

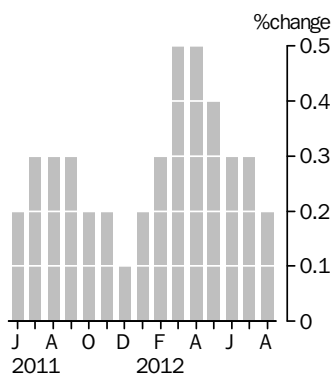
RETAIL TRADE

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) THURS 4 OCT 2012

Monthly Turnover

Current Prices
Trend Estimate



KEY FIGURES

| | August 2012 | July 2012 to August 2012 |
|-----------------------------------|----------------|-----------------------------------|
| | \$m | % change |
| Turnover at current prices | | |
| Trend | 21 523.6 | 0.2 |
| Seasonally Adjusted | 21 457.0 | 0.2 |

KEY POINTS

CURRENT PRICES

- The trend estimate rose 0.2% in August 2012. This follows a rise of 0.3% in July 2012 and a rise of 0.3% in June 2012.
- The seasonally adjusted estimate rose 0.2% in August 2012. This follows a fall of 0.8% in July 2012 and a rise of 1.2% in June 2012.
- In trend terms, Australian turnover rose 3.7% in August 2012 compared with August 2011.
- The following industries rose in trend terms in August 2012: Food retailing (0.3%), Cafes, restaurants and takeaway food services (0.5%), Household goods retailing (0.4%) and Clothing, footwear and personal accessory retailing (0.3%). Other retailing (-0.2%) and Department stores (-0.4%) fell in trend terms in August 2012.
- The following states and territories rose in trend terms in August 2012: New South Wales (0.3%), Western Australia (0.5%), Queensland (0.2%), Victoria (0.1%), the Australian Capital Territory (0.5%) and the Northern Territory (0.3%). South Australia (0.0%) was relatively unchanged and Tasmania (-0.5%) fell in trend terms in August 2012.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Paul Slater on Sydney (02) 9268 4581.

NOTES

FORTHCOMING ISSUES

| <i>ISSUE</i> | <i>RELEASE DATE</i> |
|----------------|---------------------|
| September 2012 | 5 November 2012 |
| October 2012 | 3 December 2012 |
| November 2012 | 9 January 2013 |
| December 2012 | 6 February 2013 |
| January 2013 | 5 March 2013 |
| February 2013 | 4 April 2013 |



CHANGES IN THIS ISSUE

There are no changes in this issue.

REVISIONS

There are no revisions to original estimates. Revisions to seasonally adjusted estimates are due to the concurrent methodology for deriving seasonal factors.

TIME SERIES DATA

- Data available from the Downloads tab of this issue on the ABS website include longer time series of tables in this publication, the quarterly chain volume measures and the following additional current price monthly series:
- Retail turnover by state and 15 industry subgroups in trend, seasonally adjusted and original terms
- Retail turnover completely enumerated and sample sector, by six industry groups in original terms
- Retail turnover completely enumerated and sample sector, by state in original terms
- Retail turnover completely enumerated sector, total level in trend, seasonally adjusted and original terms.



ABBREVIATIONS

| | |
|--------|---|
| ABN | Australian Business Number |
| ABS | Australian Bureau of Statistics |
| ANZSIC | Australian and New Zealand Standard Industrial Classification |
| ARIMA | autoregressive integrated moving average |
| ATO | Australian Taxation Office |
| n.e.c. | not elsewhere classified |
| PAYGW | pay-as-you-go withholding |
| RSE | relative standard error |

Brian Pink
Australian Statistician

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ANALYSIS - TOTAL RETAIL

TOTAL RETAIL - MONTHLY

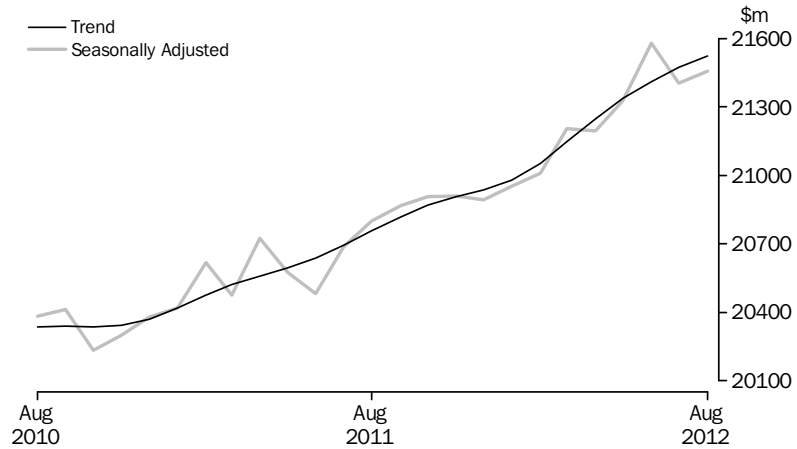
The chart below shows the trend series and seasonally adjusted series to August 2012.

In current prices, the trend estimate for Australian turnover rose 0.2% in August 2012 following a rise of 0.3% in July 2012 and a rise of 0.3% in June 2012.

The seasonally adjusted estimate for Australian turnover rose 0.2% in August 2012 following a fall of 0.8% in July 2012 and a rise of 1.2% in June 2012.

The original estimate for Australian turnover rose 1.8% in August 2012. The original estimate for chains and other larger retailers rose 1.5% in August 2012. The original estimate for smaller retailers rose 2.5% in August 2012.

RETAIL TURNOVER, Australia



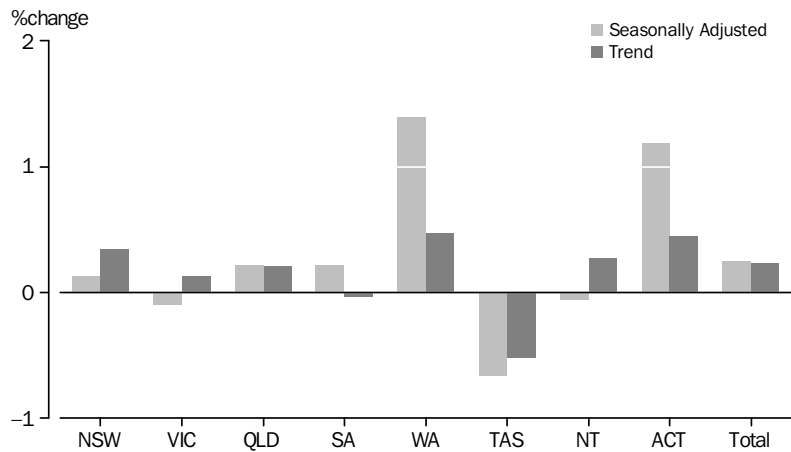
ANALYSIS - TOTAL RETAIL *continued*

TOTAL RETAIL - BY STATE

The following states and territories rose in trend terms in August 2012: New South Wales (0.3%), Western Australia (0.5%), Queensland (0.2%), Victoria (0.1%), the Australian Capital Territory (0.5%) and the Northern Territory 0.3%. South Australia (0.0%) was relatively unchanged. Tasmania (-0.5%) fell in trend terms in August 2012.

The following states and territories rose in seasonally adjusted terms in August 2012: Western Australia (1.4%), Queensland (0.2%), New South Wales (0.1%), the Australian Capital Territory (1.2%) and South Australia (0.2%). Victoria (-0.1%), Tasmania (-0.7%) and the Northern Territory (-0.1%) fell in seasonally adjusted terms in August 2012.

