



# NOTES

## FORTHCOMING ISSUES

<i>ISSUE</i>	<i>RELEASE DATE</i>
September 2015	4 November 2015
October 2015	4 December 2015
November 2015	8 January 2016
December 2015	5 February 2016
January 2016	4 March 2016
February 2016	4 April 2016



## CHANGES IN THIS ISSUE

This issue includes updated online retail turnover estimates for the August 2015 reference month. These estimates are provided and explained within the appendix section of this publication.

## REVISIONS

There are no revisions to the original estimates. Revisions to seasonally adjusted estimates are due to the concurrent methodology for deriving seasonal factors. For information on seasonal adjustment and trend estimation please refer to the explanatory notes of this publication.

## 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:

- Monthly retail turnover by state and 15 industry subgroups in trend, seasonally adjusted and original terms
- Monthly retail turnover completely enumerated and sample sectors, by six industry groups and also by state in original terms
- Monthly retail turnover completely enumerated sector, total level in trend, seasonally adjusted and original terms
- Quarterly retail chain volume measures by six industry groups and also by state in trend, seasonally adjusted and original terms
- Quarterly retail turnover per capita in trend, seasonally adjusted and original terms
- Quarterly sales to households by selected service industries in 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

David W. Kalisch  
Australian Statistician

# CONTENTS

page

## COMMENTARY

Analysis - Total Retail . . . . .	4
Analysis by Industry . . . . .	6

## TABLES

### MONTHLY ESTIMATES

<b>1</b> RETAIL TURNOVER, By Industry Group . . . . .	8
<b>2</b> RETAIL TURNOVER, By Industry Group - Percentage change from previous month . . . . .	9
<b>3</b> RETAIL TURNOVER, By State . . . . .	10
<b>4</b> RETAIL TURNOVER, By State - Percentage change from previous month . . . . .	11

## ADDITIONAL INFORMATION

Explanatory Notes . . . . .	12
Appendix 1 - Experimental Estimates of Online Retail Turnover . . . . .	20
Appendix 2 - Experimental Estimates of Consumer Sales . . . . .	24
Technical Note - Revisions to Trend Estimates . . . . .	28

## ANALYSIS - TOTAL RETAIL

### TOTAL RETAIL - MONTHLY

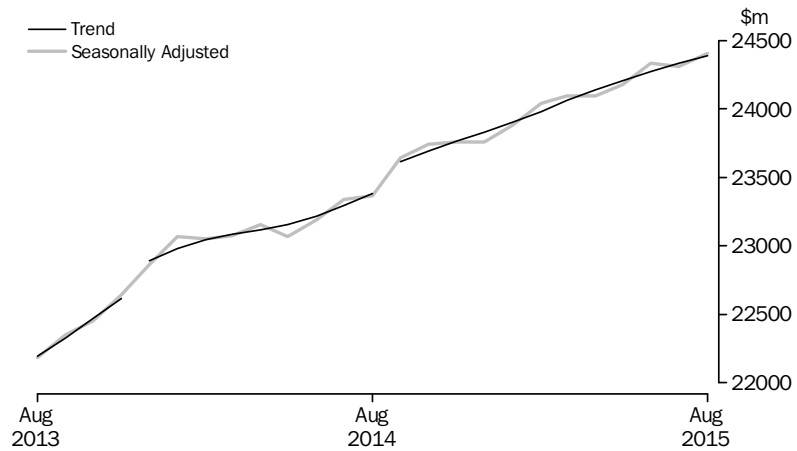
The chart below shows the trend series and seasonally adjusted series to August 2015.

In current prices, the trend estimate for Australian turnover rose 0.2% in August 2015 following a rise of 0.3% in July 2015 and a rise of 0.3% in June 2015.

The seasonally adjusted estimate for Australian turnover rose 0.4% in August 2015 following a fall of 0.1% in July 2015 and a rise of 0.6% in June 2015.

The original estimate for Australian turnover fell 0.8% in August 2015. The original estimate for chains and other larger retailers fell 1.4% in August 2015. The original estimate for smaller retailers rose 0.4% in August 2015.

### RETAIL TURNOVER, Australia



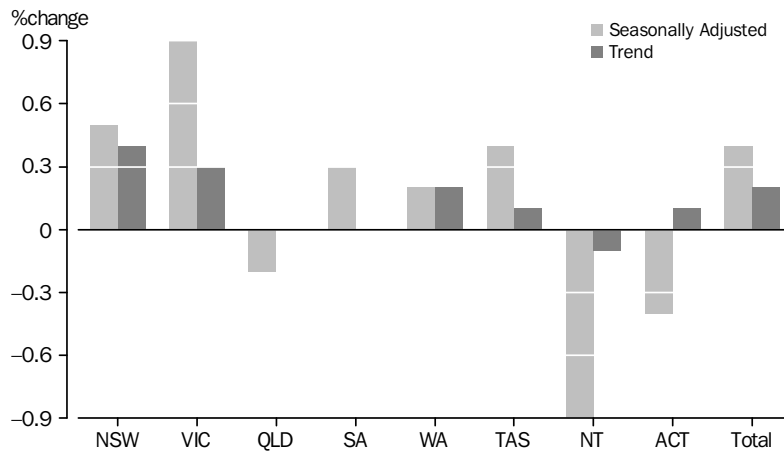
## ANALYSIS - TOTAL RETAIL *continued*

### TOTAL RETAIL - BY STATE

The following states and territories rose in trend terms in August 2015: New South Wales (0.4%), Victoria (0.3%), Western Australia (0.2%), Tasmania (0.1%) and the Australian Capital Territory (0.1%). Queensland (0.0%) and South Australia (0.0%) were relatively unchanged. The Northern Territory (-0.1%) fell in trend terms in August 2015.

In seasonally adjusted terms there were rises in Victoria (0.9%), New South Wales (0.5%), Western Australia (0.2%), South Australia (0.3%) and Tasmania (0.4%). There were falls in Queensland (-0.2%), the Northern Territory (-0.9%) and the Australian Capital Territory (-0.4%).

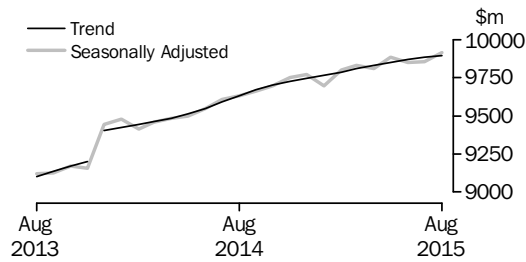
RETAIL TURNOVER, States and Territories



## ANALYSIS BY INDUSTRY

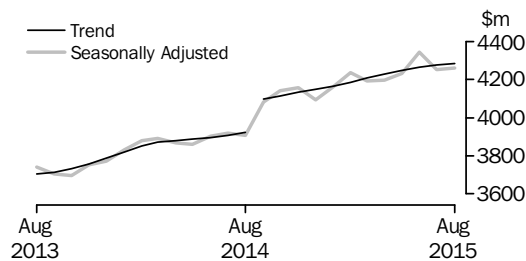
### FOOD RETAILING

In current prices, the trend estimate for Food retailing rose 0.1% in August 2015. The seasonally adjusted estimate rose 0.6%. By industry subgroup, the trend estimate rose for Other specialised food retailing (0.3%) and Liquor retailing (0.2%) and was relatively unchanged for Supermarket and grocery stores (0.0%). The seasonally adjusted estimate rose for Supermarket and grocery stores (0.6%), Liquor retailing (0.8%) and Other specialised food retailing (0.4%).



