



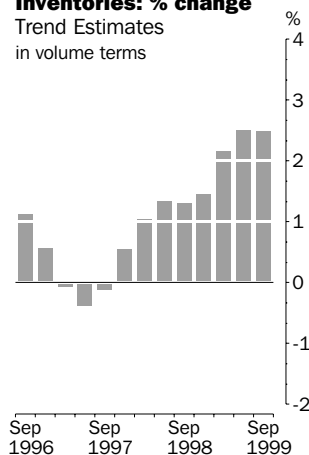
INVENTORIES AND SALES, SELECTED INDUSTRIES

AUSTRALIA

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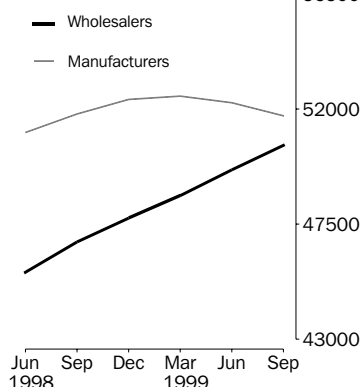
Inventories: % change

Trend Estimates
in volume terms



Sales

Trend Estimates
in volume terms



- For further information about these and related statistics, contact Stephen Butcher on 02 9268 4240, or Client Services in any ABS office as shown on the back cover of this publication.

SEPTEMBER QTR KEY FIGURES

TREND (a)

| | Sep 1998 | Jun 1999 | Sep 1999 | Jun 1999 to Sep 1999 % change | Sep 1998 to Sep 1999 % change |
|-----------------|----------|----------|----------|-------------------------------|-------------------------------|
| | \$m | \$m | \$m | | |
| Inventories | 75 425 | 80 146 | 82 142 | 2.5 | 8.9 |
| Sales by | | | | | |
| Manufacturers | 51 810 | 52 236 | 51 737 | -1.0 | -0.1 |
| Wholesale trade | 46 817 | 49 630 | 50 582 | 1.9 | 8.0 |

SEASONALLY ADJUSTED (a)

| | Sep 1998 | Jun 1999 | Sep 1999 | Jun 1999 to Sep 1999 % change | Sep 1998 to Sep 1999 % change |
|-----------------|----------|----------|----------|-------------------------------|-------------------------------|
| | \$m | \$m | \$m | | |
| Inventories | 75 254 | 79 983 | 82 552 | 3.2 | 9.7 |
| Sales by | | | | | |
| Manufacturers | 51 564 | 52 139 | 51 524 | -1.2 | -0.1 |
| Wholesale trade | 46 548 | 49 199 | 51 115 | 3.9 | 9.8 |

(a) Estimates for private businesses, in volume terms.

SEPTEMBER QTR KEY POINTS

INVENTORIES

- The trend estimate (in volume terms) of inventories held by private businesses increased by \$1,996m (2.5%) since June 1999, the eighth successive quarter of growth.
- The largest increase was in respect of Wholesale trade (\$1,107m or 4.3%) followed by Manufacturing (\$639m or 2.0%) and Retail trade (\$223m or 1.2%).
- In original current price terms, major drivers of this growth were Machinery and equipment wholesalers (which includes motor vehicles) and manufacturers and Personal and household goods wholesalers and retailers.
- While some of the increase in inventories was due to the approach of Y2K, this was not a significant factor (see Note on Page 2 for more detail).

SALES

- Manufacturers' sales fell by \$499m (1.0%) from the June 1999 estimate of \$52,236m, the second successive quarter of decline. There has been a decrease of \$73m (0.1%) since September 1998.
- Wholesale sales increased by 1.9% (\$952m) from June 1999. This is the sixth successive quarter of growth of 1.9% or greater.

NOTES

FORTHCOMING ISSUES

| <i>ISSUE (Quarter)</i> | <i>RELEASE DATE</i> |
|------------------------|---------------------|
| December 1999 | 28 February 2000 |
| March 2000 | 29 May 2000 |

PRIVATISED MARKETING AUTHORITIES

The series presented in this publication have not yet been adjusted to take account of the privatisation of the Australian Wheat Board, Wool International and the Barley Board on 1 July 1999. Because of the combined size of these businesses' inventories, the simple addition of them to the series for September quarter 1999 would cause a significant break in series resulting in misleading seasonally adjusted and trend estimates for some quarters to come. Other options for incorporating these businesses into these series without causing a significant break in series will be evaluated over the next one or two quarters. Users will be advised in due course of when and how these businesses will be included. As a result of the privatisation the Quarterly National Accounts estimates published in ABS Cat. No. 5206.0 will, from the September quarter 1999 onwards, merge the series previously known as 'Public Marketing Authorities' with 'Private non-farm inventories'. In the September quarter 1999, inventories held by the three privatised marketing authorities declined by around \$100m in seasonally adjusted chain volume measure terms. Combined with statistics elsewhere in this publication, this figure gives a good indication of the total change in private non-farm inventories that will be published for September quarter 1999.

CHANGES TO THIS ISSUE

Revisions to the series for inventories and sales have been made this quarter to reflect improvements in survey methodology and quality improvements in the business frame from which this survey is conducted. These adjustments affect historical levels from 1993 onwards but have minimal effect on movements.

EFFECTS OF Y2K

A telephone supplementary survey was undertaken in conjunction with the September quarter 1999 survey to determine the possible impact of Y2K on the level of inventories and sales. Preliminary findings reveal that, of the 500 units contacted, under ten percent either reported an impact on the level of their inventories or sales in the September quarter or predicted an impact in December quarter 1999. This result is broadly consistent with the results released in ABS Cat. No. 8152.0 *Year 2000 Problem* where only nine percent of businesses reported they would increase inventories to mitigate possible Y2K disruptions. The impact may be more important in some industries than others.

REVISIONS TO TREND

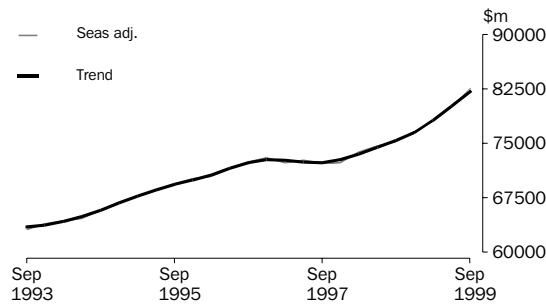
Readers should exercise care in the interpretation of the trend data as the data for the last three quarters in particular are likely to be revised with the addition of subsequent quarters' data. For further information and examples showing the sensitivity of trend data, refer to Trend Estimates in paragraph 28 of the Explanatory Notes.

Dennis Trewin
Acting Australian Statistician

INVENTORIES: Trend estimates—Chain volume measures(a)

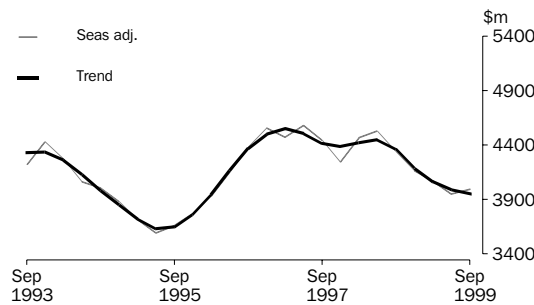
ALL SELECTED INDUSTRIES

Inventories held by private businesses continued its long term upward trend, increasing between 1.5% and 2.5% over the last four quarters.



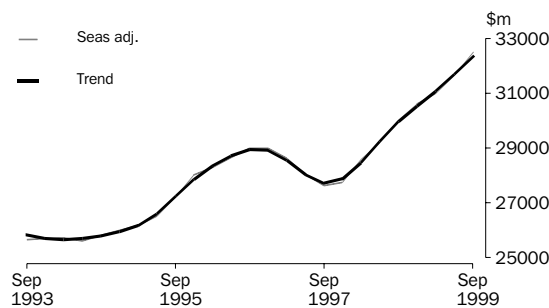
MINING

Apart from two quarters of growth in March and June quarters 1998, (0.9% and 0.6% respectively), inventories held by the Mining industry have been falling since March 1997. The current estimate of \$3,949m is \$41m (1.0%) lower than June 1999 and \$415m (9.5%) lower than September 1998.



MANUFACTURING

Growth rates for inventories held by Manufacturers have been between 1.8% and 2.8% per quarter for the last seven quarters. The current estimate of \$32,340m is \$2,379m (7.9%) higher than for September 1998. Industries contributing most to this increase were Machinery and equipment \$771m (11.9%), Food, beverage and tobacco \$576m (9.1%), Metal product \$519m (11.4%) and Petroleum, coal and chemical \$453m (7.7%).

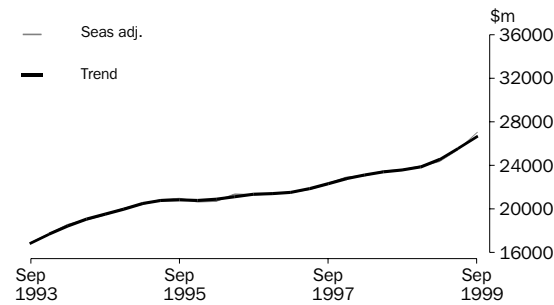


(a) Reference year for chain volume measures is 1997–1998.

INVENTORIES: Trend estimates—Chain volume measures(a)

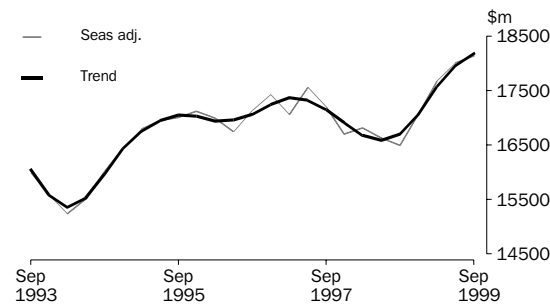
WHOLESALE TRADE

This is the fifteenth successive quarter of growth in inventories held by the Wholesale trade industry. The current estimate of \$26,666m is \$3,084m (13.1%) higher than for September 1998 and \$4,350m (19.5%) higher than September 1997.



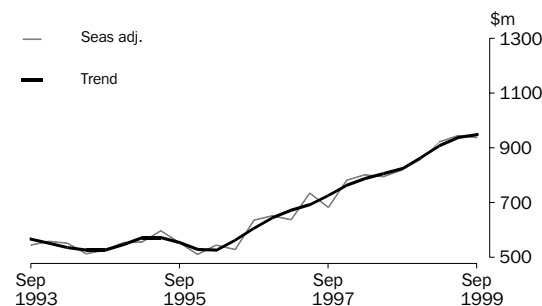
RETAIL TRADE

Inventories held by Retailers have increased for the last five quarters following five quarters of decline from June 1997 to June 1998. The current estimate of \$18,186m is \$1,492m (8.9%) higher than September 1998 and \$223m (1.2%) higher than June 1999.