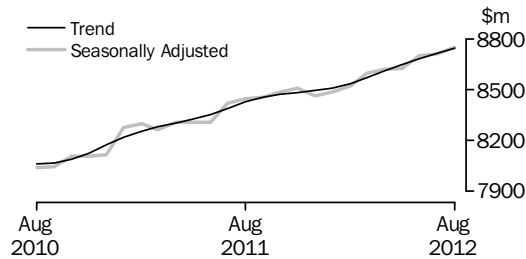
RETAIL TURNOVER, States and Territories



ANALYSIS BY INDUSTRY

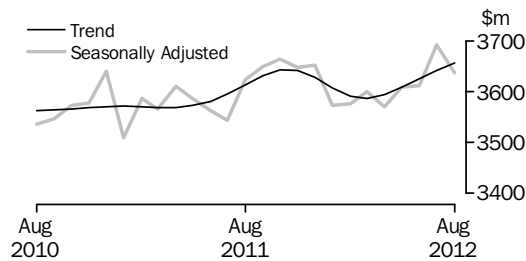
FOOD RETAILING

In current prices, the trend estimate for Food retailing rose 0.3% in August 2012. The seasonally adjusted estimate rose 0.4%. By industry subgroup, the trend estimate rose for Supermarkets and grocery stores (0.3%), Other specialised food retailing (0.4%) and Liquor retailing (0.1%). The seasonally adjusted estimate rose for Supermarkets and grocery stores (0.3%), Other specialised food retailing (1.8%) and Liquor retailing (0.1%).



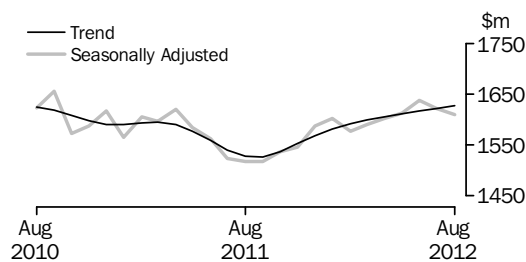
HOUSEHOLD GOODS RETAILING

In current prices, the trend estimate for Household goods retailing rose 0.4% in August 2012. The seasonally adjusted estimate fell 1.5%. By industry subgroup, the trend estimate rose for Hardware, building and garden supplies retailing (1.1%) and Furniture, floor coverings, houseware and textile goods retailing (0.1%) and fell for Electrical and electronic goods retailing (-0.1%). The seasonally adjusted estimate fell for Electrical and electronic goods retailing (-2.2%) and Furniture, floor coverings, houseware and textile goods retailing (-2.1%) and was relatively unchanged for Hardware, building and garden supplies retailing (0.0%).



CLOTHING, FOOTWEAR AND PERSONAL ACCESSORY RETAILING

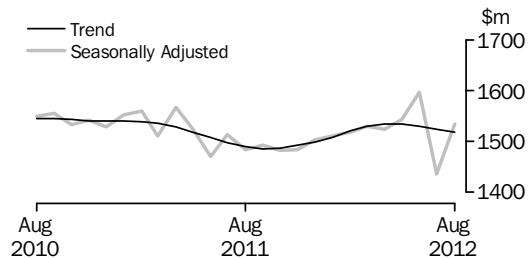
In current prices, the trend estimate for Clothing, footwear and personal accessory retailing rose 0.3% in August 2012. The seasonally adjusted estimate fell 0.7%. By industry subgroup, the trend estimate rose for Footwear and other personal accessory retailing (0.6%) and was relatively unchanged for Clothing retailing (0.0%). The seasonally adjusted estimate fell for Clothing retailing (-1.2%) and rose for Footwear and other personal accessory retailing (0.2%).



ANALYSIS BY INDUSTRY *continued*

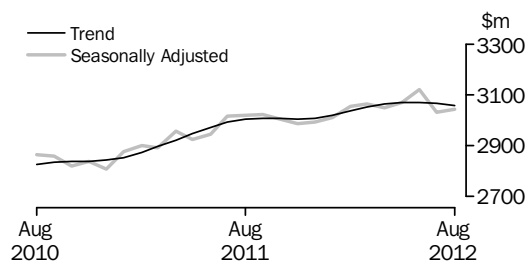
DEPARTMENT STORES

In current prices, the trend estimate for Department stores fell 0.4% in August 2012. The seasonally adjusted estimate rose 6.9%.



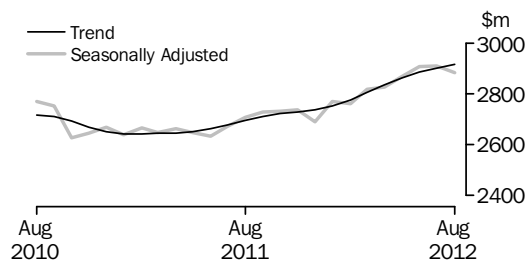
OTHER RETAILING

In current prices, the trend estimate for Other retailing fell 0.2% in August 2012. The seasonally adjusted estimate rose 0.4%. By industry subgroup, the trend estimate fell for Other retailing nec (-0.8%) and Newspaper and book retailing (-1.1%) and rose for Pharmaceutical, cosmetic and toiletry goods retailing (0.3%) and Other recreational goods retailing (0.3%). The seasonally adjusted estimate rose for Pharmaceutical, cosmetic and toiletry goods retailing (1.2%), Newspaper and book retailing (1.7%) and Other recreational goods retailing (1.1%) and fell for Other retailing n.e.c. (-1.4%).



CAFES, RESTAURANTS AND TAKEAWAY FOOD SERVICES

In current prices, the trend estimate for Cafes, restaurants and takeaway food services rose 0.5% in August 2012. The seasonally adjusted estimate fell 0.9%. By industry subgroup, the trend estimate rose for Cafes, restaurants and catering services (0.6%) and Takeaway food services (0.2%). The seasonally adjusted estimate fell for Cafes, restaurants and catering services (-1.2%) and Takeaway food services (-0.5%).