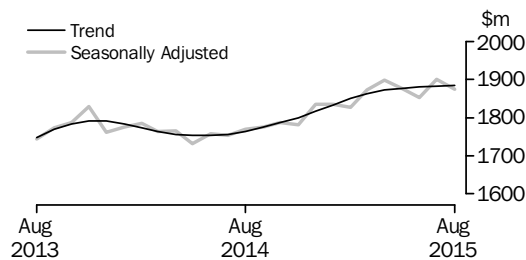
### HOUSEHOLD GOODS RETAILING

In current prices, the trend estimate for Household goods retailing rose 0.2% in August 2015. The seasonally adjusted estimate rose 0.2%. By industry subgroup, the trend estimate rose for Hardware, building and garden supplies retailing (0.3%) and Furniture, floor coverings, houseware and textile goods retailing (0.3%) and fell for Electrical and electronic goods retailing (-0.2%). The seasonally adjusted estimate rose for Electrical and electronic goods retailing (0.8%) and fell for Hardware, building and garden supplies retailing (-0.2%) and Furniture, floor coverings, houseware and textile goods retailing (-0.1%).



### CLOTHING, FOOTWEAR AND PERSONAL ACCESSORY RETAILING

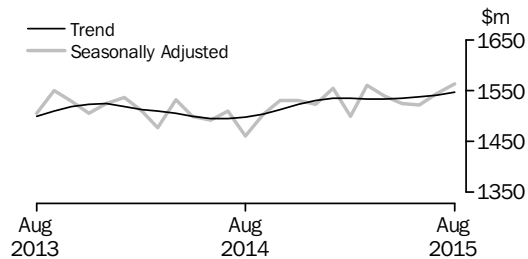
In current prices, the trend estimate for Clothing, footwear and personal accessory retailing rose 0.1% in August 2015. The seasonally adjusted estimate fell 1.4%. By industry subgroup, the trend estimate rose for Footwear and other personal accessory retailing (0.5%) and fell for Clothing retailing (-0.2%). The seasonally adjusted estimate fell for Clothing retailing (-1.6%) and Footwear and other personal accessory retailing (-1.1%).



## ANALYSIS BY INDUSTRY *continued*

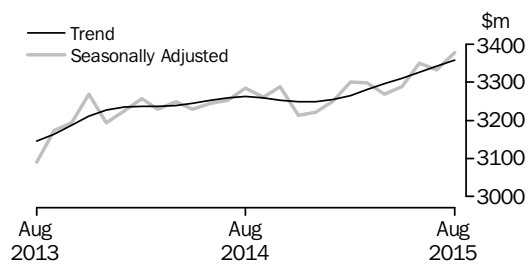
### DEPARTMENT STORES

In current prices, the trend estimate for Department stores rose 0.4% in August 2015. The seasonally adjusted estimate rose 1.3%.



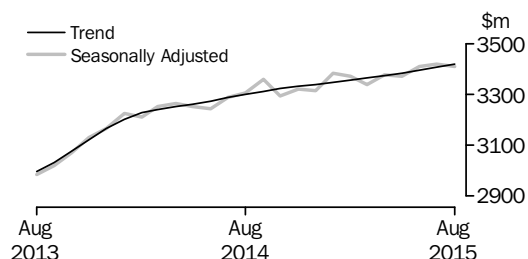
### OTHER RETAILING

In current prices, the trend estimate for Other retailing rose 0.5% in August 2015. The seasonally adjusted estimate rose 1.3%. By industry subgroup, the trend estimate rose for Other retailing n.e.c. (0.6%) and Pharmaceutical, cosmetic and toiletry goods retailing (0.5%) and fell for Newspaper and book retailing (-0.7%) and Other recreational goods retailing (-0.1%). The seasonally adjusted estimate rose for Other retailing n.e.c (1.6%), Pharmaceutical, cosmetic and toiletry goods retailing (1.0%), Other recreational goods retailing (2.3%) and Newspaper and book retailing (0.5%).



### CAFES, RESTAURANTS AND TAKEAWAY FOOD SERVICES

In current prices, the trend estimate for Cafes, restaurants and takeaway food services rose 0.4% in August 2015. The seasonally adjusted estimate fell 0.3%. By industry subgroup, the trend estimate rose for Takeaway food services (0.4%) and Cafes, restaurants and catering services (0.2%). The seasonally adjusted estimate fell for Takeaway food services (-1.0%) and rose for Cafes, restaurants and catering services (0.2%).



