

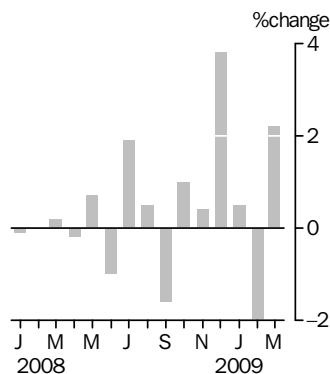
RETAIL TRADE

AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) WED 6 MAY 2009

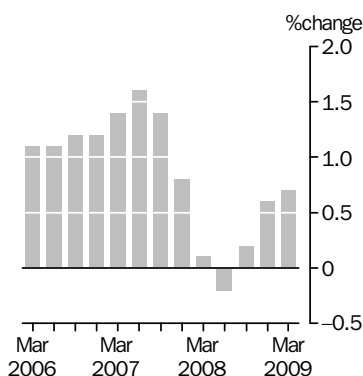
Monthly Turnover

Current prices
Seasonally adjusted



Quarterly turnover

in volume terms
Trend estimate



INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Neil Hamilton on Canberra (02) 6252 5990.

KEY FIGURES

	Mar 09 \$m	Feb 09 to Mar 09 % change
Turnover at current prices		
Trend estimates	np	np
Seasonally adjusted estimates	19 295.7	2.2

np not available for publication but included in totals where applicable, unless otherwise indicated

	Mar Qtr 2009 \$m	Dec Qtr 2008 to Mar Qtr 2009 % change
Turnover, in volume terms		
Trend estimates	53 853.6	0.7
Seasonally adjusted estimates	53 959.1	1.0

KEY POINTS

SUSPENSION OF MONTHLY TREND ESTIMATES

- The retail trade current price trend series have been suspended as at November 2008 as it is not possible to determine the trend in retail turnover through the period affected by the Federal Government's economic stimulus packages and other influences associated with global economic conditions. For further details refer to the December 2008 issue.

CURRENT PRICES

- The seasonally adjusted estimate increased by 2.2% in March 2009. This follows a decrease of 2.0% in February 2009 and an increase of 0.5% in January 2009.
- In seasonally adjusted terms, all industries had an increase in March 2009—Food retailing (+0.4%), Department stores (+13.2%), Clothing and soft good retailing (+6.4%), Household good retailing (+1.3%), Other retailing (+1.5%) and Cafes, restaurants and takeaway food services (+1.4%).
- In seasonally adjusted terms, all states, except the Australian Capital Territory (-0.1%), had an increase in March 2009—New South Wales (+1.2%), Victoria (+2.7%), Queensland (+3.2%), South Australia (+2.4%), Western Australia (+2.2%), Tasmania (+2.2%) and the Northern Territory (+4.2%).
- In original terms, Australian turnover increased by 12.2% in March 2009 compared with February 2009. Chains and other large retailers (which are completely enumerated) increased by 13.9%, while the estimate for 'smaller' retailers increased by 9.5%. Australian turnover increased by 6.4% in March 2009 compared with March 2008. Chains and other large retailers increased by 7.9%, while the estimate for 'smaller' retailers rose by 3.9%.

VOLUME MEASURES

- The trend estimate of turnover for the Australian Retail series increased by 0.7% in the March quarter 2009 in volume terms.

NOTES

FORTHCOMING ISSUES

ISSUE	RELEASE DATE
April 2009	1 June 2009
May 2009	1 July 2009
June 2009	3 August 2009
July 2009	9 September 2009
August 2009	30 September 2009
September 2009	4 November 2009



CHANGES IN THIS ISSUE

State by industry subgroup estimates had been suppressed for the period July to October 2008. Modelled estimates for this period are now available. For further details see page 3.

Quarterly Chain Volume estimates are shown in Table 5 through to Table 8 of this issue. These tables replace those presented in *Retail Trade Quarterly Indicators* (cat. no. 8502.0) which ceased with the December quarter 2008 issue.

REVISIONS

As a result of the inclusion of the modelled estimates, published current price estimates at the state and industry group levels for July to October 2008 have been revised. However, the Australian total for each month has not changed. Changes to the October month state and industry estimates have resulted in revisions to the December quarter 2008 chain volume measures.