RETAIL TURNOVER, By Industry Group

| Month | Food retailing | Household goods retailing | Clothing, footwear & personal accessory retailing | Department stores | Other retailing | Cafes, restaurants & takeaway food services | Total |
|---------------------|-------------------|---------------------------------|---|----------------------|--------------------|---|----------|
| | \$m | \$m | \$m | \$m | \$m | \$m | \$m |
| ORIGINAL | | | | | | | |
| 2011 | | | | | | | |
| June | 7 876.1 | 3 530.9 | 1 521.1 | 1 471.9 | 2 762.9 | 2 516.8 | 19 679.8 |
| July | 8 312.5 | 3 462.0 | 1 431.5 | 1 532.5 | 2 918.9 | 2 698.8 | 20 356.2 |
| August | 8 359.9 | 3 574.5 | 1 395.9 | 1 293.5 | 2 962.2 | 2 736.1 | 20 322.1 |
| September | 8 276.6 | 3 607.8 | 1 473.2 | 1 345.7 | 2 962.2 | 2 741.1 | 20 406.5 |
| October | 8 608.4 | 3 760.7 | 1 537.5 | 1 404.7 | 2 984.9 | 2 812.6 | 21 108.7 |
| November | 8 573.1 | 3 914.8 | 1 580.8 | 1 660.0 | 3 272.1 | 2 783.1 | 21 783.9 |
| December | 9 936.1 | 4 874.5 | 2 527.8 | 2 730.5 | 4 208.6 | 3 043.4 | 27 320.9 |
| 2012 | | | | | | | |
| January | 8 532.8 | 3 536.7 | 1 504.4 | 1 362.4 | 2 786.7 | 2 725.5 | 20 448.5 |
| February | 8 116.6 | 3 140.7 | 1 282.1 | 1 131.7 | 2 769.5 | 2 552.5 | 18 993.1 |
| March | 8 733.8 | 3 393.7 | 1 476.1 | 1 349.2 | 2 990.8 | 2 836.2 | 20 779.8 |
| April | 8 397.1 | 3 174.7 | 1 481.5 | 1 391.2 | 2 764.2 | 2 732.7 | 19 941.3 |
| May | 8 448.1 | 3 434.0 | 1 655.1 | 1 456.9 | 2 953.0 | 2 831.8 | 20 778.8 |
| June | 8 264.4 | 3 579.7 | 1 606.2 | 1 616.4 | 2 935.0 | 2 779.3 | 20 780.9 |
| July | 8 494.8 | 3 598.8 | 1 506.3 | 1 423.4 | 2 916.4 | 2 924.4 | 20 864.1 |
| August | 8 782.1 | 3 620.3 | 1 491.8 | 1 359.0 | 3 038.3 | 2 955.1 | 21 246.6 |
| SEASONALLY ADJUSTED | | | | | | | |
| 2011 | | | | | | | |
| June | 8 306.8 | 3 562.9 | 1 562.8 | 1 471.1 | 2 946.0 | 2 632.7 | 20 482.4 |
| July | 8 419.2 | 3 543.0 | 1 523.3 | 1 514.3 | 3 016.6 | 2 670.9 | 20 687.4 |
| August | 8 446.1 | 3 623.5 | 1 518.1 | 1 484.3 | 3 018.6 | 2 708.1 | 20 798.7 |
| September | 8 454.9 | 3 648.5 | 1 518.1 | 1 493.0 | 3 022.0 | 2 729.7 | 20 866.2 |
| October | 8 486.7 | 3 664.3 | 1 537.5 | 1 481.9 | 3 005.4 | 2 731.4 | 20 907.1 |
| November | 8 508.3 | 3 648.0 | 1 545.5 | 1 484.6 | 2 985.5 | 2 737.7 | 20 909.7 |
| December | 8 463.3 | 3 652.6 | 1 588.0 | 1 503.4 | 2 992.8 | 2 691.3 | 20 891.4 |
| 2012 | | | | | | | |
| January | 8 485.7 | 3 573.2 | 1 601.6 | 1 510.7 | 3 010.8 | 2 771.4 | 20 953.4 |
| February | 8 522.1 | 3 577.0 | 1 576.6 | 1 518.0 | 3 054.9 | 2 762.0 | 21 010.6 |
| March | 8 599.4 | 3 600.0 | 1 591.2 | 1 530.4 | 3 064.5 | 2 817.9 | 21 203.4 |
| April | 8 621.8 | 3 569.4 | 1 602.9 | 1 524.5 | 3 049.8 | 2 826.6 | 21 195.0 |
| May | 8 624.9 | 3 608.4 | 1 612.3 | 1 543.9 | 3 068.9 | 2 870.0 | 21 328.5 |
| June | 8 698.9 | 3 612.2 | 1 638.3 | 1 597.7 | 3 122.0 | 2 908.5 | 21 577.6 |
| July | 8 711.9 | 3 691.7 | 1 621.2 | 1 436.3 | 3 031.9 | 2 910.8 | 21 403.9 |
| August | 8 748.1 | 3 637.1 | 1 610.4 | 1 534.9 | 3 042.8 | 2 883.7 | 21 457.0 |
| TREND | | | | | | | |
| 2011 | | | | | | | |
| June | 8 354.5 | 3 581.4 | 1 558.9 | 1 507.6 | 2 972.6 | 2 662.3 | 20 637.3 |
| July | 8 390.6 | 3 595.6 | 1 540.2 | 1 497.3 | 2 992.1 | 2 678.4 | 20 694.1 |
| August | 8 428.2 | 3 613.2 | 1 527.9 | 1 489.8 | 3 004.0 | 2 695.2 | 20 758.0 |
| September | 8 456.5 | 3 631.2 | 1 527.2 | 1 486.1 | 3 007.2 | 2 709.9 | 20 818.1 |
| October | 8 473.3 | 3 642.6 | 1 537.3 | 1 487.4 | 3 006.6 | 2 721.1 | 20 868.2 |
| November | 8 483.7 | 3 641.8 | 1 553.3 | 1 492.6 | 3 006.0 | 2 729.5 | 20 906.9 |
| December | 8 493.4 | 3 628.3 | 1 569.0 | 1 498.4 | 3 008.3 | 2 738.1 | 20 935.4 |
| 2012 | | | | | | | |
| January | 8 509.9 | 3 607.5 | 1 581.8 | 1 508.5 | 3 018.9 | 2 752.3 | 20 978.9 |
| February | 8 536.4 | 3 590.6 | 1 591.8 | 1 520.7 | 3 036.5 | 2 776.0 | 21 052.0 |
| March | 8 571.1 | 3 586.0 | 1 599.4 | 1 530.0 | 3 053.9 | 2 806.4 | 21 146.8 |
| April | 8 610.1 | 3 593.6 | 1 605.9 | 1 534.4 | 3 065.5 | 2 837.2 | 21 246.7 |
| May | 8 648.4 | 3 608.5 | 1 612.1 | 1 533.8 | 3 069.8 | 2 863.7 | 21 336.3 |
| June | 8 683.3 | 3 625.2 | 1 617.9 | 1 530.0 | 3 069.4 | 2 885.1 | 21 410.8 |
| July | 8 715.9 | 3 642.3 | 1 622.4 | 1 524.5 | 3 066.1 | 2 902.0 | 21 473.2 |
| August | 8 745.1 | 3 657.3 | 1 627.1 | 1 518.2 | 3 058.9 | 2 917.6 | 21 523.6 |

RETAIL TURNOVER, By Industry Group—Percentage change from previous month

| Month | Food retailing | Household goods retailing | Clothing, footwear & personal accessory retailing | Department stores | Other retailing | Cafes, restaurants & takeaway food services | Total |
|---------------------|-------------------|---------------------------------|---|----------------------|--------------------|---|-------|
| | % | % | % | % | % | % | % |
| ORIGINAL | | | | | | | |
| 2011 | | | | | | | |
| June | -2.3 | 4.2 | -5.0 | 4.5 | -0.3 | -3.3 | -0.8 |
| July | 5.5 | -2.0 | -5.9 | 4.1 | 5.6 | 7.2 | 3.4 |
| August | 0.6 | 3.2 | -2.5 | -15.6 | 1.5 | 1.4 | -0.2 |
| September | -1.0 | 0.9 | 5.5 | 4.0 | 0.0 | 0.2 | 0.4 |
| October | 4.0 | 4.2 | 4.4 | 4.4 | 0.8 | 2.6 | 3.4 |
| November | -0.4 | 4.1 | 2.8 | 18.2 | 9.6 | -1.0 | 3.2 |
| December | 15.9 | 24.5 | 59.9 | 64.5 | 28.6 | 9.4 | 25.4 |
| 2012 | | | | | | | |
| January | -14.1 | -27.4 | -40.5 | -50.1 | -33.8 | -10.4 | -25.2 |
| February | -4.9 | -11.2 | -14.8 | -16.9 | -0.6 | -6.3 | -7.1 |
| March | 7.6 | 8.1 | 15.1 | 19.2 | 8.0 | 11.1 | 9.4 |
| April | -3.9 | -6.5 | 0.4 | 3.1 | -7.6 | -3.6 | -4.0 |
| May | 0.6 | 8.2 | 11.7 | 4.7 | 6.8 | 3.6 | 4.2 |
| June | -2.2 | 4.2 | -3.0 | 10.9 | -0.6 | -1.9 | 0.0 |
| July | 2.8 | 0.5 | -6.2 | -11.9 | -0.6 | 5.2 | 0.4 |
| August | 3.4 | 0.6 | -1.0 | -4.5 | 4.2 | 1.1 | 1.8 |
| SEASONALLY ADJUSTED | | | | | | | |
| 2011 | | | | | | | |
| June | 0.0 | -0.7 | -1.3 | -3.5 | 0.8 | -0.6 | -0.5 |
| July | 1.4 | -0.6 | -2.5 | 2.9 | 2.4 | 1.4 | 1.0 |
| August | 0.3 | 2.3 | -0.3 | -2.0 | 0.1 | 1.4 | 0.5 |
| September | 0.1 | 0.7 | 0.0 | 0.6 | 0.1 | 0.8 | 0.3 |
| October | 0.4 | 0.4 | 1.3 | -0.7 | -0.5 | 0.1 | 0.2 |
| November | 0.3 | -0.4 | 0.5 | 0.2 | -0.7 | 0.2 | 0.0 |
| December | -0.5 | 0.1 | 2.7 | 1.3 | 0.2 | -1.7 | -0.1 |
| 2012 | | | | | | | |
| January | 0.3 | -2.2 | 0.9 | 0.5 | 0.6 | 3.0 | 0.3 |
| February | 0.4 | 0.1 | -1.6 | 0.5 | 1.5 | -0.3 | 0.3 |
| March | 0.9 | 0.6 | 0.9 | 0.8 | 0.3 | 2.0 | 0.9 |
| April | 0.3 | -0.8 | 0.7 | -0.4 | -0.5 | 0.3 | 0.0 |
| May | 0.0 | 1.1 | 0.6 | 1.3 | 0.6 | 1.5 | 0.6 |
| June | 0.9 | 0.1 | 1.6 | 3.5 | 1.7 | 1.3 | 1.2 |
| July | 0.1 | 2.2 | -1.0 | -10.1 | -2.9 | 0.1 | -0.8 |
| August | 0.4 | -1.5 | -0.7 | 6.9 | 0.4 | -0.9 | 0.2 |
| TREND | | | | | | | |
| 2011 | | | | | | | |
| June | 0.3 | 0.2 | -1.1 | -0.7 | 0.8 | 0.4 | 0.2 |
| July | 0.4 | 0.4 | -1.2 | -0.7 | 0.7 | 0.6 | 0.3 |
| August | 0.4 | 0.5 | -0.8 | -0.5 | 0.4 | 0.6 | 0.3 |
| September | 0.3 | 0.5 | 0.0 | -0.2 | 0.1 | 0.5 | 0.3 |
| October | 0.2 | 0.3 | 0.7 | 0.1 | 0.0 | 0.4 | 0.2 |
| November | 0.1 | 0.0 | 1.0 | 0.4 | 0.0 | 0.3 | 0.2 |
| December | 0.1 | -0.4 | 1.0 | 0.4 | 0.1 | 0.3 | 0.1 |
| 2012 | | | | | | | |
| January | 0.2 | -0.6 | 0.8 | 0.7 | 0.4 | 0.5 | 0.2 |
| February | 0.3 | -0.5 | 0.6 | 0.8 | 0.6 | 0.9 | 0.3 |
| March | 0.4 | -0.1 | 0.5 | 0.6 | 0.6 | 1.1 | 0.5 |
| April | 0.5 | 0.2 | 0.4 | 0.3 | 0.4 | 1.1 | 0.5 |
| May | 0.4 | 0.4 | 0.4 | 0.0 | 0.1 | 0.9 | 0.4 |
| June | 0.4 | 0.5 | 0.4 | -0.2 | 0.0 | 0.7 | 0.3 |
| July | 0.4 | 0.5 | 0.3 | -0.4 | -0.1 | 0.6 | 0.3 |
| August | 0.3 | 0.4 | 0.3 | -0.4 | -0.2 | 0.5 | 0.2 |