## 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							
2014							
June	8 977.5	3 844.1	1 680.8	1 461.6	2 991.3	3 067.5	22 022.8
July	9 393.3	3 878.1	1 649.0	1 501.6	3 136.4	3 315.8	22 874.2
August	9 582.4	3 846.1	1 604.1	1 254.2	3 213.4	3 350.7	22 850.8
September	9 353.8	4 033.2	1 691.2	1 356.4	3 210.7	3 360.4	23 005.8
October	9 964.4	4 278.7	1 791.5	1 478.7	3 362.2	3 401.6	24 277.1
November	9 911.1	4 421.3	1 821.0	1 687.7	3 517.8	3 374.9	24 733.7
December	11 271.6	5 357.5	2 907.0	2 756.9	4 376.1	3 692.7	30 361.7
2015							
January	9 955.4	4 157.9	1 796.2	1 471.2	3 082.3	3 391.3	23 854.4
February	9 020.0	3 682.4	1 456.2	1 053.8	2 924.9	3 027.5	21 164.8
March	9 926.5	3 983.5	1 702.0	1 367.2	3 163.4	3 361.9	23 504.4
April	9 538.0	3 713.9	1 793.4	1 442.2	2 974.8	3 266.5	22 728.8
May	9 707.1	3 976.9	1 891.2	1 428.7	3 126.2	3 314.0	23 444.1
June	9 217.8	4 319.2	1 774.7	1 480.9	3 149.8	3 257.5	23 199.9
July	9 718.0	4 186.1	1 788.5	1 540.9	3 238.8	3 445.3	23 917.5
August	9 834.8	4 159.8	1 697.1	1 331.9	3 276.4	3 421.1	23 721.1
SEASONALLY ADJUSTED							
2014							
June	9 545.7	3 905.2	1 758.0	1 492.6	3 245.8	3 242.7	23 190.0
July	9 607.7	3 920.9	1 753.9	1 510.5	3 252.3	3 289.6	23 334.9
August	9 633.9	3 906.7	1 770.4	1 460.8	3 284.4	3 307.2	23 363.4
September	9 662.0	4 081.4	1 774.8	1 504.6	3 260.3	3 358.1	23 641.2
October	9 699.1	4 140.3	1 787.8	1 530.5	3 289.3	3 293.2	23 740.3
November	9 753.0	4 157.9	1 782.0	1 530.2	3 212.7	3 321.0	23 756.8
December	9 769.7	4 095.6	1 834.1	1 522.8	3 221.1	3 316.1	23 759.4
2015							
January	9 696.6	4 159.6	1 835.2	1 554.8	3 250.6	3 383.8	23 880.6
February	9 799.4	4 238.6	1 827.1	1 499.6	3 300.4	3 373.1	24 038.2
March	9 828.7	4 193.9	1 873.4	1 560.3	3 298.6	3 337.9	24 092.8
April	9 812.9	4 197.5	1 899.1	1 539.6	3 269.2	3 376.2	24 094.4
May	9 885.4	4 234.0	1 875.9	1 524.2	3 287.9	3 371.0	24 178.4
June	9 852.3	4 345.1	1 852.8	1 521.5	3 350.4	3 409.4	24 331.5
July	9 856.9	4 253.2	1 901.4	1 543.7	3 332.6	3 420.2	24 308.0
August	9 916.5	4 261.5	1 874.3	1 564.2	3 377.3	3 410.7	24 404.4
TREND							
2014							
June	9 547.8	3 894.8	1 753.0	1 495.4	3 252.5	3 274.2	23 218.0
July	9 591.2	3 907.0	1 755.9	1 494.6	3 259.0	3 287.5	23 296.1
August	9 633.9	3 921.2	1 763.8	1 498.1	3 261.8	3 300.1	23 381.4
September	9 670.7	(a) 4 098.0	1 774.6	1 504.6	3 259.0	3 312.0	(a) 23 615.9
October	9 701.4	4 114.5	1 786.4	1 513.6	3 253.5	3 323.0	23 691.3
November	9 725.1	4 131.7	1 800.0	1 523.5	3 249.7	3 332.2	23 762.1
December	9 745.3	4 148.1	1 816.2	1 531.2	3 249.3	3 339.7	23 830.1
2015							
January	9 765.9	4 165.9	1 833.7	1 535.3	3 254.8	3 347.1	23 903.1
February	9 787.0	4 186.2	1 850.2	1 535.5	3 265.5	3 356.0	23 980.6
March	9 808.1	4 208.1	1 863.3	1 533.7	3 280.1	3 365.8	24 059.2
April	9 829.4	4 230.3	1 871.9	1 533.6	3 295.6	3 375.0	24 135.8
May	9 849.7	4 249.7	1 877.0	1 534.9	3 310.2	3 384.7	24 206.1
June	9 867.5	4 264.9	1 880.4	1 537.6	3 325.8	3 395.8	24 272.0
July	9 884.6	4 276.6	1 883.0	1 541.3	3 342.5	3 406.5	24 334.7
August	9 894.6	4 283.9	1 884.8	1 547.6	3 357.9	3 419.0	24 389.1

(a) Possible break in series. See the 'Trend Estimates' section of the Explanatory Notes.



## 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							
<b>2014</b>							
June	-4.4	5.2	-5.6	3.5	-4.3	-5.0	-2.5
July	4.6	0.9	-1.9	2.7	4.9	8.1	3.9
August	2.0	-0.8	-2.7	-16.5	2.5	1.1	-0.1
September	-2.4	4.9	5.4	8.2	-0.1	0.3	0.7
October	6.5	6.1	5.9	9.0	4.7	1.2	5.5
November	-0.5	3.3	1.6	14.1	4.6	-0.8	1.9
December	13.7	21.2	59.6	63.3	24.4	9.4	22.8
<b>2015</b>							
January	-11.7	-22.4	-38.2	-46.6	-29.6	-8.2	-21.4
February	-9.4	-11.4	-18.9	-28.4	-5.1	-10.7	-11.3
March	10.1	8.2	16.9	29.7	8.2	11.0	11.1
April	-3.9	-6.8	5.4	5.5	-6.0	-2.8	-3.3
May	1.8	7.1	5.5	-0.9	5.1	1.5	3.1
June	-5.0	8.6	-6.2	3.6	0.8	-1.7	-1.0
July	5.4	-3.1	0.8	4.1	2.8	5.8	3.1
August	1.2	-0.6	-5.1	-13.6	1.2	-0.7	-0.8
SEASONALLY ADJUSTED							
<b>2014</b>							
June	0.5	1.2	1.6	-0.5	0.5	-0.3	0.5
July	0.6	0.4	-0.2	1.2	0.2	1.4	0.6
August	0.3	-0.4	0.9	-3.3	1.0	0.5	0.1
September	0.3	4.5	0.3	3.0	-0.7	1.5	1.2
October	0.4	1.4	0.7	1.7	0.9	-1.9	0.4
November	0.6	0.4	-0.3	0.0	-2.3	0.8	0.1
December	0.2	-1.5	2.9	-0.5	0.3	-0.1	0.0
<b>2015</b>							
January	-0.7	1.6	0.1	2.1	0.9	2.0	0.5
February	1.1	1.9	-0.4	-3.6	1.5	-0.3	0.7
March	0.3	-1.1	2.5	4.0	-0.1	-1.0	0.2
April	-0.2	0.1	1.4	-1.3	-0.9	1.1	0.0
May	0.7	0.9	-1.2	-1.0	0.6	-0.2	0.3
June	-0.3	2.6	-1.2	-0.2	1.9	1.1	0.6
July	0.0	-2.1	2.6	1.5	-0.5	0.3	-0.1
August	0.6	0.2	-1.4	1.3	1.3	-0.3	0.4
TREND							
<b>2014</b>							
June	0.4	0.2	0.0	-0.3	0.2	0.4	0.3
July	0.5	0.3	0.2	-0.1	0.2	0.4	0.3
August	0.4	0.4	0.4	0.2	0.1	0.4	0.4
September	0.4	4.5	0.6	0.4	-0.1	0.4	1.0
October	0.3	0.4	0.7	0.6	-0.2	0.3	0.3
November	0.2	0.4	0.8	0.7	-0.1	0.3	0.3
December	0.2	0.4	0.9	0.5	0.0	0.2	0.3
<b>2015</b>							
January	0.2	0.4	1.0	0.3	0.2	0.2	0.3
February	0.2	0.5	0.9	0.0	0.3	0.3	0.3
March	0.2	0.5	0.7	-0.1	0.4	0.3	0.3
April	0.2	0.5	0.5	0.0	0.5	0.3	0.3
May	0.2	0.5	0.3	0.1	0.4	0.3	0.3
June	0.2	0.4	0.2	0.2	0.5	0.3	0.3
July	0.2	0.3	0.1	0.2	0.5	0.3	0.3
August	0.1	0.2	0.1	0.4	0.5	0.4	0.2