OTHER SELECTED INDUSTRIES (Electricity and gas supply; accommodation, cafes and restaurants)

Inventories held by Other selected industries have increased over the last three years with growth rates between 1.2% and 7.5% per quarter. The current estimate of \$949m is \$12m (1.3%) higher than June 1999.

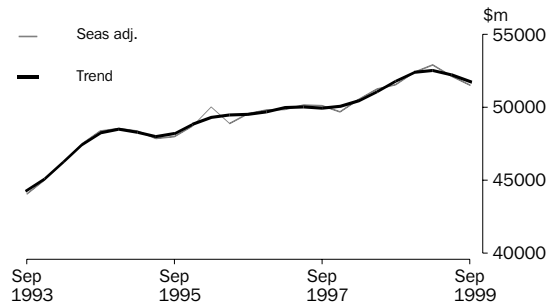


(a) Reference year for chain volume measures is 1997–1998.

SALES: Trend estimates—Chain volume measures(a)

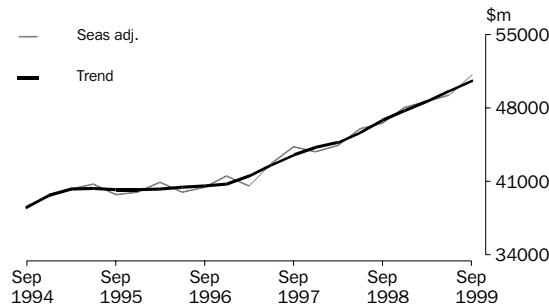
MANUFACTURERS' SALES

After six quarters of growth from the September quarter 1997, level estimates for Manufacturers' sales have fallen over the last two quarters to \$51,737m in September 1999. Since September quarter 1998, the estimate has fallen by \$73m (0.1%). The industries contributing most to this fall are Food, beverage and tobacco down \$530m (4.5%) and Textiles, clothing and footwear down \$210m (8.8%). Over the same period, Printing, publishing and recorded media increased by \$226m (8.5%) and Metal product by \$218m (2.8%).



WHOLESALE TRADE SALES

Growth rates for Wholesale trade sales have been between 1.1% and 2.6% per quarter for the last eleven quarters. The current estimate of \$50,582m is \$952m (1.9%) higher than June 1999 and \$3,765m (8.0%) higher than September 1998.



(a) Reference year for chain volume measures is 1997–1998.

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INVENTORIES, By Industry—Current prices

| At end of | Mining \$m | Manufacturing \$m | Wholesale trade \$m | Retail trade \$m | Other selected industries(a) \$m | Total selected industries \$m |
|---------------------|---------------|----------------------|---------------------------|---------------------|----------------------------------------|-------------------------------------|
| ORIGINAL | | | | | | |
| June 1997 | 4 499 | 27 893 | 21 173 | 17 076 | 701 | 71 342 |
| June 1998 | 4 508 | 29 405 | 23 457 | 16 418 | 757 | 74 546 |
| June 1999 | 3 857 | 31 185 | 25 170 | 17 992 | 937 | 79 141 |
| 1997–1998 | | | | | | |
| September | 4 447 | 27 485 | 22 321 | 17 197 | 665 | 72 115 |
| December | 4 290 | 27 536 | 23 117 | 16 889 | 833 | 72 664 |
| March | 4 479 | 28 912 | 23 161 | 16 943 | 796 | 74 291 |
| June | 4 508 | 29 405 | 23 457 | 16 418 | 757 | 74 546 |
| 1998–1999 | | | | | | |
| September | 4 334 | 30 270 | 24 495 | 16 773 | 810 | 76 683 |
| December | 4 105 | 30 280 | 24 574 | 17 519 | 950 | 77 428 |
| March | 3 951 | 31 015 | 24 686 | 18 131 | 940 | 78 722 |
| June | 3 857 | 31 185 | 25 170 | 17 992 | 937 | 79 141 |
| 1999–2000 | | | | | | |
| September | 4 086 | 32 254 | 27 109 | 18 682 | 962 | 83 093 |
| SEASONALLY ADJUSTED | | | | | | |
| June 1997 | 4 530 | 27 787 | 21 478 | 17 461 | 731 | 71 987 |
| June 1998 | 4 529 | 29 280 | 23 795 | 16 793 | 791 | 75 188 |
| June 1999 | 3 870 | 31 046 | 25 532 | 18 406 | 980 | 79 834 |
| 1997–1998 | | | | | | |
| September | 4 422 | 27 506 | 22 129 | 17 113 | 680 | 71 850 |
| December | 4 288 | 27 912 | 22 964 | 16 685 | 774 | 72 623 |
| March | 4 482 | 28 626 | 23 194 | 16 848 | 806 | 73 956 |
| June | 4 529 | 29 280 | 23 795 | 16 793 | 791 | 75 188 |
| 1998–1999 | | | | | | |
| September | 4 314 | 30 301 | 24 274 | 16 701 | 828 | 76 418 |
| December | 4 103 | 30 684 | 24 411 | 17 310 | 882 | 77 390 |
| March | 3 955 | 30 706 | 24 730 | 18 017 | 952 | 78 360 |
| June | 3 870 | 31 046 | 25 532 | 18 406 | 980 | 79 834 |
| 1999–2000 | | | | | | |
| September | 4 068 | 32 300 | 26 859 | 18 607 | 982 | 82 816 |
| TREND ESTIMATES | | | | | | |
| June 1997 | 4 471 | 27 776 | 21 580 | 17 219 | 684 | 71 730 |
| June 1998 | 4 453 | 29 410 | 23 789 | 16 716 | 808 | 75 176 |
| June 1999 | 3 945 | 31 313 | 25 658 | 18 359 | 973 | 80 248 |
| 1997–1998 | | | | | | |
| September | 4 407 | 27 649 | 22 147 | 17 075 | 723 | 72 001 |
| December | 4 403 | 27 918 | 22 773 | 16 894 | 760 | 72 748 |
| March | 4 445 | 28 568 | 23 333 | 16 728 | 786 | 73 860 |
| June | 4 453 | 29 410 | 23 789 | 16 716 | 808 | 75 176 |
| 1998–1999 | | | | | | |
| September | 4 331 | 30 136 | 24 140 | 16 894 | 833 | 76 334 |
| December | 4 112 | 30 544 | 24 422 | 17 324 | 885 | 77 287 |
| March | 3 979 | 30 852 | 24 900 | 17 890 | 938 | 78 559 |
| June | 3 945 | 31 313 | 25 658 | 18 359 | 973 | 80 248 |
| 1999–2000 | | | | | | |
| September | 3 968 | 31 923 | 26 591 | 18 699 | 994 | 82 175 |

(a) See paragraph 2 of the Explanatory Notes.

INVENTORIES, By Industry—Chain volume measures(a)

| At end of | Mining \$m | Manufacturing \$m | Wholesale trade \$m | Retail trade \$m | Other selected industries(b) \$m | Total selected industries \$m |
|---------------------|---------------|----------------------|---------------------------|---------------------|----------------------------------------|-------------------------------------|
| ORIGINAL | | | | | | |
| June 1997 | 4 546 | 28 137 | 21 485 | 17 171 | 705 | 72 037 |
| June 1998 | 4 510 | 29 327 | 23 119 | 16 260 | 760 | 73 975 |
| June 1999 | 3 934 | 31 782 | 25 083 | 17 600 | 904 | 79 303 |
| 1997–1998 | | | | | | |
| September | 4 466 | 27 597 | 22 522 | 17 288 | 669 | 72 545 |
| December | 4 245 | 27 371 | 23 034 | 16 905 | 840 | 72 400 |
| March | 4 461 | 28 867 | 23 033 | 16 910 | 792 | 74 062 |
| June | 4 510 | 29 327 | 23 119 | 16 260 | 760 | 73 975 |
| 1998–1999 | | | | | | |
| September | 4 361 | 29 987 | 23 791 | 16 570 | 802 | 75 512 |
| December | 4 165 | 30 199 | 24 055 | 17 280 | 924 | 76 622 |
| March | 4 062 | 31 303 | 24 344 | 17 790 | 909 | 78 407 |
| June | 3 934 | 31 782 | 25 083 | 17 600 | 904 | 79 303 |
| 1999–2000 | | | | | | |
| September | 4 009 | 32 445 | 27 239 | 18 217 | 919 | 82 828 |
| SEASONALLY ADJUSTED | | | | | | |
| June 1997 | 4 577 | 28 025 | 21 795 | 17 557 | 736 | 72 684 |
| June 1998 | 4 530 | 29 202 | 23 451 | 16 632 | 794 | 74 608 |
| June 1999 | 3 947 | 31 642 | 25 444 | 18 005 | 945 | 79 983 |
| 1997–1998 | | | | | | |
| September | 4 440 | 27 617 | 22 329 | 17 203 | 684 | 72 272 |
| December | 4 243 | 27 741 | 22 882 | 16 701 | 780 | 72 350 |
| March | 4 464 | 28 578 | 23 065 | 16 815 | 802 | 73 723 |
| June | 4 530 | 29 202 | 23 451 | 16 632 | 794 | 74 608 |
| 1998–1999 | | | | | | |
| September | 4 341 | 30 019 | 23 577 | 16 498 | 819 | 75 254 |
| December | 4 163 | 30 604 | 23 895 | 17 074 | 857 | 76 594 |
| March | 4 066 | 30 990 | 24 387 | 17 678 | 921 | 78 042 |
| June | 3 947 | 31 642 | 25 444 | 18 005 | 945 | 79 983 |
| 1999–2000 | | | | | | |
| September | 3 992 | 32 491 | 26 988 | 18 143 | 938 | 82 552 |
| TREND ESTIMATES | | | | | | |
| June 1997 | 4 503 | 28 029 | 21 860 | 17 320 | 691 | 72 402 |
| June 1998 | 4 449 | 29 243 | 23 378 | 16 581 | 806 | 74 458 |
| June 1999 | 3 990 | 31 701 | 25 559 | 17 963 | 937 | 80 146 |
| 1997–1998 | | | | | | |
| September | 4 413 | 27 714 | 22 316 | 17 149 | 727 | 72 320 |
| December | 4 383 | 27 868 | 22 783 | 16 919 | 763 | 72 716 |
| March | 4 421 | 28 457 | 23 137 | 16 673 | 788 | 73 477 |
| June | 4 449 | 29 243 | 23 378 | 16 581 | 806 | 74 458 |
| 1998–1999 | | | | | | |
| September | 4 364 | 29 961 | 23 582 | 16 694 | 823 | 75 425 |
| December | 4 188 | 30 532 | 23 878 | 17 064 | 865 | 76 527 |
| March | 4 061 | 31 090 | 24 563 | 17 569 | 909 | 78 185 |
| June | 3 990 | 31 701 | 25 559 | 17 963 | 937 | 80 146 |
| 1999–2000 | | | | | | |
| September | 3 949 | 32 340 | 26 666 | 18 186 | 949 | 82 142 |

(a) Reference year for chain volume measures is 1997–1998.