RETAIL TURNOVER, By State

| | New South Wales | Victoria | Queensland | South Australia | Western Australia | Tasmania | Northern Territory | Australian Capital Territory | Australia |
|-------|-----------------|----------|------------|-----------------|-------------------|----------|--------------------|------------------------------|-----------|
| Month | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m | \$m |

ORIGINAL

| 2011 | | | | | | | | | |
|-----------|---------|---------|---------|---------|---------|-------|-------|-------|----------|
| June | 5 917.1 | 5 089.4 | 4 053.4 | 1 355.4 | 2 264.4 | 401.0 | 234.0 | 365.2 | 19 679.8 |
| July | 6 102.1 | 5 195.5 | 4 268.6 | 1 409.6 | 2 342.5 | 420.9 | 252.4 | 364.6 | 20 356.2 |
| August | 6 113.9 | 5 155.1 | 4 276.6 | 1 400.8 | 2 337.4 | 423.5 | 250.9 | 363.8 | 20 322.1 |
| September | 6 190.7 | 5 153.5 | 4 279.1 | 1 411.5 | 2 341.7 | 421.0 | 241.8 | 367.3 | 20 406.5 |
| October | 6 413.3 | 5 391.0 | 4 312.6 | 1 464.4 | 2 470.5 | 433.6 | 240.1 | 383.3 | 21 108.7 |
| November | 6 706.5 | 5 526.8 | 4 408.3 | 1 525.3 | 2 542.3 | 453.6 | 232.7 | 388.5 | 21 783.9 |
| December | 8 461.3 | 7 134.7 | 5 391.2 | 1 879.2 | 3 151.1 | 563.3 | 255.5 | 484.6 | 27 320.9 |

| 2012 | | | | | | | | | |
|----------|---------|---------|---------|---------|---------|-------|-------|-------|----------|
| January | 6 240.9 | 5 175.1 | 4 209.2 | 1 415.5 | 2 406.3 | 420.6 | 208.0 | 373.0 | 20 448.5 |
| February | 5 693.2 | 4 810.1 | 3 894.8 | 1 329.5 | 2 291.6 | 411.9 | 205.7 | 356.4 | 18 993.1 |
| March | 6 190.2 | 5 317.2 | 4 235.9 | 1 467.4 | 2 510.5 | 437.8 | 228.9 | 391.9 | 20 779.8 |
| April | 6 034.3 | 5 040.7 | 4 075.5 | 1 396.6 | 2 390.6 | 409.9 | 220.0 | 373.7 | 19 941.3 |
| May | 6 262.2 | 5 219.6 | 4 280.3 | 1 436.6 | 2 541.4 | 413.3 | 240.2 | 385.3 | 20 778.8 |
| June | 6 261.4 | 5 216.3 | 4 337.4 | 1 416.4 | 2 503.4 | 405.8 | 252.2 | 388.0 | 20 780.9 |
| July | 6 242.3 | 5 208.4 | 4 436.0 | 1 420.9 | 2 510.0 | 407.0 | 263.1 | 376.5 | 20 864.1 |
| August | 6 346.1 | 5 293.5 | 4 511.2 | 1 441.3 | 2 588.2 | 413.3 | 261.8 | 391.3 | 21 246.6 |

SEASONALLY ADJUSTED

| 2011 | | | | | | | | | |
|-----------|---------|---------|---------|---------|---------|-------|-------|-------|----------|
| June | 6 186.1 | 5 289.8 | 4 213.5 | 1 417.9 | 2 346.9 | 427.0 | 227.5 | 373.6 | 20 482.4 |
| July | 6 282.8 | 5 319.3 | 4 230.9 | 1 438.3 | 2 377.3 | 432.6 | 230.6 | 375.7 | 20 687.4 |
| August | 6 334.2 | 5 334.9 | 4 248.0 | 1 445.4 | 2 392.8 | 436.8 | 230.9 | 375.7 | 20 798.7 |
| September | 6 357.8 | 5 316.9 | 4 276.5 | 1 458.6 | 2 401.4 | 439.1 | 233.4 | 382.4 | 20 866.2 |
| October | 6 351.4 | 5 351.1 | 4 256.3 | 1 459.3 | 2 442.0 | 432.3 | 234.9 | 379.9 | 20 907.1 |
| November | 6 373.4 | 5 294.9 | 4 278.3 | 1 462.9 | 2 457.6 | 434.5 | 235.5 | 372.7 | 20 909.7 |
| December | 6 361.3 | 5 360.0 | 4 229.3 | 1 451.1 | 2 449.7 | 432.2 | 228.1 | 379.8 | 20 891.4 |

| 2012 | | | | | | | | | |
|----------|---------|---------|---------|---------|---------|-------|-------|-------|----------|
| January | 6 309.3 | 5 353.3 | 4 311.9 | 1 444.3 | 2 478.4 | 433.4 | 235.5 | 387.3 | 20 953.4 |
| February | 6 286.4 | 5 333.7 | 4 367.2 | 1 458.8 | 2 509.7 | 432.8 | 236.1 | 386.1 | 21 010.6 |
| March | 6 356.2 | 5 402.1 | 4 377.7 | 1 465.3 | 2 538.4 | 434.5 | 237.0 | 392.2 | 21 203.4 |
| April | 6 428.0 | 5 317.7 | 4 383.2 | 1 471.5 | 2 538.3 | 431.2 | 234.9 | 390.2 | 21 195.0 |
| May | 6 473.4 | 5 354.0 | 4 410.8 | 1 464.4 | 2 569.1 | 427.2 | 239.0 | 390.4 | 21 328.5 |
| June | 6 542.9 | 5 411.6 | 4 480.7 | 1 475.7 | 2 594.5 | 430.5 | 246.7 | 395.0 | 21 577.6 |
| July | 6 486.0 | 5 384.2 | 4 432.2 | 1 465.3 | 2 577.7 | 424.0 | 239.9 | 394.6 | 21 403.9 |
| August | 6 494.2 | 5 378.7 | 4 441.9 | 1 468.4 | 2 613.6 | 421.2 | 239.8 | 399.3 | 21 457.0 |