## RETAIL TURNOVER, By State

Month	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
ORIGINAL									
<b>2014</b>									
June	6 920.2	5 452.6	4 576.7	1 406.5	2 582.0	432.5	263.6	388.6	22 022.8
July	7 164.9	5 602.0	4 833.9	1 487.3	2 656.6	450.4	280.0	399.1	22 874.2
August	7 120.3	5 671.8	4 781.8	1 469.9	2 677.3	447.7	278.9	403.1	22 850.8
September	7 314.2	5 673.9	4 758.8	1 479.5	2 663.7	442.8	263.4	409.5	23 005.8
October	7 742.5	6 007.0	4 937.2	1 586.6	2 847.2	465.9	261.6	429.1	24 277.1
November	8 002.1	6 134.3	4 928.2	1 619.1	2 863.8	480.8	254.1	451.4	24 733.7
December	9 805.5	7 626.5	6 037.0	1 964.4	3 510.7	593.1	281.9	542.6	30 361.7
<b>2015</b>									
January	7 641.2	5 884.0	4 924.8	1 542.2	2 743.7	479.1	229.1	410.3	23 854.4
February	6 707.0	5 260.9	4 288.9	1 379.4	2 486.5	439.2	217.8	385.1	21 164.8
March	7 430.6	5 864.1	4 792.8	1 558.3	2 715.0	478.8	241.4	423.4	23 504.4
April	7 223.9	5 701.9	4 603.3	1 486.9	2 617.1	447.3	238.5	410.0	22 728.8
May	7 448.5	5 812.4	4 780.5	1 530.2	2 734.2	456.5	253.1	428.7	23 444.1
June	7 407.5	5 749.5	4 758.6	1 503.5	2 656.2	442.4	265.2	417.0	23 199.9
July	7 545.3	5 885.5	5 017.4	1 552.8	2 746.1	466.9	286.0	417.4	23 917.5
August	7 510.4	5 908.1	4 904.7	1 519.6	2 728.0	456.1	277.8	416.4	23 721.1
SEASONALLY ADJUSTED									
<b>2014</b>									
June	7 314.5	5 741.7	4 785.3	1 494.1	2 723.6	467.5	258.3	405.0	23 190.0
July	7 395.1	5 784.7	4 792.3	1 508.6	2 722.8	463.9	253.1	414.4	23 334.9
August	7 390.3	5 816.6	4 779.7	1 509.5	2 731.2	463.4	257.3	415.4	23 363.4
September	7 525.8	5 888.1	4 796.9	1 527.8	2 756.1	467.8	255.1	423.6	23 641.2
October	7 592.0	5 883.6	4 818.6	1 548.8	2 755.8	462.9	253.6	424.9	23 740.3
November	7 577.5	5 885.2	4 824.4	1 554.2	2 760.3	468.4	257.8	428.9	23 756.8
December	7 557.2	5 880.2	4 856.5	1 546.9	2 772.0	460.4	256.8	429.4	23 759.4
<b>2015</b>									
January	7 578.5	5 923.4	4 912.9	1 549.6	2 771.9	471.6	251.9	420.9	23 880.6
February	7 626.7	5 966.5	4 923.9	1 568.5	2 792.7	474.3	257.0	428.5	24 038.2
March	7 644.4	5 980.5	4 960.4	1 570.9	2 779.5	476.3	254.9	425.9	24 092.8
April	7 662.1	6 001.0	4 925.3	1 573.3	2 774.3	472.5	255.6	430.4	24 094.4
May	7 726.7	5 999.9	4 929.0	1 573.4	2 784.3	475.1	255.7	434.2	24 178.4
June	7 799.7	6 050.1	4 939.1	1 583.8	2 791.0	475.5	257.4	434.7	24 331.5
July	7 779.4	6 039.1	4 951.9	1 570.5	2 800.5	475.4	257.5	433.7	24 308.0
August	7 819.6	6 095.3	4 942.5	1 575.7	2 807.0	477.2	255.2	432.1	24 404.4
TREND									
<b>2014</b>									
June	7 335.5	5 759.6	4 785.0	1 496.7	2 712.7	463.5	256.9	408.4	23 218.0
July	7 374.2	5 781.9	4 781.2	1 504.6	2 721.8	464.2	256.4	411.9	23 296.1
August	7 418.0	5 803.5	4 780.2	1 513.5	2 730.1	463.8	255.9	416.1	23 381.4
September	(a) 7 514.4	(a) 5 866.6	(a) 4 806.3	(a) 1 532.5	(a) 2 752.6	(a) 466.0	(a) 255.6	(a) 422.1	(a) 23 615.9
October	7 547.3	5 880.5	4 818.6	1 540.2	2 758.8	465.5	255.4	424.9	23 691.3
November	7 568.9	5 893.5	4 840.1	1 547.1	2 764.9	465.9	255.4	426.3	23 762.1
December	7 582.4	5 907.4	4 867.4	1 553.0	2 770.5	467.4	255.4	426.6	23 830.1
<b>2015</b>									
January	7 596.3	5 926.4	4 895.3	1 558.5	2 775.2	469.5	255.3	426.7	23 903.1
February	7 616.8	5 949.2	4 918.2	1 563.8	2 778.4	471.7	255.3	427.3	23 980.6
March	7 646.6	5 973.5	4 932.3	1 568.4	2 780.9	473.5	255.5	428.4	24 059.2
April	7 684.7	5 996.4	4 938.3	1 572.3	2 783.4	474.6	255.8	430.1	24 135.8
May	7 723.8	6 017.1	4 940.1	1 575.0	2 786.9	475.2	256.2	431.9	24 206.1
June	7 760.2	6 037.1	4 941.5	1 576.4	2 791.5	475.6	256.4	433.2	24 272.0
July	7 794.1	6 056.9	4 943.0	1 577.2	2 796.8	475.9	256.7	434.2	24 334.7
August	7 824.1	6 075.2	4 944.3	1 576.7	2 801.5	476.3	256.5	434.5	24 389.1

(a) Possible break in series. See the 'Trend Estimates' section of the Explanatory Notes.