(b) See paragraph 2 of the Explanatory Notes.

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

| Year to/Quarter to | Mining % | Manufacturing % | Wholesale trade % | Retail trade % | Other selected industries(b) % | Total selected industries % |
|---------------------|-------------|--------------------|-------------------------|-------------------|--------------------------------------|-----------------------------------|
| ORIGINAL | | | | | | |
| June 1997 | 10.5 | -2.1 | 2.2 | 4.8 | 38.7 | 1.8 |
| June 1998 | -0.8 | 4.2 | 7.6 | -5.3 | 7.8 | 2.7 |
| June 1999 | -12.8 | 8.4 | 8.5 | 8.2 | 19.0 | 7.2 |
| 1997-1998 | | | | | | |
| September | -1.8 | -1.9 | 4.8 | 0.7 | -5.0 | 0.7 |
| December | -4.9 | -0.8 | 2.3 | -2.2 | 25.4 | -0.2 |
| March | 5.1 | 5.5 | 0.0 | 0.0 | -5.7 | 2.3 |
| June | 1.1 | 1.6 | 0.4 | -3.8 | -4.1 | -0.1 |
| 1998-1999 | | | | | | |
| September | -3.3 | 2.2 | 2.9 | 1.9 | 5.6 | 2.1 |
| December | -4.5 | 0.7 | 1.1 | 4.3 | 15.2 | 1.5 |
| March | -2.5 | 3.7 | 1.2 | 3.0 | -1.6 | 2.3 |
| June | -3.1 | 1.5 | 3.0 | -1.1 | -0.5 | 1.1 |
| 1999-2000 | | | | | | |
| September | 1.9 | 2.1 | 8.6 | 3.5 | 1.6 | 4.4 |
| SEASONALLY ADJUSTED | | | | | | |
| June 1997 | 10.2 | -2.2 | 2.2 | 4.9 | 39.0 | 1.8 |
| June 1998 | -1.0 | 4.2 | 7.6 | -5.3 | 7.9 | 2.6 |
| June 1999 | -12.9 | 8.4 | 8.5 | 8.3 | 19.1 | 7.2 |
| 1997-1998 | | | | | | |
| September | -3.0 | -1.5 | 2.4 | -2.0 | -7.1 | -0.6 |
| December | -4.5 | 0.5 | 2.5 | -2.9 | 14.2 | 0.1 |
| March | 5.2 | 3.0 | 0.8 | 0.7 | 2.8 | 1.9 |
| June | 1.5 | 2.2 | 1.7 | -1.1 | -1.0 | 1.2 |
| 1998-1999 | | | | | | |
| September | -4.2 | 2.8 | 0.5 | -0.8 | 3.2 | 0.9 |
| December | -4.1 | 2.0 | 1.3 | 3.5 | 4.7 | 1.8 |
| March | -2.3 | 1.3 | 2.1 | 3.5 | 7.4 | 1.9 |
| June | -2.9 | 2.1 | 4.3 | 1.8 | 2.7 | 2.5 |
| 1999-2000 | | | | | | |
| September | 1.1 | 2.7 | 6.1 | 0.8 | -0.8 | 3.2 |
| TREND ESTIMATES | | | | | | |
| June 1997 | 8.1 | -2.4 | 3.6 | 2.1 | 22.8 | 1.3 |
| June 1998 | -1.2 | 4.3 | 6.9 | -4.3 | 16.5 | 2.8 |
| June 1999 | -10.3 | 8.4 | 9.3 | 8.3 | 16.3 | 7.6 |
| 1997-1998 | | | | | | |
| September | -2.0 | -1.1 | 2.1 | -1.0 | 5.2 | -0.1 |
| December | -0.7 | 0.6 | 2.1 | -1.3 | 4.9 | 0.5 |
| March | 0.9 | 2.1 | 1.6 | -1.5 | 3.3 | 1.0 |
| June | 0.6 | 2.8 | 1.0 | -0.5 | 2.2 | 1.3 |
| 1998-1999 | | | | | | |
| September | -1.9 | 2.5 | 0.9 | 0.7 | 2.1 | 1.3 |
| December | -4.0 | 1.9 | 1.3 | 2.2 | 5.1 | 1.5 |
| March | -3.0 | 1.8 | 2.9 | 3.0 | 5.1 | 2.2 |
| June | -1.7 | 2.0 | 4.1 | 2.2 | 3.1 | 2.5 |
| 1999-2000 | | | | | | |
| September | -1.0 | 2.0 | 4.3 | 1.2 | 1.2 | 2.5 |

(a) Reference year for chain volume measures is 1997-1998.

(b) See paragraph 2 of the Explanatory Notes.

INVENTORIES, By Manufacturing industries—Current prices

| At end of | 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 | Non- metallic mineral product | Metal product | Machinery and equipment | Other manu- facturing | Total manu- facturing |
|---------------------|-------------------------------------|------------------------------------------------------|-------------------------------|--------------------------------------------------|--------------------------------------------------------|----------------------------------------|------------------|-------------------------------|-----------------------------|-----------------------------|
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| ORIGINAL | | | | | | | | | | |
| June 1997 | 5 911 | 1 744 | 1 866 | 811 | 5 594 | 1 330 | 4 128 | 5 894 | 614 | 27 893 |
| June 1998 | 6 528 | 1 803 | 2 015 | 882 | 5 569 | 1 138 | 4 427 | 6 330 | 714 | 29 405 |
| June 1999 | 6 990 | 1 719 | 2 200 | 843 | 6 000 | 1 320 | 4 787 | 6 643 | 682 | 31 185 |
| 1997-1998 | | | | | | | | | | |
| September | 5 759 | 1 777 | 1 939 | 835 | 5 514 | 1 283 | 4 105 | 5 627 | 646 | 27 485 |
| December | 5 709 | 1 772 | 1 928 | 906 | 5 577 | 1 192 | 4 113 | 5 698 | 642 | 27 536 |
| March | 6 187 | 1 681 | 1 976 | 934 | 5 599 | 1 188 | 4 349 | 6 265 | 732 | 28 912 |
| June | 6 528 | 1 803 | 2 015 | 882 | 5 569 | 1 138 | 4 427 | 6 330 | 714 | 29 405 |
| 1998-1999 | | | | | | | | | | |
| September | 6 290 | 1 947 | 2 045 | 954 | 5 858 | 1 257 | 4 588 | 6 551 | 782 | 30 270 |
| December | 6 321 | 1 835 | 2 009 | 952 | 5 691 | 1 276 | 4 688 | 6 669 | 840 | 30 280 |
| March | 6 489 | 1 831 | 2 204 | 948 | 6 068 | 1 295 | 4 701 | 6 685 | 794 | 31 015 |
| June | 6 990 | 1 719 | 2 200 | 843 | 6 000 | 1 320 | 4 787 | 6 643 | 682 | 31 185 |
| 1999-2000 | | | | | | | | | | |
| September | 6 737 | 1 732 | 2 129 | 991 | 6 309 | 1 136 | 4 810 | 7 619 | 792 | 32 254 |
| SEASONALLY ADJUSTED | | | | | | | | | | |
| June 1997 | 5 706 | 1 750 | 1 845 | 818 | 5 622 | 1 319 | 4 188 | 5 926 | 613 | 27 787 |
| June 1998 | 6 293 | 1 811 | 1 992 | 890 | 5 597 | 1 129 | 4 498 | 6 360 | 710 | 29 280 |
| June 1999 | 6 734 | 1 728 | 2 176 | 851 | 6 031 | 1 310 | 4 867 | 6 673 | 676 | 31 046 |
| 1997-1998 | | | | | | | | | | |
| September | 5 812 | 1 759 | 1 950 | 828 | 5 481 | 1 277 | 4 083 | 5 665 | 651 | 27 506 |
| December | 5 888 | 1 785 | 1 959 | 904 | 5 672 | 1 213 | 4 094 | 5 755 | 642 | 27 912 |
| March | 6 169 | 1 680 | 1 958 | 937 | 5 509 | 1 183 | 4 328 | 6 132 | 730 | 28 626 |
| June | 6 293 | 1 811 | 1 992 | 890 | 5 597 | 1 129 | 4 498 | 6 360 | 710 | 29 280 |
| 1998-1999 | | | | | | | | | | |
| September | 6 351 | 1 925 | 2 053 | 946 | 5 830 | 1 251 | 4 559 | 6 597 | 789 | 30 301 |
| December | 6 522 | 1 847 | 2 041 | 950 | 5 783 | 1 299 | 4 667 | 6 738 | 837 | 30 684 |
| March | 6 470 | 1 833 | 2 186 | 949 | 5 968 | 1 289 | 4 677 | 6 540 | 794 | 30 706 |
| June | 6 734 | 1 728 | 2 176 | 851 | 6 031 | 1 310 | 4 867 | 6 673 | 676 | 31 046 |
| 1999-2000 | | | | | | | | | | |
| September | 6 803 | 1 712 | 2 137 | 982 | 6 283 | 1 130 | 4 778 | 7 674 | 801 | 32 300 |
| TREND ESTIMATES | | | | | | | | | | |
| June 1997 | 5 691 | 1 761 | 1 845 | 818 | 5 651 | 1 313 | 4 214 | 5 886 | 597 | 27 776 |
| June 1998 | 6 281 | 1 808 | 1 992 | 925 | 5 640 | 1 178 | 4 466 | 6 379 | 741 | 29 410 |
| June 1999 | 6 680 | 1 753 | 2 165 | 919 | 6 077 | 1 255 | 4 788 | 6 925 | 751 | 31 313 |
| 1997-1998 | | | | | | | | | | |
| September | 5 801 | 1 758 | 1 920 | 849 | 5 567 | 1 275 | 4 094 | 5 752 | 633 | 27 649 |
| December | 5 951 | 1 740 | 1 959 | 888 | 5 543 | 1 215 | 4 140 | 5 812 | 670 | 27 918 |
| March | 6 119 | 1 754 | 1 975 | 914 | 5 577 | 1 171 | 4 296 | 6 065 | 697 | 28 568 |
| June | 6 281 | 1 808 | 1 992 | 925 | 5 640 | 1 178 | 4 466 | 6 379 | 741 | 29 410 |
| 1998-1999 | | | | | | | | | | |
| September | 6 385 | 1 869 | 2 032 | 938 | 5 735 | 1 226 | 4 576 | 6 583 | 792 | 30 136 |
| December | 6 460 | 1 874 | 2 092 | 938 | 5 842 | 1 289 | 4 654 | 6 593 | 802 | 30 544 |
| March | 6 561 | 1 814 | 2 139 | 926 | 5 943 | 1 298 | 4 726 | 6 667 | 778 | 30 852 |
| June | 6 680 | 1 753 | 2 165 | 919 | 6 077 | 1 255 | 4 788 | 6 925 | 751 | 31 313 |
| 1999-2000 | | | | | | | | | | |
| September | 6 797 | 1 704 | 2 173 | 929 | 6 237 | 1 190 | 4 828 | 7 323 | 742 | 31 923 |