MONTHLY TREND SERIES

The retail trade trend series have been suspended as at November 2008 as it is not possible to determine the trend in retail turnover through the period affected by the Federal Government's economic stimulus packages and other influences associated with global economic conditions. For further details refer to the December 2008 issue.

QUARTERLY TREND SERIES

The impact of the Federal Government's economic stimulus packages has been assessed as not statistically significant in the quarterly Chain Volume series (i.e. the impact on the quarterly estimate is relatively smaller than the impact on an individual month and the impact on the quarter is less distinguishable from other irregular influences over the period). Therefore, the quarterly trend series are being released.

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 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.

Brian Pink
Australian Statistician

STATE BY INDUSTRY SUBGROUP ESTIMATES

STATE BY INDUSTRY SUBGROUP ESTIMATES: JULY TO OCTOBER 2008

The 'one-in, two-out' sampling scheme used for the July to October 2008 reference months produced state by industry subgroup data of sufficient accuracy to release on a quarterly basis but monthly estimates that were too volatile to release. As a result, the state by industry subgroup estimates for the July to October 2008 reference months were suppressed. However, the broader level state and industry estimates continued to be available for this period.

The ABS has now produced modelled estimates for the July to October 2008 reference months at the state by industry subgroup level and they are available from the downloads tab of this issue.

The modelled state by industry subgroup estimates have been produced using an ARIMA model using the 15 years of data prior to July 2008 and data for November 2008. The original July to October 2008 estimates produced from the 'one-in, two-out' sample design are too volatile and would distort the modelled data. In addition, original estimates for December 2008 and subsequent months have been affected by the Federal Government's economic stimulus packages and other influences associated with global economic conditions. Use of data after November 2008 would bias the modelled data due to the uncertain affect on Retail Trade of these real world factors.

The modelled estimates were constrained as follow:

- the sum of the July to September 2008 months were constrained to the September quarter original estimates for State and Industry subgroup levels as released in the December quarter 2008 issue of Retail Trade Quarterly Indicators, Australia (cat. no. 8502.0)
- in addition, each of the July to September 2008 months was constrained to the Australian original estimate for each month as released in the previous issue of this publication
- the October 2008 month was only constrained to the Australian original estimate for October as released in the previous issue of this publication.

As a result of the inclusion of the modelled estimates, July to October 2008 current price estimates at the state and industry group levels have been revised. However, the Australian total for each of these months and the state and industry group estimates for September quarter 2008 have not changed. Changes to the October 2008 month state and industry group data have also resulted in revisions to the December quarter 2008 chain volume measures.

ANALYSIS

TOTAL RETAIL—MONTHLY

The chart below shows the current price, monthly trend series, to November 2008, and seasonally adjusted series, to March 2009.

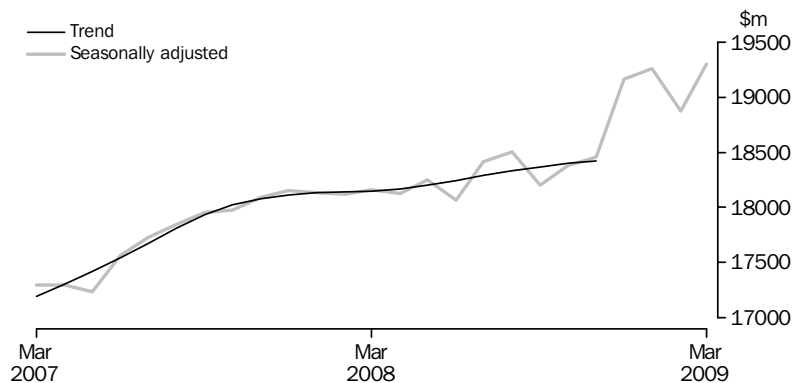
As the seasonally adjusted series (except for the completely enumerated total series) are currently estimated using forward seasonal factors based on data to the June 2008 reference month, the seasonal adjustment factors have not been influenced by spending associated with the stimulus package.

In current price seasonally adjusted terms, Australian turnover increased by 2.2% in March 2009 after decreasing by a similar amount in February and increasing for the previous four months including a 3.8% increase in December 2008. The level of turnover, in seasonally adjusted terms, remains above the level of the trend at November 2008.