## RETAIL TURNOVER, By State—Percentage change from previous month

	<i>New South Wales</i>	<i>Victoria</i>	<i>Queensland</i>	<i>South Australia</i>	<i>Western Australia</i>	<i>Tasmania</i>	<i>Northern Territory</i>	<i>Australian Capital Territory</i>	<i>Australia</i>
<i>Month</i>	%	%	%	%	%	%	%	%	%
ORIGINAL									
<b>2014</b>									
June	-2.1	-2.4	-2.4	-3.8	-3.4	-3.1	1.2	-3.0	-2.5
July	3.5	2.7	5.6	5.7	2.9	4.1	6.2	2.7	3.9
August	-0.6	1.2	-1.1	-1.2	0.8	-0.6	-0.4	1.0	-0.1
September	2.7	0.0	-0.5	0.7	-0.5	-1.1	-5.6	1.6	0.7
October	5.9	5.9	3.7	7.2	6.9	5.2	-0.7	4.8	5.5
November	3.4	2.1	-0.2	2.0	0.6	3.2	-2.9	5.2	1.9
December	22.5	24.3	22.5	21.3	22.6	23.4	10.9	20.2	22.8
<b>2015</b>									
January	-22.1	-22.8	-18.4	-21.5	-21.8	-19.2	-18.7	-24.4	-21.4
February	-12.2	-10.6	-12.9	-10.6	-9.4	-8.3	-4.9	-6.1	-11.3
March	10.8	11.5	11.7	13.0	9.2	9.0	10.8	10.0	11.1
April	-2.8	-2.8	-4.0	-4.6	-3.6	-6.6	-1.2	-3.2	-3.3
May	3.1	1.9	3.8	2.9	4.5	2.1	6.1	4.6	3.1
June	-0.5	-1.1	-0.5	-1.7	-2.9	-3.1	4.8	-2.7	-1.0
July	1.9	2.4	5.4	3.3	3.4	5.5	7.9	0.1	3.1
August	-0.5	0.4	-2.2	-2.1	-0.7	-2.3	-2.9	-0.3	-0.8
SEASONALLY ADJUSTED									
<b>2014</b>									
June	0.7	0.5	0.1	0.1	1.1	1.6	-0.3	-0.1	0.5
July	1.1	0.7	0.1	1.0	0.0	-0.8	-2.0	2.3	0.6
August	-0.1	0.6	-0.3	0.1	0.3	-0.1	1.7	0.2	0.1
September	1.8	1.2	0.4	1.2	0.9	1.0	-0.9	2.0	1.2
October	0.9	-0.1	0.5	1.4	0.0	-1.1	-0.6	0.3	0.4
November	-0.2	0.0	0.1	0.3	0.2	1.2	1.6	0.9	0.1
December	-0.3	-0.1	0.7	-0.5	0.4	-1.7	-0.4	0.1	0.0
<b>2015</b>									
January	0.3	0.7	1.2	0.2	0.0	2.4	-1.9	-2.0	0.5
February	0.6	0.7	0.2	1.2	0.7	0.6	2.1	1.8	0.7
March	0.2	0.2	0.7	0.2	-0.5	0.4	-0.8	-0.6	0.2
April	0.2	0.3	-0.7	0.2	-0.2	-0.8	0.3	1.0	0.0
May	0.8	0.0	0.1	0.0	0.4	0.6	0.0	0.9	0.3
June	0.9	0.8	0.2	0.7	0.2	0.1	0.7	0.1	0.6
July	-0.3	-0.2	0.3	-0.8	0.3	0.0	0.0	-0.2	-0.1
August	0.5	0.9	-0.2	0.3	0.2	0.4	-0.9	-0.4	0.4
TREND									
<b>2014</b>									
June	0.4	0.3	-0.1	0.4	0.3	0.3	-0.2	0.4	0.3
July	0.5	0.4	-0.1	0.5	0.3	0.1	-0.2	0.9	0.3
August	0.6	0.4	0.0	0.6	0.3	-0.1	-0.2	1.0	0.4
September	1.3	1.1	0.5	1.3	0.8	0.5	-0.1	1.4	1.0
October	0.4	0.2	0.3	0.5	0.2	-0.1	-0.1	0.7	0.3
November	0.3	0.2	0.4	0.4	0.2	0.1	0.0	0.3	0.3
December	0.2	0.2	0.6	0.4	0.2	0.3	0.0	0.1	0.3
<b>2015</b>									
January	0.2	0.3	0.6	0.4	0.2	0.5	0.0	0.0	0.3
February	0.3	0.4	0.5	0.3	0.1	0.5	0.0	0.1	0.3
March	0.4	0.4	0.3	0.3	0.1	0.4	0.1	0.3	0.3
April	0.5	0.4	0.1	0.3	0.1	0.2	0.1	0.4	0.3
May	0.5	0.3	0.0	0.2	0.1	0.1	0.2	0.4	0.3
June	0.5	0.3	0.0	0.1	0.2	0.1	0.1	0.3	0.3
July	0.4	0.3	0.0	0.1	0.2	0.1	0.1	0.2	0.3
August	0.4	0.3	0.0	0.0	0.2	0.1	-0.1	0.1	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 2,700 'smaller' businesses is selected. The 'large' business' contribution of approximately 64% 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 based on the ABS Business Register to describe the characteristics of businesses and the structural relationships between related businesses. Within large and diverse business groups, the units model is used to define reporting units that can provide data to the ABS at suitable levels of detail. In mid 2002, the ABS commenced sourcing its register information from the Australian Business Register and at that time changed its business register to a two population model. The two populations comprise what is called the Profiled Population and the Non-Profiled Population. The main distinction between businesses in the two populations relates to the complexity of the business structure and the degree of intervention required to reflect the business structure for statistical purposes.

### NON-PROFILED POPULATION

**11** The majority of businesses included on the ABS Business Register are in the Non-Profiled Population. Most of these businesses are understood to have simple structures. For these businesses, the ABS is able to use the ABN as the basis for a statistical unit. One ABN equates to one statistical unit.

### PROFILED POPULATION

**12** For a small number of businesses, the ABN unit is not suitable for ABS economic statistics purposes and the ABS maintains its own units structure through direct contact with businesses. These businesses constitute the Profiled Population. This population consists typically of large or complex groups of businesses. The statistical units model below caters for such businesses:

- *Enterprise group*: This is a unit covering all the operations in Australia of one or more legal entities under common ownership and/or control. It covers all the operations in Australia of legal entities which are related in terms of the current Corporations Law (as amended by the Corporations Legislation Amendment Act 1991), including legal entities such as companies, trusts and partnerships. Majority ownership is not required for control to be exercised.
- *Enterprise*: The enterprise is an institutional unit comprising:
  - a single legal entity or business entity, or
  - more than one legal entity or business entity within the same enterprise group and in the same institutional subsector (i.e. they are all classified to a single Standard Institutional Sector Classification of Australia (SISCA) subsector).
- *Type of activity unit (TAU)*: The 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 ANZSIC). Where a business cannot supply adequate data for each industry, a TAU is formed which contains activity in more than one industry subdivision.

### 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 Non-Profiled Population, the annualised turnover is based on the ATO's Business Activity Statement item Total Sales and for the Profiled Population a modelled annualised turnover is used. For stratification purposes the annualised turnover allocated to each business is updated quarterly with the most recent Business Activity Statement (BAS) information.

## EXPLANATORY NOTES *continued*

### SURVEY METHODOLOGY

*continued*

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

**18** Stratified sampling is employed when, within a survey population, there are subpopulations which vary from the entire population. Stratification offers the advantage of sampling each stratum independently. The Retail Business Survey uses stratification to group the retail businesses to be surveyed into homogenous strata based on the annualised turnover allocated to each business. The annualised turnover variable is derived from BAS information from the taxation system and is used both as a sizing variable for stratification purposes and to form auxiliary information (estimation benchmarks) to support the regression estimation methodology used in the Retail Business Survey. The utilisation of BAS information enables the most efficient design for the survey, keeping sample sizes to a minimum while providing accurate results. From October 2013, the stratification benchmarks have been updated every quarter so as to improve the accuracy of level estimates derived from the survey as well as addressing the issue of aging stratification benchmarks which must otherwise be periodically updated.