(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)

| At end of | 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- metallic mineral product | Metal product | Machinery and equipment | Other manu- facturing | Total manu- facturing |
|---------------------|-------------------------------------|------------------------------------------------------|-------------------------------|--------------------------------------------------|--------------------------------------------------------|----------------------------------------|------------------|-------------------------------|-----------------------------|-----------------------------|
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| ORIGINAL | | | | | | | | | | |
| June 1997 | 5 994 | 1 751 | 1 881 | 819 | 5 604 | 1 329 | 4 172 | 5 961 | 617 | 28 137 |
| June 1998 | 6 479 | 1 809 | 1 986 | 857 | 5 682 | 1 131 | 4 416 | 6 257 | 711 | 29 327 |
| June 1999 | 7 126 | 1 739 | 2 177 | 798 | 6 296 | 1 334 | 5 023 | 6 622 | 666 | 31 782 |
| 1997-1998 | | | | | | | | | | |
| September | 5 798 | 1 779 | 1 953 | 848 | 5 496 | 1 289 | 4 106 | 5 671 | 646 | 27 597 |
| December | 5 657 | 1 763 | 1 936 | 915 | 5 465 | 1 195 | 4 087 | 5 699 | 642 | 27 371 |
| March | 6 173 | 1 675 | 1 969 | 928 | 5 640 | 1 189 | 4 338 | 6 218 | 731 | 28 867 |
| June | 6 479 | 1 809 | 1 986 | 857 | 5 682 | 1 131 | 4 416 | 6 257 | 711 | 29 327 |
| 1998-1999 | | | | | | | | | | |
| September | 6 221 | 1 949 | 1 985 | 899 | 5 933 | 1 243 | 4 551 | 6 452 | 754 | 29 987 |
| December | 6 315 | 1 831 | 1 940 | 884 | 5 859 | 1 264 | 4 709 | 6 589 | 808 | 30 199 |
| March | 6 509 | 1 832 | 2 161 | 887 | 6 345 | 1 295 | 4 861 | 6 644 | 769 | 31 303 |
| June | 7 126 | 1 739 | 2 177 | 798 | 6 296 | 1 334 | 5 023 | 6 622 | 666 | 31 782 |
| 1999-2000 | | | | | | | | | | |
| September | 6 835 | 1 778 | 2 104 | 945 | 6 270 | 1 140 | 5 045 | 7 556 | 771 | 32 445 |
| SEASONALLY ADJUSTED | | | | | | | | | | |
| June 1997 | 5 786 | 1 757 | 1 859 | 826 | 5 631 | 1 318 | 4 233 | 5 993 | 614 | 28 025 |
| June 1998 | 6 245 | 1 817 | 1 963 | 865 | 5 711 | 1 122 | 4 487 | 6 287 | 704 | 29 202 |
| June 1999 | 6 865 | 1 748 | 2 154 | 805 | 6 329 | 1 324 | 5 107 | 6 652 | 659 | 31 642 |
| 1997-1998 | | | | | | | | | | |
| September | 5 852 | 1 762 | 1 964 | 840 | 5 462 | 1 282 | 4 084 | 5 709 | 653 | 27 617 |
| December | 5 834 | 1 776 | 1 967 | 912 | 5 558 | 1 217 | 4 068 | 5 756 | 642 | 27 741 |
| March | 6 155 | 1 674 | 1 950 | 931 | 5 550 | 1 183 | 4 317 | 6 086 | 730 | 28 578 |
| June | 6 245 | 1 817 | 1 963 | 865 | 5 711 | 1 122 | 4 487 | 6 287 | 704 | 29 202 |
| 1998-1999 | | | | | | | | | | |
| September | 6 282 | 1 928 | 1 993 | 891 | 5 905 | 1 237 | 4 522 | 6 497 | 763 | 30 019 |
| December | 6 517 | 1 843 | 1 971 | 882 | 5 955 | 1 286 | 4 688 | 6 657 | 807 | 30 604 |
| March | 6 489 | 1 834 | 2 144 | 888 | 6 241 | 1 288 | 4 836 | 6 500 | 770 | 30 990 |
| June | 6 865 | 1 748 | 2 154 | 805 | 6 329 | 1 324 | 5 107 | 6 652 | 659 | 31 642 |
| 1999-2000 | | | | | | | | | | |
| September | 6 903 | 1 757 | 2 112 | 937 | 6 245 | 1 134 | 5 012 | 7 610 | 781 | 32 491 |
| TREND ESTIMATES | | | | | | | | | | |
| June 1997 | 5 775 | 1 774 | 1 859 | 828 | 5 623 | 1 317 | 4 278 | 5 968 | 600 | 28 029 |
| June 1998 | 6 230 | 1 809 | 1 958 | 896 | 5 709 | 1 170 | 4 438 | 6 302 | 731 | 29 243 |
| June 1999 | 6 771 | 1 773 | 2 135 | 867 | 6 276 | 1 262 | 5 002 | 6 887 | 730 | 31 701 |
| 1997-1998 | | | | | | | | | | |
| September | 5 825 | 1 757 | 1 933 | 861 | 5 531 | 1 278 | 4 095 | 5 790 | 634 | 27 714 |
| December | 5 934 | 1 735 | 1 967 | 894 | 5 508 | 1 218 | 4 123 | 5 810 | 672 | 27 868 |
| March | 6 077 | 1 751 | 1 967 | 907 | 5 586 | 1 170 | 4 275 | 6 022 | 696 | 28 457 |
| June | 6 230 | 1 809 | 1 958 | 896 | 5 709 | 1 170 | 4 438 | 6 302 | 731 | 29 243 |
| 1998-1999 | | | | | | | | | | |
| September | 6 337 | 1 869 | 1 976 | 886 | 5 857 | 1 214 | 4 559 | 6 493 | 770 | 29 961 |
| December | 6 443 | 1 873 | 2 031 | 875 | 6 039 | 1 280 | 4 698 | 6 519 | 774 | 30 532 |
| March | 6 603 | 1 818 | 2 093 | 866 | 6 184 | 1 298 | 4 864 | 6 618 | 753 | 31 090 |
| June | 6 771 | 1 773 | 2 135 | 867 | 6 276 | 1 262 | 5 002 | 6 887 | 730 | 31 701 |
| 1999-2000 | | | | | | | | | | |
| September | 6 913 | 1 749 | 2 150 | 884 | 6 310 | 1 209 | 5 078 | 7 264 | 729 | 32 340 |

(a) Reference year for chain volume measures is 1997-1998.

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

PERCENTAGE CHANGES IN MANUFACTURERS' INVENTORIES—Chain volume measures(a)