TREND

| 2011 | | | | | | | | | |
|-----------|---------|---------|---------|---------|---------|-------|-------|-------|----------|
| June | 6 265.4 | 5 319.8 | 4 228.9 | 1 435.4 | 2 351.6 | 430.5 | 229.0 | 376.5 | 20 637.3 |
| July | 6 279.7 | 5 325.6 | 4 240.7 | 1 438.4 | 2 371.0 | 432.5 | 230.0 | 376.2 | 20 694.1 |
| August | 6 307.2 | 5 325.2 | 4 247.3 | 1 444.6 | 2 391.8 | 434.2 | 231.3 | 376.5 | 20 758.0 |
| September | 6 335.4 | 5 324.5 | 4 251.4 | 1 450.8 | 2 411.4 | 435.1 | 232.4 | 377.0 | 20 818.1 |
| October | 6 351.2 | 5 328.6 | 4 257.6 | 1 454.9 | 2 429.7 | 435.1 | 233.2 | 377.9 | 20 868.2 |
| November | 6 350.4 | 5 335.9 | 4 269.0 | 1 456.3 | 2 447.6 | 434.6 | 233.6 | 379.4 | 20 906.9 |
| December | 6 338.6 | 5 341.0 | 4 284.9 | 1 456.1 | 2 465.8 | 433.9 | 233.7 | 381.4 | 20 935.4 |

| 2012 | | | | | | | | | |
|----------|---------|---------|---------|---------|---------|-------|-------|-------|----------|
| January | 6 332.3 | 5 345.6 | 4 308.1 | 1 456.3 | 2 485.4 | 433.3 | 234.0 | 383.9 | 20 978.9 |
| February | 6 343.6 | 5 351.0 | 4 338.2 | 1 458.4 | 2 506.4 | 432.9 | 235.0 | 386.5 | 21 052.0 |
| March | 6 372.8 | 5 356.8 | 4 370.3 | 1 461.9 | 2 527.2 | 432.3 | 236.4 | 389.0 | 21 146.8 |
| April | 6 412.7 | 5 362.8 | 4 398.2 | 1 465.6 | 2 547.1 | 431.1 | 238.1 | 391.0 | 21 246.7 |
| May | 6 453.1 | 5 368.9 | 4 419.4 | 1 468.4 | 2 565.1 | 429.3 | 239.6 | 392.5 | 21 336.3 |
| June | 6 486.6 | 5 375.8 | 4 435.7 | 1 469.7 | 2 581.0 | 427.3 | 240.7 | 394.1 | 21 410.8 |
| July | 6 513.5 | 5 382.8 | 4 448.5 | 1 470.5 | 2 595.5 | 425.2 | 241.4 | 395.7 | 21 473.2 |
| August | 6 535.8 | 5 389.5 | 4 457.9 | 1 470.0 | 2 607.9 | 423.0 | 242.1 | 397.5 | 21 523.6 |

RETAIL TURNOVER, By State—Percentage change from previous month

| Month | New South Wales | Victoria | Queensland | South Australia | Western Australia | Tasmania | Northern Territory | Australian Capital Territory | Australia |
|-------|-----------------|----------|------------|-----------------|-------------------|----------|--------------------|------------------------------|-----------|
| | % | % | % | % | % | % | % | % | % |

ORIGINAL

| 2011 | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|
| June | -1.2 | -0.9 | 0.0 | -2.3 | 0.0 | -1.8 | 4.1 | -1.1 | -0.8 |
| July | 3.1 | 2.1 | 5.3 | 4.0 | 3.5 | 5.0 | 7.9 | -0.1 | 3.4 |
| August | 0.2 | -0.8 | 0.2 | -0.6 | -0.2 | 0.6 | -0.6 | -0.2 | -0.2 |
| September | 1.3 | 0.0 | 0.1 | 0.8 | 0.2 | -0.6 | -3.7 | 1.0 | 0.4 |
| October | 3.6 | 4.6 | 0.8 | 3.7 | 5.5 | 3.0 | -0.7 | 4.4 | 3.4 |
| November | 4.6 | 2.5 | 2.2 | 4.2 | 2.9 | 4.6 | -3.1 | 1.4 | 3.2 |
| December | 26.2 | 29.1 | 22.3 | 23.2 | 23.9 | 24.2 | 9.8 | 24.7 | 25.4 |

| 2012 | | | | | | | | | |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| January | -26.2 | -27.5 | -21.9 | -24.7 | -23.6 | -25.3 | -18.6 | -23.0 | -25.2 |
| February | -8.8 | -7.1 | -7.5 | -6.1 | -4.8 | -2.1 | -1.1 | -4.4 | -7.1 |
| March | 8.7 | 10.5 | 8.8 | 10.4 | 9.6 | 6.3 | 11.3 | 9.9 | 9.4 |
| April | -2.5 | -5.2 | -3.8 | -4.8 | -4.8 | -6.4 | -3.9 | -4.6 | -4.0 |
| May | 3.8 | 3.5 | 5.0 | 2.9 | 6.3 | 0.8 | 9.2 | 3.1 | 4.2 |
| June | 0.0 | -0.1 | 1.3 | -1.4 | -1.5 | -1.8 | 5.0 | 0.7 | 0.0 |
| July | -0.3 | -0.2 | 2.3 | 0.3 | 0.3 | 0.3 | 4.3 | -3.0 | 0.4 |
| August | 1.7 | 1.6 | 1.7 | 1.4 | 3.1 | 1.5 | -0.5 | 3.9 | 1.8 |

SEASONALLY ADJUSTED

| 2011 | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|
| June | -0.9 | -0.4 | -0.2 | -1.2 | 0.6 | -0.2 | 0.4 | -1.0 | -0.5 |
| July | 1.6 | 0.6 | 0.4 | 1.4 | 1.3 | 1.3 | 1.3 | 0.6 | 1.0 |
| August | 0.8 | 0.3 | 0.4 | 0.5 | 0.7 | 1.0 | 0.2 | 0.0 | 0.5 |
| September | 0.4 | -0.3 | 0.7 | 0.9 | 0.4 | 0.5 | 1.1 | 1.8 | 0.3 |
| October | -0.1 | 0.6 | -0.5 | 0.0 | 1.7 | -1.6 | 0.7 | -0.7 | 0.2 |
| November | 0.3 | -1.0 | 0.5 | 0.2 | 0.6 | 0.5 | 0.2 | -1.9 | 0.0 |
| December | -0.2 | 1.2 | -1.1 | -0.8 | -0.3 | -0.5 | -3.1 | 1.9 | -0.1 |

| 2012 | | | | | | | | | |
|----------|------|------|------|------|------|------|------|------|------|
| January | -0.8 | -0.1 | 2.0 | -0.5 | 1.2 | 0.3 | 3.2 | 2.0 | 0.3 |
| February | -0.4 | -0.4 | 1.3 | 1.0 | 1.3 | -0.1 | 0.3 | -0.3 | 0.3 |
| March | 1.1 | 1.3 | 0.2 | 0.4 | 1.1 | 0.4 | 0.4 | 1.6 | 0.9 |
| April | 1.1 | -1.6 | 0.1 | 0.4 | 0.0 | -0.8 | -0.9 | -0.5 | 0.0 |
| May | 0.7 | 0.7 | 0.6 | -0.5 | 1.2 | -0.9 | 1.7 | 0.1 | 0.6 |
| June | 1.1 | 1.1 | 1.6 | 0.8 | 1.0 | 0.8 | 3.2 | 1.2 | 1.2 |
| July | -0.9 | -0.5 | -1.1 | -0.7 | -0.6 | -1.5 | -2.8 | -0.1 | -0.8 |
| August | 0.1 | -0.1 | 0.2 | 0.2 | 1.4 | -0.7 | -0.1 | 1.2 | 0.2 |