The industries with the largest seasonally adjusted increases in March 2009 also had large increases in December 2008 and large decreases over the previous two months:

- Department stores increased by 13.2% in March 2009, 8.3% in December 2008 and decreased by 0.5% and 9.8% in January and February 2009, respectively.
- Clothing and softgood retailing increased by 6.4% in March 2009, 5.8% in December 2008 and 0.8% in January 2009 and decreased by 2.7% in February.

RETAIL TURNOVER, Australia



(a) Estimates for July to October 2008 are derived from the one-in, two-out sampling method.
 (b) Trend series suspended as at November 2008.

TOTAL RETAIL— QUARTERLY

In seasonally adjusted terms, March quarter 2009 had a 1.0% increase in volume and a 1.5% increase in prices.

In March quarter 2009, New South Wales (+2.5%) and Northern Territory (+3.5%) had the largest increase in volumes, while Victoria and South Australia had no change and Queensland grew by 0.4% in seasonally adjusted terms.

All industries, except Household good retailing (−2.1%) had an increase in volumes in March quarter 2009. The largest increases were Clothing and soft good retailing (+3.7%), Cafe, restaurants and takeaway food services (+3.0%) and Food retailing (+1.3%). Department stores grew by 0.7% in seasonally adjusted terms.

RETAIL TURNOVER, By Industry Group(a)

Month	Food retailing	Department stores	Clothing & soft good retailing	Household good retailing	Other retailing	Cafes, restaurants & takeaway food services	Total
ORIGINAL (\$ million)							
2008							
January	7 381.9	1 397.8	1 258.0	3 095.2	2 604.8	2 167.2	17 904.9
February	6 959.5	1 140.5	1 062.9	2 736.2	2 545.5	2 093.6	16 538.2
March	7 493.2	1 351.7	1 136.2	2 802.2	2 592.8	2 164.5	17 540.6
April	7 051.7	1 396.6	1 287.0	2 836.0	2 545.9	2 154.2	17 271.3
May	7 331.4	1 421.1	1 323.2	2 928.4	2 710.5	2 184.0	17 898.6
June	6 921.7	1 401.6	1 206.0	3 052.6	2 510.8	2 098.0	17 190.7
July	r7 414.4	1 582.3	r1 257.8	r3 015.3	r2 661.2	r2 178.3	18 109.3
August	r7 536.7	1 268.4	r1 199.6	r3 013.5	r2 694.6	r2 208.7	17 921.4
September	r7 278.1	1 383.3	r1 251.5	r2 926.1	r2 647.6	r2 128.6	17 615.0
October	r7 831.3	1 452.4	r1 303.7	r3 081.3	r2 870.3	r2 305.0	18 844.0
November	7 817.3	1 675.9	1 317.2	3 138.9	2 974.6	2 243.5	19 167.4
December	9 013.9	2 886.1	1 880.7	4 285.5	4 183.0	2 468.0	24 717.2
2009							
January	8 155.1	1 451.0	1 331.4	3 140.6	2 694.4	2 310.5	19 082.9
February	7 320.1	1 056.6	1 043.5	2 612.3	2 526.4	2 068.9	16 627.9
March	8 017.9	1 386.9	1 290.9	2 889.8	2 774.5	2 303.2	18 663.2
SEASONALLY ADJUSTED (\$ million)							
2008							
January	7 286.5	1 528.1	1 272.0	3 095.3	2 755.5	2 193.5	18 130.9
February	7 272.2	1 527.4	1 297.1	3 017.9	2 789.5	2 218.0	18 122.2
March	7 381.5	1 509.0	1 268.3	3 063.7	2 765.0	2 171.1	18 158.6
April	7 283.6	1 530.0	1 298.8	3 080.1	2 746.6	2 186.9	18 126.1
May	7 369.2	1 516.3	1 291.2	3 062.4	2 819.0	2 190.2	18 248.3
June	7 361.9	1 436.8	1 227.4	3 087.2	2 762.9	2 190.0	18 066.2
July	7 497.2	1 593.6	1 308.6	3 072.8	2 755.8	2 185.3	18 413.4
August	7 645.6	1 492.7	1 307.8	3 074.7	2 780.1	2 199.4	18 500.3
September	7 494.6	1 533.6	1 283.3	2 973.2	2 750.4	2 168.6	18 203.6
October	7 601.5	1 503.2	1 251.6	3 013.1	2 803.8	2 204.5	18 377.7
November	7 750.0	1 476.4	1 269.5	2 960.3	2 796.9	2 204.4	18 457.5
December	7 857.4	1 599.5	1 342.6	3 252.3	2 869.3	2 241.7	19 162.8
2009							
January	7 998.1	1 591.5	1 353.0	3 123.8	2 874.1	2 316.3	19 256.8
February	7 963.9	1 436.0	1 316.2	3 004.4	2 866.2	2 286.7	18 873.4
March	7 999.3	1 625.2	1 400.7	3 043.7	2 908.6	2 318.2	19 295.7
TREND (\$ million)(b)							
2008							
January	7 294.6	1 519.3	1 284.3	3 075.7	2 750.8	2 206.7	18 134.0
February	7 298.5	1 519.9	1 283.7	3 069.0	2 764.5	2 199.4	18 137.8
March	7 310.6	1 517.0	1 281.5	3 068.1	2 773.4	2 193.4	18 145.1
April	7 336.0	1 513.9	1 280.5	3 070.2	2 776.6	2 188.5	18 165.7
May	7 371.9	1 513.1	1 281.5	3 072.7	2 775.4	2 185.8	18 200.4
June	7 419.0	1 514.2	1 282.8	3 071.5	2 772.4	2 186.1	18 245.9
July	7 473.3	1 515.7	1 283.1	3 061.6	2 771.1	2 187.5	18 292.4
August	7 530.0	1 515.5	1 282.2	3 042.7	2 773.1	2 189.6	18 333.1
September	7 586.1	1 512.6	1 279.6	3 020.6	2 776.9	2 191.8	18 367.5
October	7 641.8	1 507.1	1 275.2	2 997.8	2 782.4	2 194.3	18 398.3
November	7 691.5	1 501.8	1 271.7	2 975.5	2 785.5	2 197.5	18 423.1
December	np	np	np	np	np	np	np
2009							
January	np	np	np	np	np	np	np
February	np	np	np	np	np	np	np
March	np	np	np	np	np	np	np