| Year to/Quarter to | 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- metallic mineral product | Metal product | Machinery and equipment | Other manu- facturing | Total manu- facturing |
|---------------------|-------------------------------------|---------------------------------------------------|-------------------------------|--------------------------------------------------|--------------------------------------------------------|----------------------------------------|------------------|-------------------------------|-----------------------------|-----------------------------|
| | % | % | % | % | % | % | % | % | % | % |
| ORIGINAL | | | | | | | | | | |
| June 1997 | 1.4 | 3.4 | 8.6 | -8.0 | -2.6 | 5.9 | -10.0 | -3.6 | -9.0 | -2.1 |
| 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 |
| 1997-1998 | | | | | | | | | | |
| September | -3.3 | 1.6 | 3.9 | 3.6 | -1.9 | -3.0 | -1.6 | -4.9 | 4.7 | -1.9 |
| December | -2.4 | -0.9 | -0.9 | 7.9 | -0.6 | -7.2 | -0.5 | 0.5 | -0.7 | -0.8 |
| March | 9.1 | -5.0 | 1.7 | 1.5 | 3.2 | -0.6 | 6.2 | 9.1 | 13.9 | 5.5 |
| June | 5.0 | 8.0 | 0.9 | -7.7 | 0.7 | -4.9 | 1.8 | 0.6 | -2.8 | 1.6 |
| 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 | -4.1 | 2.2 | -3.4 | 18.5 | -0.4 | -14.5 | 0.4 | 14.1 | 15.8 | 2.1 |
| SEASONALLY ADJUSTED | | | | | | | | | | |
| June 1997 | 1.2 | 3.6 | 8.6 | -7.9 | -2.6 | 6.1 | -9.8 | -3.6 | -9.3 | -2.2 |
| June 1998 | 7.9 | 3.4 | 5.6 | 4.7 | 1.4 | -14.8 | 6.0 | 4.9 | 14.7 | 4.2 |
| June 1999 | 9.9 | -3.8 | 9.7 | -6.9 | 10.8 | 18.0 | 13.8 | 5.8 | -6.5 | 8.4 |
| 1997-1998 | | | | | | | | | | |
| September | 1.1 | 0.3 | 5.7 | 1.7 | -3.0 | -2.7 | -3.5 | -4.7 | 6.3 | -1.5 |
| December | -0.3 | 0.8 | 0.2 | 8.6 | 1.8 | -5.1 | -0.4 | 0.8 | -1.7 | 0.5 |
| March | 5.5 | -5.7 | -0.9 | 2.0 | -0.2 | -2.8 | 6.1 | 5.7 | 13.7 | 3.0 |
| June | 1.5 | 8.6 | 0.7 | -7.1 | 2.9 | -5.1 | 3.9 | 3.3 | -3.5 | 2.2 |
| 1998-1999 | | | | | | | | | | |
| September | 0.6 | 6.1 | 1.5 | 3.1 | 3.4 | 10.2 | 0.8 | 3.3 | 8.4 | 2.8 |
| December | 3.7 | -4.4 | -1.1 | -1.0 | 0.8 | 4.0 | 3.7 | 2.5 | 5.7 | 2.0 |
| March | -0.4 | -0.5 | 8.8 | 0.6 | 4.8 | 0.2 | 3.2 | -2.4 | -4.6 | 1.3 |
| June | 5.8 | -4.7 | 0.5 | -9.3 | 1.4 | 2.8 | 5.6 | 2.3 | -14.4 | 2.1 |
| 1999-2000 | | | | | | | | | | |
| September | 0.6 | 0.5 | -1.9 | 16.4 | -1.3 | -14.3 | -1.9 | 14.4 | 18.6 | 2.7 |
| TREND ESTIMATES | | | | | | | | | | |
| June 1997 | 1.8 | 4.7 | 9.8 | -5.9 | -2.2 | -0.3 | -10.2 | -4.9 | -8.7 | -2.4 |
| June 1998 | 7.9 | 2.0 | 5.4 | 8.2 | 1.5 | -11.2 | 3.7 | 5.6 | 21.7 | 4.3 |
| June 1999 | 8.7 | -2.0 | 9.0 | -3.1 | 9.9 | 7.8 | 12.7 | 9.3 | 0.0 | 8.4 |
| 1997-1998 | | | | | | | | | | |
| September | 0.9 | -1.0 | 4.0 | 4.0 | -1.6 | -3.0 | -4.3 | -3.0 | 5.7 | -1.1 |
| December | 1.9 | -1.3 | 1.7 | 3.9 | -0.4 | -4.7 | 0.7 | 0.3 | 5.9 | 0.6 |
| March | 2.4 | 1.0 | 0.0 | 1.4 | 1.4 | -3.9 | 3.7 | 3.7 | 3.6 | 2.1 |
| June | 2.5 | 3.3 | -0.4 | -1.3 | 2.2 | 0.0 | 3.8 | 4.6 | 4.9 | 2.8 |
| 1998-1999 | | | | | | | | | | |
| September | 1.7 | 3.3 | 0.9 | -1.0 | 2.6 | 3.7 | 2.7 | 3.0 | 5.5 | 2.5 |
| December | 1.7 | 0.2 | 2.8 | -1.3 | 3.1 | 5.5 | 3.1 | 0.4 | 0.5 | 1.9 |
| March | 2.5 | -2.9 | 3.1 | -1.0 | 2.4 | 1.4 | 3.5 | 1.5 | -2.7 | 1.8 |
| June | 2.5 | -2.5 | 2.0 | 0.1 | 1.5 | -2.8 | 2.8 | 4.1 | -3.1 | 2.0 |
| 1999-2000 | | | | | | | | | | |
| September | 2.1 | -1.4 | 0.7 | 1.9 | 0.5 | -4.2 | 1.5 | 5.5 | -0.1 | 2.0 |

(a) Reference year for chain volume measures is 1997-1998.

MANUFACTURERS' AND WHOLESALE TRADE SALES—Current prices

| Period | 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-metallic mineral product | Metal product | Machinery and equipment | Other manufacturing | Total manufacturing | Total wholesale |
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| ORIGINAL | | | | | | | | | | | |
| Year to | | | | | | | | | | | |
| June 1997 | 43 749 | 9 128 | 13 150 | 9 623 | 34 630 | 9 718 | 31 930 | 38 732 | 6 508 | 197 168 | 164 912 |
| June 1998 | 46 348 | 8 991 | 13 851 | 11 083 | 36 019 | 9 508 | 29 994 | 39 010 | 6 753 | 201 556 | 178 534 |
| June 1999 | 47 111 | 9 494 | 14 462 | 11 206 | 35 680 | 11 097 | 31 020 | 41 615 | 7 067 | 208 751 | 190 358 |
| 1997-1998 | | | | | | | | | | | |
| September | 11 694 | 2 293 | 3 447 | 2 656 | 8 945 | 2 453 | 7 655 | 10 061 | 1 768 | 50 973 | 43 792 |
| December | 12 626 | 2 295 | 3 572 | 2 989 | 9 003 | 2 389 | 7 536 | 9 922 | 1 809 | 52 141 | 46 098 |
| March | 10 830 | 2 171 | 3 154 | 2 672 | 8 763 | 2 319 | 7 066 | 8 990 | 1 496 | 47 460 | 42 342 |
| June | 11 198 | 2 232 | 3 679 | 2 766 | 9 308 | 2 348 | 7 736 | 10 037 | 1 679 | 50 982 | 46 303 |
| 1998-1999 | | | | | | | | | | | |
| September | 12 161 | 2 552 | 3 720 | 2 752 | 9 015 | 2 707 | 7 978 | 10 472 | 1 666 | 53 021 | 47 263 |
| December | 12 930 | 2 427 | 3 731 | 2 794 | 9 171 | 2 900 | 7 990 | 11 034 | 2 063 | 55 040 | 49 968 |
| March | 11 209 | 2 257 | 3 334 | 2 775 | 8 450 | 2 657 | 7 168 | 9 818 | 1 727 | 49 396 | 45 225 |
| June | 10 811 | 2 259 | 3 676 | 2 885 | 9 044 | 2 833 | 7 883 | 10 291 | 1 611 | 51 294 | 47 903 |
| 1999-2000 | | | | | | | | | | | |
| September | 11 366 | 2 217 | 4 013 | 3 003 | 9 136 | 2 544 | 7 965 | 10 741 | 1 776 | 52 761 | 50 826 |
| SEASONALLY ADJUSTED | | | | | | | | | | | |
| Year to | | | | | | | | | | | |
| June 1997 | 43 816 | 9 136 | 13 161 | 9 632 | 34 622 | 9 707 | 31 894 | 38 762 | 6 525 | 197 257 | 164 980 |
| June 1998 | 46 351 | 8 999 | 13 858 | 11 122 | 36 034 | 9 527 | 29 967 | 39 021 | 6 757 | 201 635 | 178 356 |
| June 1999 | 47 156 | 9 516 | 14 465 | 11 204 | 35 627 | 11 072 | 31 066 | 41 644 | 7 078 | 208 828 | 190 574 |
| 1997-1998 | | | | | | | | | | | |
| September | 11 396 | 2 201 | 3 345 | 2 662 | 8 966 | 2 414 | 7 421 | 9 803 | 1 705 | 49 913 | 43 315 |
| December | 11 531 | 2 283 | 3 428 | 2 745 | 8 786 | 2 251 | 7 380 | 9 630 | 1 657 | 49 691 | 44 024 |
| March | 11 633 | 2 266 | 3 342 | 2 874 | 9 203 | 2 480 | 7 470 | 9 656 | 1 672 | 50 596 | 44 694 |
| June | 11 791 | 2 248 | 3 743 | 2 841 | 9 079 | 2 382 | 7 696 | 9 933 | 1 722 | 51 435 | 46 322 |
| 1998-1999 | | | | | | | | | | | |
| September | 11 898 | 2 470 | 3 611 | 2 701 | 8 993 | 2 627 | 7 823 | 10 199 | 1 604 | 51 926 | 47 170 |
| December | 11 674 | 2 357 | 3 584 | 2 620 | 9 089 | 2 797 | 7 754 | 10 713 | 1 906 | 52 494 | 47 585 |
| March | 12 187 | 2 414 | 3 530 | 2 920 | 8 729 | 2 773 | 7 653 | 10 548 | 1 914 | 52 668 | 47 897 |
| June | 11 397 | 2 274 | 3 739 | 2 964 | 8 816 | 2 874 | 7 837 | 10 185 | 1 654 | 51 740 | 47 922 |
| 1999-2000 | | | | | | | | | | | |
| September | 10 994 | 2 098 | 3 897 | 3 007 | 9 272 | 2 532 | 7 745 | 10 459 | 1 724 | 51 728 | 50 567 |
| TREND ESTIMATES | | | | | | | | | | | |
| Year to | | | | | | | | | | | |
| June 1997 | 43 777 | 9 087 | 13 167 | 9 665 | 34 799 | 9 687 | 31 712 | 38 720 | 6 471 | 197 086 | 165 120 |
| June 1998 | 46 241 | 9 105 | 13 815 | 11 053 | 35 985 | 9 598 | 30 078 | 39 079 | 6 697 | 201 652 | 178 237 |
| June 1999 | 47 085 | 9 421 | 14 539 | 11 238 | 35 786 | 10 930 | 31 017 | 41 708 | 7 157 | 208 884 | 191 134 |
| 1997-1998 | | | | | | | | | | | |
| September | 11 275 | 2 280 | 3 350 | 2 643 | 8 864 | 2 399 | 7 509 | 9 779 | 1 677 | 49 776 | 43 065 |
| December | 11 523 | 2 242 | 3 384 | 2 773 | 8 971 | 2 356 | 7 409 | 9 676 | 1 681 | 50 016 | 44 034 |
| March | 11 689 | 2 263 | 3 487 | 2 841 | 9 049 | 2 369 | 7 489 | 9 695 | 1 669 | 50 550 | 45 022 |
| June | 11 754 | 2 320 | 3 595 | 2 797 | 9 101 | 2 474 | 7 670 | 9 929 | 1 670 | 51 310 | 46 117 |
| 1998-1999 | | | | | | | | | | | |
| September | 11 853 | 2 379 | 3 625 | 2 723 | 9 066 | 2 612 | 7 760 | 10 294 | 1 744 | 52 056 | 47 081 |
| December | 11 923 | 2 417 | 3 590 | 2 727 | 8 921 | 2 754 | 7 763 | 10 513 | 1 819 | 52 428 | 47 495 |
| March | 11 800 | 2 364 | 3 606 | 2 835 | 8 871 | 2 808 | 7 742 | 10 498 | 1 826 | 52 351 | 47 882 |
| June | 11 509 | 2 261 | 3 718 | 2 953 | 8 928 | 2 755 | 7 752 | 10 402 | 1 769 | 52 049 | 48 676 |
| 1999-2000 | | | | | | | | | | | |
| September | 11 135 | 2 158 | 3 856 | 3 054 | 9 069 | 2 651 | 7 777 | 10 305 | 1 682 | 51 655 | 49 750 |