TREND

| 2011 | | | | | | | | | |
|-----------|------|-----|-----|------|-----|------|-----|------|-----|
| June | -0.1 | 0.3 | 0.4 | -0.1 | 0.7 | 0.4 | 0.2 | -0.3 | 0.2 |
| July | 0.2 | 0.1 | 0.3 | 0.2 | 0.8 | 0.5 | 0.4 | -0.1 | 0.3 |
| August | 0.4 | 0.0 | 0.2 | 0.4 | 0.9 | 0.4 | 0.6 | 0.1 | 0.3 |
| September | 0.4 | 0.0 | 0.1 | 0.4 | 0.8 | 0.2 | 0.5 | 0.1 | 0.3 |
| October | 0.2 | 0.1 | 0.1 | 0.3 | 0.8 | 0.0 | 0.3 | 0.2 | 0.2 |
| November | 0.0 | 0.1 | 0.3 | 0.1 | 0.7 | -0.1 | 0.2 | 0.4 | 0.2 |
| December | -0.2 | 0.1 | 0.4 | 0.0 | 0.7 | -0.2 | 0.0 | 0.5 | 0.1 |

| 2012 | | | | | | | | | |
|----------|------|-----|-----|-----|-----|------|-----|-----|-----|
| January | -0.1 | 0.1 | 0.5 | 0.0 | 0.8 | -0.1 | 0.2 | 0.6 | 0.2 |
| February | 0.2 | 0.1 | 0.7 | 0.1 | 0.8 | -0.1 | 0.4 | 0.7 | 0.3 |
| March | 0.5 | 0.1 | 0.7 | 0.2 | 0.8 | -0.1 | 0.6 | 0.6 | 0.5 |
| April | 0.6 | 0.1 | 0.6 | 0.3 | 0.8 | -0.3 | 0.7 | 0.5 | 0.5 |
| May | 0.6 | 0.1 | 0.5 | 0.2 | 0.7 | -0.4 | 0.6 | 0.4 | 0.4 |
| June | 0.5 | 0.1 | 0.4 | 0.1 | 0.6 | -0.5 | 0.5 | 0.4 | 0.3 |
| July | 0.4 | 0.1 | 0.3 | 0.1 | 0.6 | -0.5 | 0.3 | 0.4 | 0.3 |
| August | 0.3 | 0.1 | 0.2 | 0.0 | 0.5 | -0.5 | 0.3 | 0.5 | 0.2 |

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents estimates of the value of turnover of "retail trade" for Australian businesses classified by industry, and by state and territory. For the purposes of this publication "retail trade" includes those industries as defined in paragraphs 5 and 6.

2 The estimates of turnover are compiled from the monthly Retail Business Survey. About 500 'large' businesses are included in the survey every month, while a sample of about 2,750 'smaller' businesses is selected. The 'large' business' contribution of approximately 62% of the total estimate ensures a highly reliable Australian total turnover estimate.

3 Monthly estimates are presented in current price terms. Quarterly chain volume measures at the state and industry levels are updated with the March, June, September and December issues of this publication.

DEFINITION OF TURNOVER

4 Turnover includes:

- retail sales;
- wholesale sales;
- takings from repairs, meals and hiring of goods (except for rent, leasing and hiring of land and buildings);
- commissions from agency activity (e.g. commissions received from collecting dry cleaning, selling lottery tickets, etc.); and
- from July 2000, the goods and services tax.

DEFINING RETAIL TRADE

5 The industries included in the survey are as defined in the *Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006* (cat. no. 1292.0). Industry statistics in this publication are presented at two levels of detail:

- Industry group - the broadest industry level comprising 6 industry groups. This level is used to present monthly current price and quarterly chain volume measure estimates in this publication.
- Industry subgroup - the most detailed industry level comprising 15 industry subgroups. This level is used to present monthly current price estimates in time series spreadsheets.

6 The following shows the level at which retail trade statistics are released and defines each industry group and subgroup in terms of ANZSIC 2006 classes:

- Food retailing
 - Supermarket and grocery stores and non-petrol sales (convenience stores) of selected fuel retailing
 - Supermarket and grocery stores (4110)
 - non-petrol sales (convenience stores) of selected Fuel retailing (4000)
 - Liquor retailing
 - Liquor retailing (4123)
 - Other specialised food retailing
 - Fresh meat, fish and poultry retailing (4121)
 - Fruit & vegetable retailing (4122)
 - Other specialised food retailing (4129)
- Household goods retailing
 - Furniture, floor coverings, houseware and textile goods retailing
 - Furniture retailing (4211)
 - Floor coverings retailing (4212)
 - Houseware retailing (4213)
 - Manchester and other textile goods retailing (4214)
 - Electrical and electronic goods retailing
 - Electrical, electronic and gas appliance retailing (4221)
 - Computer and computer peripheral retailing (4222)

EXPLANATORY NOTES *continued*

DEFINING RETAIL TRADE

continued

- Other electrical and electronic goods retailing (4229)
- Hardware, building & garden supplies retailing
 - Hardware and building supplies retailing (4231)
 - Garden supplies retailing (4232)
- Clothing, footwear and personal accessory retailing
 - Clothing retailing
 - Clothing retailing (4251)
 - Footwear and other personal accessory retailing
 - Footwear retailing (4252)
 - Watch and jewellery retailing (4253)
 - Other personal accessory retailing (4259)
- Department stores (4260)
- Other retailing
 - Newspaper and book retailing
 - Newspaper and book retailing (4244)
 - Other recreational goods retailing
 - Sport and camping equipment retailing (4241)
 - Entertainment media retailing (4242)
 - Toy and game retailing (4243)
 - Pharmaceutical, cosmetic and toiletry goods retailing
 - Pharmaceutical, cosmetic and toiletry goods retailing (4271)
 - Other retailing n.e.c.
 - Stationery goods retailing (4272)
 - Antique and used goods retailing (4273)
 - Flower retailing (4274)
 - Other-store based retailing n.e.c (4279)
 - Non-store retailing (4310)
 - Retail commission-based buying and/or selling (4320)
- Cafes, restaurants and takeaway food services
 - Cafes, restaurants and catering services
 - Cafes and restaurants (4511)
 - Catering services (4513)
 - Takeaway food services
 - Takeaway food services (4512)

SCOPE AND COVERAGE

7 The scope of the Retail Business Survey is all employing retail trade businesses who predominantly sell to households. Like most Australian Bureau of Statistics (ABS) economic surveys, the frame used for the Survey is taken from the ABS Business Register which includes registrations to the Australian Taxation Office's (ATO) pay-as-you-go withholding (PAYGW) scheme. Each statistical unit included on the ABS Business Register is classified to the ANZSIC industry in which it mainly operates. The frame is supplemented with information about a small number of businesses which are classified to a non-retail trade industry but which have significant retail trade activity.

8 The frame is updated quarterly to take account of new businesses, businesses which have ceased employing, changes in industry and other general business changes. The estimates include an allowance for the time it takes a newly registered business to get on to the survey frame. Businesses which have ceased employing are identified when the ATO cancels their Australian Business Number (ABN) and/or PAYGW registration. In addition, businesses with less than 50 employees which do not remit under the PAYGW scheme in each of the previous five quarters are removed from the frame.

EXPLANATORY NOTES *continued*

SCOPE AND COVERAGE

continued

9 To improve coverage and the quality of the estimates and to reduce the cost to the business community of reporting information to the ABS, turnover for franchisees is collected directly from a number of franchise head offices. The franchisees included in this reporting are identified and removed from the frame.

STATISTICAL UNIT

10 The ABS uses an economic statistics units model on the ABS Business Register to describe the characteristics of businesses, and the structural relationships between related businesses. The units model is also used to break groups of related businesses into relatively homogeneous components that can provide data to the ABS.

11 In the Retail Business Survey the statistical unit used to represent businesses, and for which statistics are reported, is in most cases the Australian Business Number (ABN) unit. The ABN unit is the business unit which has registered for an ABN and therefore appears on the ATO administered Australian Business Register. This unit is suitable for ABS statistical needs when the business is simple in structure.

12 For more significant and diverse businesses where the ABN unit is not suitable for ABS statistical needs, the statistical unit used is the Type of Activity Unit (TAU). A TAU is comprised of one or more business entities, sub-entities or branches of a business entity within an Enterprise Group that can report production and employment data for similar economic activities. When a minimum set of data items is available, a TAU is created which covers all the operations within an industry subdivision (and the TAU is classified to the relevant subdivision of the Australian and New Zealand Standard Industrial Classification (ANZSIC)). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision and the TAU is classified to the predominant ANZSIC subdivision. TAUs may have operations in one or more states/territories.