### SEASONAL ADJUSTMENT AND TREND ESTIMATION

**19** 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.

**20** 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

## EXPLANATORY NOTES *continued*

### SEASONAL ADJUSTMENT AND TREND ESTIMATION *continued*

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.

**21** The following Retail trade series are directly seasonally adjusted:

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

**22** 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.

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

**24** 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.

**25** 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 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).

**26** 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.

**27** 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.

**28** 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



## EXPLANATORY NOTES *continued*

### SEASONAL ADJUSTMENT AND TREND ESTIMATION *continued*

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.

**29** 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.

**30** 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).

### 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 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 2012-13. 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 2014-15 financial year which will initially be based upon price data for the 2012-13 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.

## EXPLANATORY NOTES *continued*

### STANDARD ERRORS *continued*

**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.

#### RELATIVE STANDARD ERRORS BY INDUSTRY GROUP

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

#### RELATIVE STANDARD ERRORS BY STATE

	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
RSE (%)	A	A	A	A	A	B	A	A	A

**37** Standard errors for the Australian estimates (original data) for August 2015 contained in this publication are:

Data Series	Estimate	Standard Error
Level of retail turnover (\$m)	23 721.1	147.1
Change from preceding month (\$m)	-196.4	81.7
% change from preceding month (%)	-0.8	0.4

### 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*

## EXPLANATORY NOTES *continued*

### COMPARABILITY WITH OTHER ABS ESTIMATES *continued*

*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.

### RETAIL TRADE PER CAPITA

**41** The estimates of retail turnover per capita are compiled from the monthly Retail Business Survey and the quarterly Estimated Resident Population (ERP) published within Australian Demographic Statistics (Cat. no. 3101.0). Retail turnover per capita estimates are the ratios of total quarterly retail turnover to the quarterly ERP. The methods used in deriving Retail turnover per capita estimates are consistent with those used for the derivation of GDP per capita. As quarterly ERP estimates currently lag quarterly retail trade estimates by approximately six months, the two most recent quarters of Retail per capita estimates use ERP projections based on current trend.

**42** The scope, coverage and methodology for the Retail Business Survey and ERP estimates are included in the explanatory notes of the corresponding publications. Detailed discussion around the derivation methodology, ERP projection and interpretation of retail turnover per capita estimates are available as an Appendix within the Explanatory notes tab to the June 2014 release of this publication.

**43** Current price estimates and chain volume measures, in original, seasonally adjusted and trend terms are available from the Downloads tab of this issue on the ABS website. Revisions to the retail turnover per capita series will occur with every future revision of quarterly ERP estimates and also following any revisions to Retail Trade estimates.

### RELATED PUBLICATIONS

**44** 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).

**45** 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.

# APPENDIX 1 EXPERIMENTAL ESTIMATES OF ONLINE RETAIL TURNOVER

## INTRODUCTION

- 1** This appendix presents estimates of the value of 'online retail turnover' in Australia (i.e. turnover from domestic online retail sales) from March 2013 and onwards.
- 2** The estimates are compiled from the monthly Retail Business Survey. The scope, coverage and methodology of this survey are provided in the explanatory notes of this publication.
- 3** Monthly estimates are presented in current price terms. Original estimates only are available, with a view to publishing seasonally adjusted and trend estimates in the future.
- 4** The estimates in this appendix are considered experimental. They are subject to evaluation and should therefore be used with caution.
- 5** Further discussion on the scope of the Retail Business Survey and the enhanced measurement of online retail trade activity can be found in the information paper Measurement of Online Retail Trade in Macroeconomics(cat. no. 8501.0.55.007).

## KEY STATISTICS

### **A1** ONLINE RETAIL TURNOVER, Australia, By Type of Activity

<i>Month</i>	<i>Pure-play</i>	<i>Multi-channel</i>	<i>Total</i>
	<i>Online Retail Trade</i>	<i>Online Retail Trade</i>	<i>Online Retail Trade</i>
	\$m	\$m	\$m

#### ORIGINAL

#### 2013

March	146.2	271.3	417.4
April	152.5	293.7	446.2
May	182.5	273.9	456.4
June	175.0	291.7	466.7
July	161.1	294.4	455.6
August	158.5	301.0	459.5
September	173.4	292.9	466.4
October	202.3	308.3	510.6
November	239.8	354.8	594.6
December	249.9	378.9	628.8

#### 2014

January	184.1	343.1	527.1
February	170.3	325.6	495.9
March	174.8	357.2	532.0
April	193.5	326.6	520.1
May	203.6	370.8	574.4
June	229.1	368.5	597.6
July	205.1	386.0	591.1
August	209.9	383.5	593.4
September	276.1	368.7	644.7
October	272.8	435.2	708.0
November	292.5	452.1	744.6
December	337.2	517.6	854.8

#### 2015

January	239.8	416.4	656.2
February	219.6	376.8	596.4
March	272.2	436.3	708.5
April	260.9	424.5	685.4
May	297.2	420.4	717.6
June	324.4	452.5	777.0
July	277.4	459.2	736.6
August	292.2	453.4	745.5

# APPENDIX 1 EXPERIMENTAL ESTIMATES OF ONLINE RETAIL TURNOVER *continued*

KEY STATISTICS *continued*

## **A2** ONLINE RETAIL TURNOVER, Australia, By Type of Activity—Percentage change from previous month

Month	Pure-play	Multi-channel	Total
	Online Retail Trade	Online Retail Trade	Online Retail Trade
	%	%	%
ORIGINAL			
<b>2013</b>			
April	4.3	8.3	6.9
May	19.7	-6.8	2.3
June	-4.1	6.5	2.3
July	-7.9	0.9	-2.4
August	-1.6	2.2	0.9
September	9.4	-2.7	1.5
October	16.7	5.2	9.5
November	18.5	15.1	16.5
December	4.2	6.8	5.7
<b>2014</b>			
January	-26.3	-9.5	-16.2
February	-7.5	-5.1	-5.9
March	2.7	9.7	7.3
April	10.7	-8.6	-2.2
May	5.2	13.6	10.4
June	12.5	-0.6	4.0
July	-10.4	4.7	-1.1
August	1.8	-0.7	0.2
September	31.6	-3.9	8.7
October	-1.2	18.0	9.8
November	7.2	3.9	5.2
December	15.3	14.5	14.8
<b>2015</b>			
January	-28.9	-19.5	-23.2
February	-8.4	-9.5	-9.1
March	24.0	15.8	18.8
April	-4.2	-2.7	-3.3
May	13.9	-1.0	4.7
June	9.2	7.6	8.3
July	-14.5	1.5	-5.2
August	5.3	-1.3	1.2