MANUFACTURERS' AND WHOLESALE TRADE SALES—Chain volume measures(a)

| Period | MANUFACTURING..... | | | | | | | | | | WHOLESALE TRADE |
|---------------------|-----------------------------------|----------------------------------------------------------|--------------------------------|------------------------------------------------|------------------------------------------------------|-------------------------------------|----------------------|--------------------------------|----------------------------|----------------------------|------------------------|
| | <i>Food, beverage and tobacco</i> | <i>Textiles, clothing, footwear and leather products</i> | <i>Wood and paper products</i> | <i>Printing, publishing and recorded media</i> | <i>Petroleum, coal, chemical and assoc. products</i> | <i>Non-metallic mineral product</i> | <i>Metal product</i> | <i>Machinery and equipment</i> | <i>Other manufacturing</i> | <i>Total manufacturing</i> | <i>Total wholesale</i> |
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| ORIGINAL | | | | | | | | | | | |
| Year to | | | | | | | | | | | |
| June 1997 | 44 848 | 9 165 | 13 126 | 9 765 | 34 288 | 9 852 | 32 798 | 39 073 | 6 507 | 199 354 | 165 177 |
| June 1998 | 46 348 | 8 991 | 13 851 | 11 083 | 36 019 | 9 508 | 29 994 | 39 010 | 6 753 | 201 556 | 178 534 |
| June 1999 | 46 752 | 9 523 | 14 268 | 10 846 | 36 567 | 11 033 | 31 547 | 41 512 | 6 966 | 209 014 | 192 409 |
| 1997-1998 | | | | | | | | | | | |
| September | 11 830 | 2 281 | 3 454 | 2 667 | 8 952 | 2 461 | 7 650 | 10 118 | 1 762 | 51 174 | 44 392 |
| December | 12 625 | 2 286 | 3 597 | 3 007 | 8 945 | 2 395 | 7 545 | 9 943 | 1 810 | 52 141 | 45 835 |
| March | 10 791 | 2 176 | 3 157 | 2 660 | 8 785 | 2 316 | 7 062 | 8 975 | 1 500 | 47 427 | 42 202 |
| June | 11 101 | 2 248 | 3 643 | 2 749 | 9 337 | 2 336 | 7 737 | 9 974 | 1 681 | 50 813 | 46 104 |
| 1998-1999 | | | | | | | | | | | |
| September | 11 970 | 2 567 | 3 671 | 2 669 | 9 130 | 2 686 | 7 931 | 10 401 | 1 642 | 52 667 | 46 701 |
| December | 12 812 | 2 428 | 3 685 | 2 708 | 9 299 | 2 880 | 8 100 | 11 011 | 2 034 | 54 957 | 50 201 |
| March | 11 106 | 2 261 | 3 294 | 2 682 | 8 772 | 2 643 | 7 372 | 9 821 | 1 707 | 49 659 | 46 193 |
| June | 10 864 | 2 267 | 3 618 | 2 787 | 9 365 | 2 824 | 8 145 | 10 278 | 1 583 | 51 731 | 49 314 |
| 1999-2000 | | | | | | | | | | | |
| September | 11 342 | 2 232 | 3 918 | 2 812 | 9 203 | 2 525 | 8 141 | 10 686 | 1 725 | 52 584 | 51 283 |
| SEASONALLY ADJUSTED | | | | | | | | | | | |
| Year to | | | | | | | | | | | |
| June 1997 | 44 848 | 9 165 | 13 126 | 9 765 | 34 288 | 9 852 | 32 798 | 39 073 | 6 507 | 199 354 | 165 177 |
| June 1998 | 46 348 | 8 991 | 13 851 | 11 083 | 36 019 | 9 508 | 29 994 | 39 010 | 6 753 | 201 556 | 178 534 |
| June 1999 | 46 752 | 9 523 | 14 268 | 10 846 | 36 567 | 11 033 | 31 547 | 41 512 | 6 966 | 209 014 | 192 409 |
| 1997-1998 | | | | | | | | | | | |
| September | 11 526 | 2 187 | 3 350 | 2 663 | 8 968 | 2 419 | 7 429 | 9 854 | 1 695 | 50 090 | 44 271 |
| December | 11 533 | 2 273 | 3 451 | 2 751 | 8 723 | 2 252 | 7 399 | 9 649 | 1 657 | 49 683 | 43 843 |
| March | 11 597 | 2 270 | 3 345 | 2 852 | 9 222 | 2 471 | 7 471 | 9 639 | 1 677 | 50 546 | 44 432 |
| June | 11 691 | 2 261 | 3 705 | 2 816 | 9 107 | 2 367 | 7 696 | 9 868 | 1 724 | 51 237 | 45 987 |
| 1998-1999 | | | | | | | | | | | |
| September | 11 705 | 2 481 | 3 563 | 2 617 | 9 115 | 2 608 | 7 770 | 10 125 | 1 580 | 51 564 | 46 548 |
| December | 11 555 | 2 353 | 3 539 | 2 539 | 9 227 | 2 783 | 7 847 | 10 683 | 1 876 | 52 403 | 48 020 |
| March | 12 057 | 2 412 | 3 487 | 2 824 | 9 078 | 2 767 | 7 853 | 10 542 | 1 889 | 52 908 | 48 641 |
| June | 11 434 | 2 276 | 3 680 | 2 866 | 9 147 | 2 875 | 8 078 | 10 162 | 1 621 | 52 139 | 49 199 |
| 1999-2000 | | | | | | | | | | | |
| September | 10 953 | 2 107 | 3 803 | 2 819 | 9 358 | 2 521 | 7 897 | 10 395 | 1 671 | 51 524 | 51 115 |
| TREND ESTIMATES | | | | | | | | | | | |
| Year to | | | | | | | | | | | |
| June 1997 | 44 824 | 9 116 | 13 136 | 9 799 | 34 463 | 9 833 | 32 583 | 39 022 | 6 452 | 199 170 | 165 371 |
| June 1998 | 46 217 | 9 098 | 13 807 | 11 005 | 35 970 | 9 579 | 30 093 | 39 067 | 6 689 | 201 521 | 178 127 |
| June 1999 | 46 666 | 9 429 | 14 336 | 10 873 | 36 642 | 10 888 | 31 485 | 41 565 | 7 046 | 208 934 | 192 831 |
| 1997-1998 | | | | | | | | | | | |
| September | 11 386 | 2 268 | 3 359 | 2 651 | 8 834 | 2 405 | 7 548 | 9 828 | 1 671 | 49 947 | 43 537 |
| December | 11 554 | 2 234 | 3 397 | 2 772 | 8 951 | 2 354 | 7 416 | 9 695 | 1 681 | 50 055 | 44 234 |
| March | 11 638 | 2 265 | 3 484 | 2 825 | 9 047 | 2 360 | 7 480 | 9 671 | 1 671 | 50 443 | 44 722 |
| June | 11 638 | 2 330 | 3 567 | 2 757 | 9 137 | 2 459 | 7 649 | 9 873 | 1 665 | 51 076 | 45 634 |
| 1998-1999 | | | | | | | | | | | |
| September | 11 697 | 2 387 | 3 580 | 2 656 | 9 171 | 2 595 | 7 762 | 10 235 | 1 726 | 51 810 | 46 817 |
| December | 11 781 | 2 418 | 3 545 | 2 646 | 9 131 | 2 742 | 7 850 | 10 478 | 1 793 | 52 382 | 47 749 |
| March | 11 713 | 2 362 | 3 556 | 2 739 | 9 147 | 2 801 | 7 913 | 10 478 | 1 795 | 52 506 | 48 635 |
| June | 11 475 | 2 263 | 3 655 | 2 832 | 9 193 | 2 750 | 7 960 | 10 375 | 1 732 | 52 236 | 49 630 |
| 1999-2000 | | | | | | | | | | | |
| September | 11 167 | 2 177 | 3 760 | 2 882 | 9 267 | 2 650 | 7 980 | 10 257 | 1 642 | 51 737 | 50 582 |

(a) Reference year for chain volume measures is 1997-1998.

PERCENTAGE CHANGES IN SALES—Chain volume measures(a)