SURVEY METHODOLOGY

13 The Survey is conducted monthly primarily by telephone interview although a small number of questionnaires are mailed to businesses. The businesses included in the survey are selected by random sample from a frame stratified by state, industry and business size. The survey uses annualised turnover as the measure of business size. For the ATO Maintained Population, the annualised turnover is based on the ATO's Business Activity Statement item Total sales and for the ABS Maintained Population a modelled annualised turnover is used. For stratification purposes the annualised turnover allocated to each business is not updated each quarter as to do so would result in increased volatility in the estimates.

14 Each quarter, some businesses in the sample are replaced, at random, by other businesses so that the reporting load can be spread across smaller retailers. This sample replacement occurs in the first month of each quarter which may increase the volatility of estimates between this month and the previous month especially at the state by industry subgroup level.

15 Generalised regression estimation methodology is used for estimation. For estimation purposes, the annualised turnover allocated to each business is updated each quarter.

16 Most businesses can provide turnover on a calendar month basis and this is how the data are presented. When businesses cannot provide turnover on a calendar month basis, the reported data and the period they relate to are used to estimate turnover for the calendar month.

17 Most retailers operate in a single state/territory. For this reason, estimates of turnover by state/territory are only collected from the larger retailers which are included in the survey each month. These retailers are asked to provide turnover for sales from each state/territory in which the business operates. Turnover for the smaller businesses

EXPLANATORY NOTES *continued*

SURVEY METHODOLOGY

continued

SEASONAL ADJUSTMENT AND TREND ESTIMATION

is allocated to the state of their mailing address as recorded on the ABS Business Register.

18 Seasonally adjusted estimates are derived by estimating and removing systematic calendar related effects from the original series. In the Retail trade series, these calendar related effects are known as:

- seasonal e.g. annual patterns in sales, such as increased spending in December as a result of Christmas
- trading day influences arising from weekly patterns in sales and the varying length of each month and the varying number of Sundays, Mondays, Tuesdays, etc. in each month
- an Easter proximity effect, which is caused when Easter, a moveable holiday, falls late in March or early in April
- a Father's Day effect, which is caused when the first Sunday in September falls in the first few days of the month and Father's Day shopping occurs in August.

19 Each of these influences is estimated by separate factors which, when combined, are referred to as the combined adjustment factors. The combined adjustment factors are based on observed patterns in the historical data. It is possible that with the introduction of ANZSIC 2006 from July 2009 the historical patterns may not be as relevant to some series. For example Watch and jewellery retailing moved from the Other retailing n.e.c industry subgroup to the Footwear and other personal accessory retailing industry subgroup under ANZSIC 2006. The seasonal patterns for other businesses in the Footwear and other personal accessory retailing industry subgroup appear to differ from watch and jewellery retailers. The combined adjustment factors will evolve over time to reflect any new seasonal or trading day patterns, although in this example, an estimate for this impact (seasonal break) has been implemented in the combined adjustment factors.

20 The following Retail trade series are directly seasonally adjusted:

- Australian turnover
- each state total
- each Australian industry subgroup total
- each state by industry subgroup.

21 A "two-dimensional reconciliation" methodology is used on the seasonally adjusted time series to force additivity - that is, to force the sum of fine-level (state by industry subgroup) estimates to equal the Australian, state and industry subgroup totals. The industry group totals are derived from the lower level estimates.

22 Quarterly seasonally adjusted series used in the compilation of the chain volume measures are the sum of their applicable monthly series.

23 Autoregressive integrated moving average (ARIMA) modelling can improve the revision properties of the seasonally adjusted and trend estimates. ARIMA modelling relies on the characteristics of the series being analysed to project future period data. The projected values are temporary, intermediate values, that are only used internally to improve the estimation of the seasonal factors. The projected data do not affect the original estimates and are discarded at the end of the seasonal adjustment process. The retail collection uses an individual ARIMA model for each of the industry totals and state totals. The ARIMA model is assessed as part of the annual reanalysis.

24 In the seasonal adjustment process, both the seasonal and trading day factors evolve over time to reflect changes in spending and trading patterns. Examples of this evolution include the slow move in spending from December to January; and, increased trading activity on weekends and public holidays. The Retail series uses a concurrent seasonal adjustment methodology to derive the combined adjustment factors. This means that data from the current month are used in estimating seasonal and trading day

EXPLANATORY NOTES *continued*

SEASONAL ADJUSTMENT AND TREND ESTIMATION *continued*

factors for the current and previous months. For more information see *Information paper: Introduction of Concurrent Seasonal Adjustment into the Retail Trade Series* (cat. no. 8514.0).

25 The seasonal and trading day factors are reviewed annually at a more detailed level than possible in the monthly processing cycle. The annual reanalysis can result in relatively higher revisions to the seasonally adjusted series than during normal monthly processing.

26 The seasonally adjusted estimates still reflect the sampling and non-sampling errors to which the original estimates are subject. This is why it is recommended that trend series be used with the seasonally adjusted series to analyse underlying month-to-month movements.

27 The trend estimates are derived by applying a 13-term Henderson moving average to the seasonally adjusted monthly series and a 7-term Henderson moving average to the seasonally adjusted quarterly series. The Henderson moving average is symmetric, but as the end of a time series is approached, asymmetric forms of the moving average have to be applied. The asymmetric moving averages have been tailored to suit the particular characteristics of individual series and enable trend estimates for recent periods to be produced. An end-weight parameter 2.0 of the asymmetric moving average is used to produce trend estimates for the Australia, State and Australian industry group totals. For the other series a standard end-weight parameter 3.5 of the asymmetric moving average is used. Estimates of the trend will be improved at the current end of the time series as additional observations become available. This improvement is due to the application of different asymmetric moving averages for the most recent six months for monthly series and three quarters for quarterly series. As a result of the improvement, most revisions to the trend estimates will be observed in the most recent six months or three quarters.

28 Trend estimates are used to analyse the underlying behaviour of the series over time. As a result of the introduction of The New Tax System, a break in the monthly trend series has been inserted between June and July 2000. Care should therefore be taken if comparisons span this period. For more details refer to the Appendix in the December 2000 issue of this publication.

29 For further information on seasonally adjusted and trend estimates, see:

- *Feature article: Use of ARIMA modelling to reduce revisions in the October 2004 issue of Australian Economic Indicators* (cat. no. 1350.0)
- *Information Paper: Introduction of Concurrent Seasonal Adjustment into the Retail Trade Series* (cat. no. 8514.0)
- *Information Paper: A Guide to Interpreting Time Series - Monitoring Trends, 2003* (cat. no. 1349.0)
- or contact the Director, Time Series Analysis on Canberra (02) 6252 6406 or by email at [<time.series.analysis@abs.gov.au>](mailto:time.series.analysis@abs.gov.au).

ANALYSING TREND ESTIMATES

30 The following terms may be used to describe month to month movements in the trend series:

- in decline - percentage change in trend estimate less than zero
- no change or flat - percentage change in the trend estimate equal to zero
- weak growth - percentage change in the trend estimate of 0.1 to 0.3%
- moderate growth - percentage change in the trend estimate of 0.4 to 0.7%
- strong growth - percentage change in the trend estimate greater than 0.7%.

CHAIN VOLUME MEASURES

31 Monthly current price estimates presented in this publication reflect both price and volume changes. However, the quarterly chain volume estimates measure changes in value after the direct effects of price changes have been eliminated and hence only reflect volume changes. The chain volume measures of retail turnover appearing in this

EXPLANATORY NOTES *continued*

CHAIN VOLUME MEASURES

continued

publication are annually reweighted chain Laspeyres indexes referenced to current price values in a chosen reference year. The reference year is advanced each September issue and is currently 2009-10. Each year's data in the Retail chain volume series are based on the prices of the previous year, except for the quarters of the 2011-12 financial year which will initially be based upon price data for the 2009-10 financial year. Comparability with previous years is achieved by linking (or chaining) the series together to form a continuous time series. Further information on the nature and concepts of chain volume measures is contained in the ABS publication Information Paper: Introduction of Chain Volume Measures in the Australian National Accounts (cat. no. 5248.0)

RELIABILITY OF ESTIMATES

32 There are two types of error possible in estimates of retail turnover: *Sampling error* which occurs because a sample, rather than the entire population, is surveyed. One measure of the likely difference resulting from not including all establishments in the survey is given by the standard error. Sampling error may be influenced by the sample replacement that occurs in the first month of each quarter. This may increase the volatility of estimates between this month and the previous month especially at the state by industry subgroup level. *Non sampling error* which arises from inaccuracies in collecting, recording and processing the data. The most significant of these errors are: misreporting of data items; deficiencies in coverage; non-response; and processing errors. Every effort is made to minimise reporting error by the careful design of questionnaires, intensive training and supervision of interviewers, and efficient data processing procedures.

