value in this case is the result we would obtain if we could enumerate the total population.

The following tables show the standard errors for national quarterly level estimates. These standard errors are based on a smoothed average of inventories and sales estimates over a number of quarters

|  | Inventories |
| :---: | :---: |
|  | \$m |
| Mining | 88 |
| Manufacturing | 438 |
| Wholesale trade | 667 |
| Retail trade | 530 |
| Other | 75 |
| Total selected industries | 965 |
|  | Manufacturers' sales |
|  | \$m |
| Manufacturing | 865 |

Income from sales of goods and services

|  | $\$ \mathrm{~m}$ |
| :--- | ---: |
|  |  |
| Manufacturing | 1146 |
| Wholesale trade | 1536 |
| Motor vehicle retailing services | 117 |
| Accommodation | 100 |
| Transport and storage | 832 |
| Communication services | 84 |
| Property and business services | 797 |
| Cultural and recreational services | 455 |
| Personal Services | 46 |
| Total selected industries | 2114 |

Motor vehicle retailing services 117
Accommodation 100
Transport and storage
Commuication senices 84

Cultural and recreational services 455

Total selected industries 2114

## STANDARD ERRORS continued

MOVEMENT ESTIMATES
The following example illustrates how to use the standard error to interpret a movement estimate. Let us say that one quarter the published level estimate for total inventories is $\$ 77,000 \mathrm{~m}$, and the next quarter the published level estimate is $\$ 79,000 \mathrm{~m}$. In this example the calculated standard error for the movement estimate is $\$ 754 \mathrm{~m}$. The standard error is then used to interpret the published movement estimate of $+\$ 2,000 \mathrm{~m}$.

For instance, the standard error of $\$ 754 \mathrm{~m}$ indicates that:

- There are approximately two chances in three that the real movement over the two quarter period falls within the range $\$ 1,246 \mathrm{~m}$ to $\$ 2,754 \mathrm{~m}(\$ 2,000 \mathrm{~m} \pm \$ 754 \mathrm{~m})$
- There are approximately nineteen chances in twenty that the real movement falls within the range $\$ 492 \mathrm{~m}$ to $\$ 3,508 \mathrm{~m}(\$ 2,000 \mathrm{~m} \pm \$ 1,508 \mathrm{~m})$

The following table shows the standard errors for national quarterly movement estimates. These standard errors are based on a smoothed average of inventories and sales estimates over a number of quarters.

## Inventories

|  | \$m |
| :---: | :---: |
| Mining | 98 |
| Manufacturing | 329 |
| Wholesale trade | 490 |
| Retail trade | 449 |
| Other | 92 |
| Total selected industries | 754 |

Manufacturers'
sales
\$m
Manufacturing 682
$\qquad$

Income from sales of goods and services

|  | $\$ \mathrm{~m}$ |
| :---: | :---: |
| Wholesale trade | 1309 |

## EFFECT OF NEW SEASONALLY ADJUSTED ESTIMATES ON TREND ESTIMATES

TREND REVISIONS
The examples in the tables below show two scenarios and the consequent revisions to previous trend estimates of inventories owned by private businesses and manufacturers' and wholesalers' sales.

1 The December quarter seasonally adjusted estimate of chain volume measures is higher than the September quarter estimate by the percentage shown.

2 The December quarter seasonally adjusted estimate of chain volume measures is lower than the September quarter estimate by the percentage shown.

The percentages chosen are the long term average movements, without regard to sign, in the seasonally adjusted series.

wholesale trade sales


TREND AS PUBLISHED

|  | \$m | \% change | 1 |  | 2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | rises by 1.7 on Sep 2000 |  | falls by 1.7 on Sep 2000 |  |
|  |  |  | \$m | \% change |  | \% change |
| 1999 |  |  |  |  |  |  |
| December | 52743 | 2.7 | 52743 | 2.7 | 52743 | 2.7 |
| 2000 |  |  |  |  |  |  |
| March | 53623 | 1.7 | 53656 | 1.7 | 53801 | 2.0 |
| June | 54039 | 0.8 | 54040 | 0.7 | 53990 | 0.4 |
| September | 54221 | 0.3 | 54339 | 0.6 | 53640 | -0.6 |
| December |  | - | 546 | 0.5 | 52 | -1.3 |

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[^0]:    (a) A break in series occurred in Wholesale trade between the June and September 1999 quarters. See paragraphs 34 and 35 of the Explanatory Notes.
    (b) Includes Electricity and gas supply; Accommodation, cafes and restaurants.

[^1]:    (a) Reference year for chain volume measures is 1998-1999.
    (b) A break in series occurred in Wholesale trade between the June and September 1999
    quarters. See paragraphs 34 and 35 of the Explanatory Notes.