| Period | 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-metallic mineral product | Metal product | Machinery and equipment | Other manufacturing | Total manufacturing | Total wholesale |
| | % | % | % | % | % | % | % | % | % | % | % |
| ORIGINAL | | | | | | | | | | | |
| Year to | | | | | | | | | | | |
| June 1997 | 0.8 | 2.9 | 10.0 | -2.5 | 1.1 | -5.0 | -0.7 | 6.2 | 3.1 | 1.9 | 2.9 |
| June 1998 | 3.3 | -1.9 | 5.5 | 13.5 | 5.0 | -3.5 | -8.5 | -0.2 | 3.8 | 1.1 | 8.1 |
| June 1999 | 0.9 | 5.9 | 3.0 | -2.1 | 1.5 | 16.0 | 5.2 | 6.4 | 3.2 | 3.7 | 7.8 |
| 1997-1998 | | | | | | | | | | | |
| September | 11.5 | -2.8 | 5.3 | 8.4 | -0.1 | -0.6 | -4.1 | 0.5 | 10.3 | 2.8 | 3.8 |
| December | 6.7 | 0.2 | 4.1 | 12.8 | -0.1 | -2.7 | -1.4 | -1.7 | 2.7 | 1.9 | 3.2 |
| March | -14.5 | -4.8 | -12.2 | -11.5 | -1.8 | -3.3 | -6.4 | -9.7 | -17.1 | -9.0 | -7.9 |
| June | 2.9 | 3.3 | 15.4 | 3.3 | 6.3 | 0.9 | 9.6 | 11.1 | 12.0 | 7.1 | 9.2 |
| 1998-1999 | | | | | | | | | | | |
| September | 7.8 | 14.2 | 0.8 | -2.9 | -2.2 | 15.0 | 2.5 | 4.3 | -2.3 | 3.6 | 1.3 |
| December | 7.0 | -5.4 | 0.4 | 1.5 | 1.8 | 7.3 | 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 | -9.6 | -8.0 |
| June | -2.2 | 0.3 | 9.8 | 3.9 | 6.8 | 6.9 | 10.5 | 4.7 | -7.3 | 4.2 | 6.8 |
| 1999-2000 | | | | | | | | | | | |
| September | 4.4 | -1.5 | 8.3 | 0.9 | -1.7 | -10.6 | 0.0 | 4.0 | 9.0 | 1.6 | 4.0 |
| SEASONALLY ADJUSTED | | | | | | | | | | | |
| Year to | | | | | | | | | | | |
| June 1997 | 0.8 | 2.9 | 10.0 | -2.5 | 1.1 | -5.0 | -0.7 | 6.2 | 3.1 | 1.9 | 2.9 |
| June 1998 | 3.3 | -1.9 | 5.5 | 13.5 | 5.0 | -3.5 | -8.5 | -0.2 | 3.8 | 1.1 | 8.1 |
| June 1999 | 0.9 | 5.9 | 3.0 | -2.1 | 1.5 | 16.0 | 5.2 | 6.4 | 3.2 | 3.7 | 7.8 |
| 1997-1998 | | | | | | | | | | | |
| September | 3.5 | -7.4 | 0.4 | 5.7 | 2.5 | -3.8 | -6.7 | -1.0 | 4.0 | -0.1 | 3.7 |
| December | 0.1 | 3.9 | 3.0 | 3.3 | -2.7 | -6.9 | -0.4 | -2.1 | -2.2 | -0.8 | -1.0 |
| March | 0.5 | -0.1 | -3.1 | 3.7 | 5.7 | 9.7 | 1.0 | -0.1 | 1.2 | 1.7 | 1.3 |
| June | 0.8 | -0.4 | 10.8 | -1.2 | -1.2 | -4.2 | 3.0 | 2.4 | 2.8 | 1.4 | 3.5 |
| 1998-1999 | | | | | | | | | | | |
| September | 0.1 | 9.7 | -3.8 | -7.1 | 0.1 | 10.2 | 1.0 | 2.6 | -8.3 | 0.6 | 1.2 |
| December | -1.3 | -5.1 | -0.7 | -3.0 | 1.2 | 6.7 | 1.0 | 5.5 | 18.7 | 1.6 | 3.2 |
| March | 4.3 | 2.5 | -1.5 | 11.3 | -1.6 | -0.6 | 0.1 | -1.3 | 0.7 | 1.0 | 1.3 |
| June | -5.2 | -5.6 | 5.5 | 1.5 | 0.8 | 3.9 | 2.9 | -3.6 | -14.2 | -1.5 | 1.1 |
| 1999-2000 | | | | | | | | | | | |
| September | -4.2 | -7.5 | 3.4 | -1.6 | 2.3 | -12.3 | -2.2 | 2.3 | 3.1 | -1.2 | 3.9 |
| TREND ESTIMATES | | | | | | | | | | | |
| Year to | | | | | | | | | | | |
| June 1997 | 0.4 | 2.3 | 10.0 | -1.8 | 2.0 | -5.1 | -1.7 | 6.0 | 1.1 | 1.7 | 2.7 |
| June 1998 | 3.1 | -0.2 | 5.1 | 12.3 | 4.4 | -2.6 | -7.6 | 0.1 | 3.7 | 1.2 | 7.7 |
| June 1999 | 1.0 | 3.6 | 3.8 | -1.2 | 1.9 | 13.7 | 4.6 | 6.4 | 5.3 | 3.7 | 8.3 |
| 1997-1998 | | | | | | | | | | | |
| September | 1.4 | -2.0 | 0.0 | 4.9 | 0.9 | -2.1 | -3.7 | -0.6 | 2.1 | -0.1 | 2.3 |
| December | 1.5 | -1.5 | 1.2 | 4.6 | 1.3 | -2.1 | -1.7 | -1.4 | 0.6 | 0.2 | 1.6 |
| March | 0.7 | 1.4 | 2.5 | 1.9 | 1.1 | 0.2 | 0.9 | -0.3 | -0.6 | 0.8 | 1.1 |
| June | 0.0 | 2.8 | 2.4 | -2.4 | 1.0 | 4.2 | 2.3 | 2.1 | -0.4 | 1.3 | 2.0 |
| 1998-1999 | | | | | | | | | | | |
| September | 0.5 | 2.4 | 0.4 | -3.7 | 0.4 | 5.5 | 1.5 | 3.7 | 3.7 | 1.4 | 2.6 |
| December | 0.7 | 1.3 | -1.0 | -0.4 | -0.4 | 5.6 | 1.1 | 2.4 | 3.8 | 1.1 | 2.0 |
| March | -0.6 | -2.3 | 0.3 | 3.5 | 0.2 | 2.2 | 0.8 | 0.0 | 0.2 | 0.2 | 1.9 |
| June | -2.0 | -4.2 | 2.8 | 3.4 | 0.5 | -1.8 | 0.6 | -1.0 | -3.5 | -0.5 | 2.0 |
| 1999-2000 | | | | | | | | | | | |
| September | -2.7 | -3.8 | 2.9 | 1.8 | 0.8 | -3.6 | 0.2 | -1.1 | -5.2 | -1.0 | 1.9 |

(a) Reference year for chain volume measures is 1997-1998.

MANUFACTURING AND WHOLESALE TRADE INVENTORIES/SALES RATIO—Current prices(a)

| Year to/Quarter to | 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-metallic mineral product | Metal product | Machinery and equipment | Other manufacturing | Total manufacturing | Total wholesale |
| June 1997 | 0.52 | 0.74 | 0.55 | 0.33 | 0.64 | 0.53 | 0.53 | 0.60 | 0.37 | 0.56 | 0.51 |
| June 1998 | 0.53 | 0.81 | 0.53 | 0.31 | 0.62 | 0.47 | 0.58 | 0.64 | 0.41 | 0.57 | 0.51 |
| June 1999 | 0.59 | 0.76 | 0.58 | 0.29 | 0.68 | 0.46 | 0.62 | 0.66 | 0.41 | 0.60 | 0.53 |
| 1997-1998 | | | | | | | | | | | |
| September | 0.51 | 0.80 | 0.58 | 0.31 | 0.61 | 0.53 | 0.55 | 0.58 | 0.38 | 0.55 | 0.51 |
| December | 0.51 | 0.78 | 0.57 | 0.33 | 0.65 | 0.54 | 0.55 | 0.60 | 0.39 | 0.56 | 0.52 |
| March | 0.53 | 0.74 | 0.59 | 0.33 | 0.60 | 0.48 | 0.58 | 0.64 | 0.44 | 0.57 | 0.52 |
| June | 0.53 | 0.81 | 0.53 | 0.31 | 0.62 | 0.47 | 0.58 | 0.64 | 0.41 | 0.57 | 0.51 |
| 1998-1999 | | | | | | | | | | | |
| September | 0.53 | 0.78 | 0.57 | 0.35 | 0.65 | 0.48 | 0.58 | 0.65 | 0.49 | 0.58 | 0.51 |
| December | 0.56 | 0.78 | 0.57 | 0.36 | 0.64 | 0.46 | 0.60 | 0.63 | 0.44 | 0.58 | 0.51 |
| March | 0.53 | 0.76 | 0.62 | 0.33 | 0.68 | 0.46 | 0.61 | 0.62 | 0.41 | 0.58 | 0.52 |
| June | 0.59 | 0.76 | 0.58 | 0.29 | 0.68 | 0.46 | 0.62 | 0.66 | 0.41 | 0.60 | 0.53 |
| 1999-2000 | | | | | | | | | | | |
| September | 0.62 | 0.82 | 0.55 | 0.33 | 0.68 | 0.45 | 0.62 | 0.73 | 0.46 | 0.62 | 0.53 |

(a) Seasonally adjusted series.

EXPLANATORY NOTES

INTRODUCTION

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

SCOPE AND COVERAGE

2 The scope of the survey:

- includes the following industries (Australian and New Zealand Standard Industrial Classification 1993 [ANZSIC] Divisions and Subdivisions):

Mining (Division B)

Manufacturing (Division C)

Food, beverages and tobacco (21)

Textiles, clothing, footwear and leather (22)

Wood and paper products (23)

Printing, publishing and recorded media (24)

Petroleum, coal, chemical and associated products (25)

Non-metallic mineral products (26)

Metal products (27)

Machinery and equipment (28)

Other manufacturing (29)

Wholesale Trade (Division F)

Basic materials (45)

Machinery and motor vehicles (46)

Personal and household goods (47)

Retail Trade (Division G excluding 5322, 5323 and 5329)

Food (51)

Personal and household goods (52)

Motor vehicle retailing and services (53 excluding 5322, 5323 and 5329)

Other Selected Industries

Electricity and gas supply (36)

Accommodation, cafes and restaurants (Division H)

- excludes the following industries:

Agriculture, forestry and fishing

Water supply, sewerage and drainage services

Construction

Transport and storage

Communication services

Finance and insurance

Property and business services

Government administration and defence

Education, health and community services

Cultural and recreational services

Personal and other services

- in addition the scope excludes public sector business units (i.e. all departments, authorities and other organisations owned and/or controlled by Commonwealth, State and Local Governments). Primary producer marketing boards are classified as public sector and are also excluded.

EXPLANATORY NOTES

SURVEY METHODOLOGY

3 The survey is conducted by mail on a quarterly basis. It is based on a stratified random sample of approximately 7,500 private businesses selected from the ABS register of businesses. The sample is stratified by industry and number of employees. All business units with over 250 employees, and other statistically significant units, such as many joint venture partners, are included. The figures obtained from these businesses are also supplemented by adjustments for new businesses not yet included in the sample framework.

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

5 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 4.4% to the current quarter's estimate of reported inventories and 3.7% to reported sales. These adjustments were introduced in the June quarter 1997 publication and have been made back to the June quarter 1984. For further information see the June quarter 1997 publication or an Information Paper—*Improvements to ABS Economic Statistics 1997* (Cat. no. 1357.0) issued on 22 August 1997.

TIMING OF SURVEY CYCLE

6 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.

SAMPLE REVISION

7 Prior to the June quarter 1996 survey, the survey frames and samples were revised annually to ensure that they remained representative of the survey population. Adjustments were made to the survey estimates each quarter to reflect changes in the size of the survey frame throughout the year. From the June quarter 1996 survey, the survey frames and samples are being revised each quarter. The aim is to further improve the quality of the survey estimates by selecting a sample which will be more representative of the business population. The timing of sample selection will now be consistent with other ABS surveys. This will lead to greater consistency when comparing data across these surveys.

8 With these revisions to the sample, some of the business units are rotated out of the survey and are replaced by others to spread the reporting workload equitably. The rate of rotation under quarterly sample selection is slightly higher than one quarter of the previous annual rate of rotation.

9 When frames and samples were updated annually some data would be revised as a consequence. No data revisions of this nature will be needed given quarterly updates to frames and samples. Data may be revised however on the basis of further processing.

EXPLANATORY NOTES

STATISTICAL UNIT

10 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 defined where separate and comprehensive accounts are compiled for it. Prior to 1989, the survey was on a different business unit basis. Further details are available on request.