STANDARD ERRORS

33 Seasonally adjusted and trend estimates and chain volume measures are also subject to sampling variability. For seasonally adjusted estimates, the standard errors are approximately the same as for the original estimates. For trend estimates, the standard errors are likely to be smaller. For quarterly chain volume measures, the standard errors may be up to 10% higher than those for the corresponding current price estimates because of the sampling variability contained in the prices data used to deflate the current price estimates.

34 Estimates, in original terms, are available from the Downloads tab of this issue on the ABS website. Estimates that have an estimated relative standard error (RSE) between 10% and 25% are annotated with the symbol '^'. These estimates should be used with caution as they are subject to sampling variability too high for some purposes. Estimates with a RSE between 25% and 50% are annotated with the symbol '*', indicating that the estimates should be used with caution as they are subject to sampling variability too high for most practical purposes. Estimates with a RSE greater than 50% are annotated with the symbol '**' indicating that the sampling variability causes the estimates to be considered too unreliable for general use.

35 To further assist users in assessing the reliability of estimates, key data series have been given a grading of A to B. Where:

- A represents a relative standard error on level of less than 2%. The published estimates are highly reliable for movement analysis.
- B represents a relative standard error on level between 2% and 5%, meaning the estimates are reliable for movement analysis purposes.

36 The tables below provide an indicator of reliability for the estimates in original terms. The reliability indicator is based on an average RSE derived over four years.

EXPLANATORY NOTES *continued*

STANDARD ERRORS *continued*

RELATIVE STANDARD ERRORS BY INDUSTRY GROUP

| | <i>Food retailing</i> | <i>Household goods retailing</i> | <i>Clothing, footwear and personal accessory retailing</i> | <i>Department stores</i> | <i>Other retailing</i> | <i>Cafes, restaurants and takeaway food services</i> | <i>Total</i> |
|---------|---------------------------|--|--|------------------------------|----------------------------|--|--------------|
| RSE (%) | A | A | B | A | B | B | A |

RELATIVE STANDARD ERRORS BY STATE

| | <i>NSW</i> | <i>Vic.</i> | <i>Qld</i> | <i>SA</i> | <i>WA</i> | <i>Tas.</i> | <i>NT</i> | <i>ACT</i> | <i>Aust.</i> |
|---------|------------|-------------|------------|-----------|-----------|-------------|-----------|------------|--------------|
| RSE (%) | A | A | A | A | A | B | A | A | A |

37 Standard errors for the Australian estimates (original data) for August 2012 contained in this publication are:

| <i>Data Series</i> | <i>Estimate</i> | <i>Standard Error</i> |
|-----------------------------------|-----------------|---------------------------|
| Level of retail turnover (\$m) | 21 246.6 | 163.6 |
| Change from preceding month (\$m) | 382.5 | 60.2 |
| % change from preceding month (%) | 1.8 | 0.3 |

RELIABILITY OF TREND
ESTIMATES

38 The trending process dampens the volatility in the original and seasonally adjusted estimates. However, trend estimates are subject to revisions as future observations become available.

COMPARABILITY WITH OTHER
ABS ESTIMATES

39 The estimates of Retail turnover in this publication will differ from sales of goods and services by the Retail trade industry in *Business Indicators, Australia* (cat. no. 5676.0). This publication presents monthly estimates of the value of turnover of retail businesses, is sourced from the *Retail Business Survey*, includes the Goods and Services Tax and includes some retail trade businesses classified to a non-retail trade industry but which have significant retail trade activity. Estimates for sales of goods and services in *Business Indicators, Australia* are sourced from the economy wide *Quarterly Business Indicators Survey* and exclude the Goods and Services Tax. In addition, the *Retail Business Survey* does not include all classes in the ANZSIC Retail trade Division but includes Cafes, restaurants and takeaway food services from the Accommodation and Food Services Division. The use of different samples in the two surveys also contributes to differences.

40 Quarterly Retail trade chain volume estimates contribute to the quarterly national accounts in two main areas. First, they are an indicator of Household Final Consumption Expenditure in the expenditure side of Gross domestic product. Historically Retail trade estimates contribute about 55-60% of Household Final Consumption Expenditure but this relative contribution can vary from quarter to quarter as household expenditure shifts between retail trade and areas like personal services, travel and leisure activities which are outside the scope of retail trade. Second, Retail trade estimates, along with estimates from *Business Indicators, Australia*, contribute to estimates for the Retail trade Division in the production side of Gross domestic product.

EXPLANATORY NOTES *continued*

RELATED PUBLICATIONS

41 Current publications and other products released by the ABS are available from the Statistics View. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead. Users may also wish to refer to the following publications:

- *Australian National Accounts: National Income, Expenditure and Product* (cat. no. 5206.0)
- *Australian Industry* (cat. no. 8155.0)
- *Business Indicators, Australia* (cat. no. 5676.0).

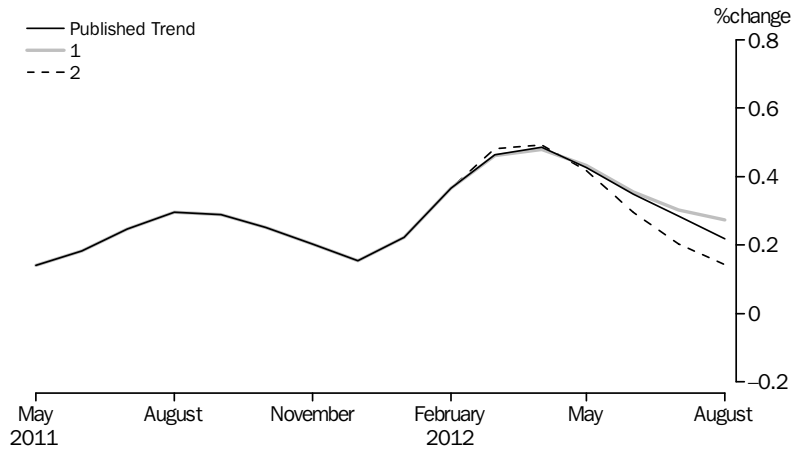
42 As well as the statistics included in this and related publications, the ABS may have other relevant data available. Inquires should be made to the National Information and Referral Service on 1300 135 070.

TECHNICAL NOTE REVISIONS TO TREND ESTIMATES

EFFECT OF NEW SEASONALLY ADJUSTED ESTIMATES ON TREND ESTIMATES

1 As original estimates become available each month, the estimates of the seasonal pattern and trend series are updated to include the most up to date information. This means that most seasonally adjusted and trend estimates are likely to be revised when the next month's data become available. To assist readers of this publication in analysing retail trends, the 'what-if' chart presents the approximate effect that two possible future scenarios would have on the current and previous trend movement estimates of total retail turnover for Australia. Note that the 'what-if' graph gives an idea of possible trend revisions based on future seasonally adjusted estimates and does not account for revised seasonally adjusted estimates based on additional original data. ABS research shows that approximately 75% of the total revision to the trend estimate at the current end of the series is due to the use of different asymmetric moving averages when a new data point becomes available. For more information see the trend estimates section of the Explanatory Notes. The two future scenarios considered are based on the 25th and 75th percentiles of seasonally adjusted movements calculated from the historical series. The two scenarios are as follows:

- Scenario 1. Next month's seasonally adjusted estimate of retail turnover rises 0.91%.
- Scenario 2. Next month's seasonally adjusted estimate of retail turnover falls 0.07%.



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