# APPENDIX 1 EXPERIMENTAL ESTIMATES OF ONLINE RETAIL TURNOVER *continued*

KEY STATISTICS *continued*

## **A3** ONLINE RETAIL TURNOVER, Australia, By Type of Activity—Percentage of Total Australian Retail Turnover

Month	Pure-play	Multi-channel	Total
	Online Retail Trade	Online Retail Trade	Online Retail Trade
	%	%	%
ORIGINAL			
<b>2013</b>			
March	0.7	1.3	1.9
April	0.7	1.4	2.2
May	0.8	1.3	2.1
June	0.8	1.4	2.2
July	0.8	1.4	2.1
August	0.7	1.4	2.1
September	0.8	1.4	2.2
October	0.9	1.3	2.2
November	1.0	1.5	2.5
December	0.9	1.3	2.2
<b>2014</b>			
January	0.8	1.5	2.3
February	0.8	1.6	2.4
March	0.8	1.6	2.4
April	0.9	1.5	2.4
May	0.9	1.6	2.5
June	1.0	1.7	2.7
July	0.9	1.7	2.6
August	0.9	1.7	2.6
September	1.2	1.6	2.8
October	1.1	1.8	2.9
November	1.2	1.8	3.0
December	1.1	1.7	2.8
<b>2015</b>			
January	1.0	1.7	2.8
February	1.0	1.8	2.8
March	1.2	1.9	3.0
April	1.1	1.9	3.0
May	1.3	1.8	3.1
June	1.4	2.0	3.3
July	1.2	1.9	3.1
August	1.2	1.9	3.1

DEFINITION OF ONLINE RETAIL TURNOVER

**6** For the purposes of this publication, 'online retail turnover' is the value of turnover of 'retail trade' which is derived from 'online sales'. 'Retail trade' includes those industries defined in paragraphs 5 and 6 of the explanatory notes of this publication. 'Online sales' are defined as sales of goods and/or services where the order is placed by the buyer via the Internet or any other computer network, regardless of whether payment is made online or not.

CLASSIFICATION

**7** The estimates are disaggregated between "pure-play" and "multi-channel" online retail trade activity. Pure-play online retail trade includes only the online sales of sole e-commerce retailers (i.e. retailers that trade with consumers solely via an online store and have no physical store). All other online sales are included in Multi-channel online retail trade, comprised of retailers which combine an online store with a physical store and/or other non-traditional means such as catalogues, mail-order and/or telephone-order.

## APPENDIX 1 EXPERIMENTAL ESTIMATES OF ONLINE RETAIL TURNOVER *continued*

---

### SCOPE AND COVERAGE

**8** The estimates of online retail turnover are compiled from the monthly Retail Business Survey. The scope of this survey includes all employing businesses within Australia from selected retail trade and food services industries which predominately sell to households.

**9** The online retail sales of both store based and non-store based retailers, including pure-play online retailers, will be included in this scope. However, online sales by non-employing businesses and non-resident retailers overseas which sell directly to the Australian general public via an online store are not included, nor are they within the primary purpose or scope of the Retail Business Survey.

**10** The survey also excludes online retail sales from businesses with a non-retail industry classification, such as businesses which sell predominantly to other businesses (which are predominantly wholesalers) and businesses which produce goods for direct selling to consumers from the same premises (which are predominantly manufacturers).

**11** The methodology used to derive the estimates of online retail turnover is also based on the same sample design and generalised estimation methodology which is used for the Retail Business Survey.

### ONGOING INVESTIGATIONS AND UPCOMING CHANGES

**12** Further enhancements to improve the coverage and presentation of estimates of online retail turnover are the subject of ongoing investigation by the ABS. These include (but are not limited to) potential enhancements to the methodology of the Retail Business Survey which would optimise the survey design for estimating both online and total retail turnover, rather than the current design which is optimised for estimating total retail turnover only.

**13** Changes to the presentation of the estimates are planned for future issues of Retail Trade. Future issues are expected to include:

- Estimates of the sampling variability associated with the new estimates of online retail turnover;
- Spreadsheets including the new estimates, available from the Downloads tab of this publication on the ABS website; and
- Discussion on the potential disaggregation of the new estimates by state and territory, and conceptual issues associated with disaggregating online retail turnover by location of business and/or consumer.

### SUGGESTIONS AND FEEDBACK

**14** As part of our ongoing investigations, we are currently seeking user feedback and suggestions about the presentation of the experimental time series in this publication and the upcoming changes planned for future issues. In particular, comment is sought on the usefulness of the proposed industry disaggregation.

**15** If you have any feedback or suggestions please contact Ben Dorber by email at [ben.dorber@abs.gov.au](mailto:ben.dorber@abs.gov.au) or by phone on Sydney (02) 9268 4723.

### RELATED PUBLICATIONS

**16** Users may also wish to refer to the following:

- Feature Article from Retail Trade, (cat. no. 8501.0) November 2013
- Measurement of Online Retail Trade in Macroeconomic Statistics (cat. no. 8501.0.55.007).

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

## APPENDIX 2 EXPERIMENTAL ESTIMATES OF CONSUMER SALES

### INTRODUCTION

- 1** This appendix presents estimates of the value of sales of electricity and gas to consumer customers in Australia. The full time series is available from the Downloads tab of this publication on the ABS website.
- 2** The estimates are compiled from the quarterly Survey of Consumer Sales - Energy Retailing. The survey is activity based and is considered a census of energy retailing activity. Approximately 40 businesses are included in the survey every quarter. The scope of the survey excludes energy generation and energy distribution.
- 3** Quarterly estimates are presented in current price values. Original estimates only are available, with a view to publishing seasonally adjusted and trend estimates in the future.
- 4** The Survey of Consumer Sales - Energy Retailing will provide key indicators on the performance of the Australian economy and will be an important component in the compilation of Household Final Consumption Expenditure (HFCE) in the National Accounts.
- 5** The estimates in this appendix are considered experimental. They are subject to evaluation and should therefore be used with caution.

### KEY STATISTICS

#### **A4** CONSUMER SALES, Australia, By Type of Activity

Quarter	Electricity	Gas
	retailing	retailing
	\$m	\$m
ORIGINAL		
<b>2013</b>		
June	3 805.2	1 106.6
September	4 306.7	1 355.5
December	3 683.4	790.1
<b>2014</b>		
March	3 923.3	563.7
June	4 112.9	1 054.6
September	4 212.7	1 430.7
December	3 577.7	727.3
<b>2015</b>		
March	3 833.6	r605.5
June	3 985.5	1 265.4

r revised



## APPENDIX 2 EXPERIMENTAL ESTIMATES OF CONSUMER SALES

*continued*

KEY STATISTICS *continued*

### **A5** CONSUMER SALES, Australia, By Type of Activity | Percentage change from previous quarter

Quarter	Electricity	Gas
	%	%
ORIGINAL		
<b>2013</b>		
June	0.5	102.9
September	13.2	22.5
December	-14.5	-41.7
<b>2014</b>		
March	6.5	-28.6
June	4.8	87.1
September	2.4	35.7
December	-15.1	-49.2
<b>2015</b>		
March	7.2	r-16.7
June	4.0	109.0

r revised

TIMING OF SURVEY CYCLE

**6** Surveys are conducted in respect of each quarter and returns are completed during the eight or nine week period after the end of the quarter to which the survey data relate. E.g. December quarter returns are completed during January and February.