CLASSIFICATION BY INDUSTRY

11 The Australian and New Zealand Standard Industrial Classification (ANZSIC) has been developed for use in both countries for the production and analysis of industry statistics. It replaces the Australian Standard Industrial Classification (ASIC) and the New Zealand Standard Industrial Classification (NZSIC).

12 For more information, users are referred to *Australian & New Zealand Standard Industrial Classification, 1993, ANZSIC*, ABS (Cat. no. 1292.0) and Statistics New Zealand (Cat. no. 19.005.0092).

13 In order to classify inventories and sales data by industry, each statistical unit (as defined above) is classified to the Australian and New Zealand Standard Industrial Classification (ANZSIC) industry in which it *mainly* operates.

14 All of the inventories and sales of each statistical unit are classified to that unit's industry even though it may have activities in other industries.

DESCRIPTION OF TERMS

15 *Manufacturers' Sales*. All sales of goods manufactured by the business or manufactured for it on commission. 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.

16 *Wholesale Trade Sales*. Sales of goods and services by businesses classified to the Wholesale Trade Industry.

17 *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.

CHAIN VOLUME MEASURES

18 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 1997–1998). Chain volume measures were introduced in September quarter 1998, replacing constant price estimates. Chain volume measures can be thought of as current price values re-expressed in (i.e. based on) the prices of the previous year and linked together to form continuous time series. Each year's quarter-to-quarter growth rates in the chain volume series are based on the prices of the previous 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 1999 issue of this publication, the chain volume measures for 1998–1999 have 1997–1998 (the previous financial year) as their base year rather than 1996–1997, and the reference year is 1997–1998. A change in reference year changes levels but not growth rates.

EXPLANATORY NOTES

CHAIN VOLUME MEASURES *continued* **19** 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 this means that the original chain volume estimates for industry groups will not add to total inventories and sales for Australia. However, by using the latest base year as the reference year, non-additivity does not exist for the quarters following the reference year and 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).

RELIABILITY OF THE ESTIMATES **20** Two types of error are possible in an estimate based on a sample survey: sampling error and non-sampling error. Sampling error is explained and quantified on pages 21 and 22.

Non-sampling error arises from inaccuracies in collecting, recording and processing the data. The major errors of concern and which may affect the data are:

- misreporting of data by respondents; and
- deficiencies in the register of economic units, particularly in respect of small units.

Every effort is made to minimise the non-sampling error by careful design of questionnaires, efficient operating procedures, and appropriate methodology.

SEASONAL ADJUSTMENT **21** 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.

22 Seasonal adjustment may be carried out by various methods and the results may vary slightly depending on the procedure adopted. Accordingly, seasonally adjusted statistics are only indicative and should not be regarded as in any way definitive. In interpreting seasonally adjusted data it is important therefore to bear in mind the methods by which they have been derived and the limitations to which the methods used are subject.

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

24 In the seasonal adjustment of the series, account has been taken of both normal seasonal factors and 'trading' day effects (arising from the varying length of each quarter) and the varying numbers of Sundays, Mondays, Tuesdays etc. in the quarter. Seasonal adjustment does not remove from the series the effect of irregular or non-seasonal influences (e.g. change in interest rates).

25 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 1999 survey. Data for periods after March 1999 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. Care should be exercised when interpreting quarter to quarter movements in the seasonally adjusted series in the publication, particularly for recent quarters.

EXPLANATORY NOTES

SEASONAL ADJUSTMENT

continued

26 It should be noted that the seasonally adjusted figures necessarily reflect the sampling and other errors to which the original figures are subject.

27 Details of the seasonal adjustment methods used for inventories and sales, together with selected measures of variability for these series are available on request.

TREND ESTIMATES

28 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 contact the Assistant Director, Time Series Analysis on (02) 6252 6076.

COMPARISON WITH OTHER ABS STATISTICS

29 The data collected in the Survey of Inventories and Sales are used to compile estimates of the increase in book value of non-farm inventories in the quarterly and annual national accounts. For further details see *Australian National Accounts: Concepts, Sources and Methods* (Cat. no. 5216.0).

30 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 include estimates for the construction and transport industries.

RELATED PUBLICATIONS

31 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)
- *Information Paper: Australian National Accounts, Introduction of Chain Volume and Price Indexes* (Cat. no. 5248.0)
- *Manufacturing Production, Australia* (Cat. no. 8301.0)
- *Private New Capital Expenditure and Expected Expenditure, Australia* (Cat. no. 5625.0)
- *State Estimates of Private New Capital Expenditure* (Cat. no. 5646.0)

32 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.

UNPUBLISHED DATA

33 In addition to the data contained in this and related publications, more detailed industry information may be made available on request. Data are available at the ANZSIC Group (i.e. 3 digit) level for inventories and manufacturers' sales.

SYMBOLS AND OTHER USAGES

ANZSIC *Australian and New Zealand Standard Industrial Classification* (Cat. no. 1292.0) 1993 edition

S T A N D A R D E R R O R S

INTRODUCTION

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.

LEVEL ESTIMATES

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

For instance, the standard error of \$965m indicates that:

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

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

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

| | Inventories \$m | Sales \$m |
|---------------------------|--------------------|--------------|
| Mining | 88 | n.a. |
| Manufacturing | 438 | 865 |
| Wholesale trade | 667 | 1 536 |
| Retail trade | 530 | n.a. |
| Other | 75 | n.a. |
| Total selected industries | 965 | n.a. |

S T A N D A R D E R R O R S

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 \$77,000m, and the next quarter the published level estimate is \$79,000m. In this example the calculated standard error for the movement estimate is \$754m. The standard error is then used to interpret the published movement estimate of +\$2,000m.

For instance, the standard error of \$754m indicates that:

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

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.

| | Inventories \$m | Sales \$m |
|---------------------------|--------------------|--------------|
| Mining | 98 | n.a. |
| Manufacturing | 329 | 682 |
| Wholesale trade | 490 | 1 309 |
| Retail trade | 449 | n.a. |
| Other | 92 | n.a. |
| Total selected industries | 754 | n.a. |

WHAT IF . . . ? REVISIONS TO TREND ESTIMATES

EFFECT OF NEW SEASONALLY ADJUSTED ESTIMATES ON TREND ESTIMATES

TREND REVISIONS

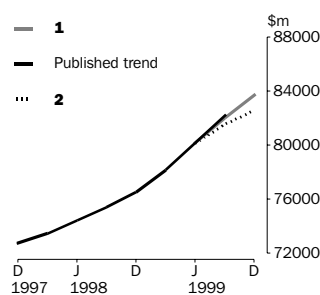
The examples in the tables below show two scenarios and the consequent revisions to previous trend estimates of inventories owned by private businesses and manufacturers' and wholesalers' sales.

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.

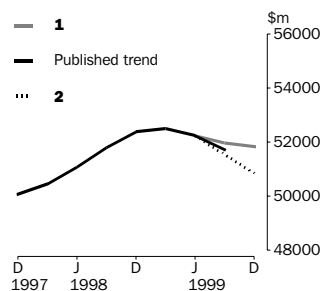
The percentages chosen are the long term average movements, without regard to sign, in the seasonally adjusted series.

INVENTORIES



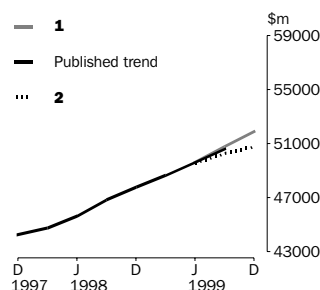
| | TREND AS PUBLISHED | | WHAT IF NEXT QUARTER'S SEASONALLY ADJUSTED ESTIMATE: | | | |
|-----------|--------------------|----------|------------------------------------------------------|----------|--------------------------------------|----------|
| | \$m | % change | 1 rises by 1.0 on Sep 1999 | | 2 falls by 1.0 on Sep 1999 | |
| | \$m | % change | \$m | % change | \$m | % change |
| 1998 | | | | | | |
| December | 76 527 | 1.5 | 76 527 | 1.5 | 76 527 | 1.5 |
| 1999 | | | | | | |
| March | 78 185 | 2.2 | 78 176 | 2.2 | 78 273 | 2.3 |
| June | 80 146 | 2.5 | 80 141 | 2.5 | 80 107 | 2.3 |
| September | 82 142 | 2.5 | 82 024 | 2.3 | 81 558 | 1.8 |
| December | — | — | 83 688 | 2.0 | 82 582 | 1.3 |

MANUFACTURERS' SALES



| | TREND AS PUBLISHED | | WHAT IF NEXT QUARTER'S SEASONALLY ADJUSTED ESTIMATE: | | | |
|-----------|--------------------|----------|------------------------------------------------------|----------|--------------------------------------|----------|
| | \$m | % change | 1 rises by 1.4 on Sep 1999 | | 2 falls by 1.4 on Sep 1999 | |
| | \$m | % change | \$m | % change | \$m | % change |
| 1998 | | | | | | |
| December | 52 382 | 1.1 | 52 382 | 1.1 | 52 382 | 1.1 |
| 1999 | | | | | | |
| March | 52 506 | 0.2 | 52 511 | 0.2 | 52 595 | 0.4 |
| June | 52 236 | -0.5 | 52 240 | -0.5 | 52 211 | -0.7 |
| September | 51 737 | -1.0 | 51 956 | -0.5 | 51 548 | -1.3 |
| December | — | — | 51 817 | -0.3 | 50 850 | -1.4 |

WHOLESALE TRADE SALES



| | TREND AS PUBLISHED | | WHAT IF NEXT QUARTER'S SEASONALLY ADJUSTED ESTIMATE: | | | |
|-----------|--------------------|----------|------------------------------------------------------|----------|--------------------------------------|----------|
| | \$m | % change | 1 rises by 1.7 on Sep 1999 | | 2 falls by 1.7 on Sep 1999 | |
| | \$m | % change | \$m | % change | \$m | % change |
| 1998 | | | | | | |
| December | 47 749 | 2.0 | 47 749 | 2.0 | 47 749 | 2.0 |
| 1999 | | | | | | |
| March | 48 635 | 1.9 | 48 605 | 1.8 | 48 707 | 2.0 |
| June | 49 630 | 2.0 | 49 641 | 2.1 | 49 604 | 1.8 |
| September | 50 582 | 1.9 | 50 790 | 2.3 | 50 297 | 7.2 |
| December | — | — | 51 906 | 2.2 | 50 774 | 0.9 |

SELF-HELP ACCESS TO STATISTICS

- CPI INFOLINE* For current and historical Consumer Price Index data, call 1902 981 074 (call cost 75c per minute).
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