DEFINITION OF CONSUMER SALES

**7** For the purposes of this publication, "consumer sales" are the value of sales to consumer customers. The Survey of Consumer Sales - Energy Retailing defines a consumer customer as a residential customer who:

- Consumes electricity and gas for domestic use;
- Is a non-business customer;
- Is a non-government customer;
- Consumes below 100 megawatt hours (MWh) of electricity annually; and
- Consumes below 1 terajoule (TJ) of gas annually.

CLASSIFICATION

**8** Energy retailing activity is defined with reference to the Classification of Individual Consumption according to Purpose (COICOP) category "Electricity, Gas and Other fuels".

**9** Electricity retailing is the sale of electricity to consumer customers.

**10** Gas retailing is the sale of town and natural gas to consumer customers. The sale of liquefied hydrocarbons (e.g. LPG) is currently excluded, though these are included in the COICOP category for gas.

SCOPE AND COVERAGE

**11** The scope of the survey is all businesses that hold a licence obtained from a regulatory body to operate as an energy retailer. Energy generation and distribution activities are outside the scope of the survey.

**12** The estimates aim to measure total expenditure by consumers on electricity and gas for domestic use. For this reason, the estimates are broader than the income received by retailers, including for example; the Goods and Services Tax (GST), government concessions, discounts and solar rebates.

**13** The frame used for the survey is taken from a registry list of all operating energy retailers in Australia produced by the Energy Supply Association of Australia (ESAA). The sample is annually updated to account for any new energy retailers.

## APPENDIX 2 EXPERIMENTAL ESTIMATES OF CONSUMER SALES

*continued*

### SURVEY METHODOLOGY

**14** The survey is conducted electronically on a quarterly basis. It is based on a complete enumeration of businesses that have been identified as holding a licence to retail electricity and/or gas to consumer customers. This may include Government-owned and/or controlled Public Non-Financial Corporations.

**15** Respondents are asked to provide consumer sales data on an accrual basis. Where a selected unit does not respond in a given survey period, a value is estimated. If data are subsequently provided, the estimated value is replaced with the reported data. Aggregates are calculated from all the data by summing the individual unit level data. Data are edited at both individual unit level and aggregate level.

**16** The statistical unit used to represent each energy retailer is sourced from the ABS Business Register (ABSBR). The majority of the businesses within scope of this survey are large businesses with the statistical unit being the Type of Activity Unit (TAU). However there are a few units where the Australian Business Number (ABN) is the statistical unit and is suitable for ABS statistical needs when the business is simple in structure.

### REVISIONS

**17** The survey frame and sample are updated annually to ensure that the sample remains representative of the target population.

### SEASONALLY ADJUSTED AND TREND ESTIMATES

**18** Original estimates only are available, with a view to publish seasonally adjusted and trend estimates in the future.

### COMPARABILITY WITH NATIONAL ACCOUNTS AND OTHER ESTIMATES

**19** Since June quarter 2012, the new quarterly Survey of Consumer Sales - Energy Retailing has collected data to provide new indicators of household expenditure for categories currently outside the scope of Retail Trade. The experimental estimates will differ from corresponding HFCE energy statistics. More detail on the compilation of HFCE is available from Australian System of National Accounts: Concepts, Sources and Methods (cat. no. 5216.0).

**20** Many ABS publications are classified according to the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006 (cat. no. 1292.0). Outputs from the Survey of Consumer Sales - Energy Retailing are not classified according to ANZSIC and are instead classified by activity with reference to COICOP. The aim of this classification is to survey all businesses which sell energy to consumers, including those businesses for which energy retailing may be a secondary activity.

**21** The experimental estimates are not comparable to the value of energy sales published in the Business Indicators, Australia (cat. no. 5676.0) and Australian Industry (cat. no. 8155.0) because the estimates within these publications are classified according to ANZSIC and do not exclude sales to business customers and government customers.

### GENERAL ACKNOWLEDGEMENT

**22** ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act 1905.

### RELATED PUBLICATIONS

**23** Users may also wish to refer to the following:

- Feature Article from Retail Trade, Australia (cat. no. 8501.0) September 2013
- 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)

## APPENDIX 2 EXPERIMENTAL ESTIMATES OF CONSUMER SALES

*continued*

---

### RELATED PUBLICATIONS

*continued*

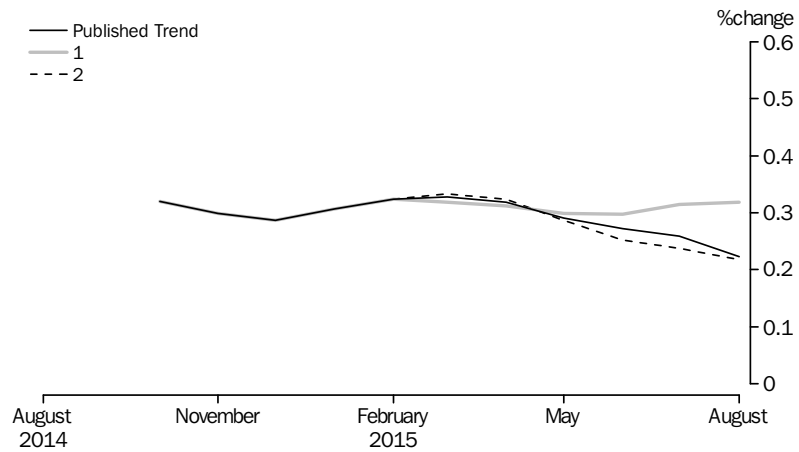
**24** As well as the statistics included in this and related publications, the ABS may have other relevant data available. Inquiries should be made to the National Information and Referral Service on 1300 135 070.

# 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 0.712%.
- Scenario 2. Next month's seasonally adjusted estimate of retail turnover falls 0.022%.









## FOR MORE INFORMATION . . .

*INTERNET*      **www.abs.gov.au** the ABS website is the best place for data from our publications and information about the ABS.

### INFORMATION AND REFERRAL SERVICE

Our consultants can help you access the full range of information published by the ABS that is available free of charge from our website. Information tailored to your needs can also be requested as a 'user pays' service. Specialists are on hand to help you with analytical or methodological advice.

*PHONE*                      1300 135 070

*EMAIL*                      [client.services@abs.gov.au](mailto:client.services@abs.gov.au)

*FAX*                              1300 135 211

*POST*                              Client Services, ABS, GPO Box 796, Sydney NSW 2001

## FREE ACCESS TO STATISTICS

All statistics on the ABS website can be downloaded free of charge.

*WEB ADDRESS*      [www.abs.gov.au](http://www.abs.gov.au)