np not available for publication but included in totals where applicable, unless otherwise indicated

r revised

(a) See paragraph 6 of Explanatory Notes.

(b) Trend calculated on data up to November 2008.

RETAIL TURNOVER, By Industry Group(a)

Month	Food retailing	Department stores	Clothing & soft good retailing	Household good retailing	Other retailing	Cafes, restaurants & takeaway food services	Total
ORIGINAL (% change from preceding month)							
2008							
January	-11.8	-49.1	-30.0	-23.7	-34.1	-12.1	-23.5
February	-5.7	-18.4	-15.5	-11.6	-2.3	-3.4	-7.6
March	7.7	18.5	6.9	2.4	1.9	3.4	6.1
April	-5.9	3.3	13.3	1.2	-1.8	-0.5	-1.5
May	4.0	1.8	2.8	3.3	6.5	1.4	3.6
June	-5.6	-1.4	-8.9	4.2	-7.4	-3.9	-4.0
July	7.1	12.9	4.3	-1.2	6.0	3.8	5.3
August	1.6	-19.8	-4.6	-0.1	1.3	1.4	-1.0
September	-3.4	9.1	4.3	-2.9	-1.7	-3.6	-1.7
October	7.6	5.0	4.2	5.3	8.4	8.3	7.0
November	-0.2	15.4	1.0	1.9	3.6	-2.7	1.7
December	15.3	72.2	42.8	36.5	40.6	10.0	29.0
2009							
January	-9.5	-49.7	-29.2	-26.7	-35.6	-6.4	-22.8
February	-10.2	-27.2	-21.6	-16.8	-6.2	-10.5	-12.9
March	9.5	31.3	23.7	10.6	9.8	11.3	12.2
SEASONALLY ADJUSTED (% change from preceding month)							
2008							
January	-0.1	1.2	-0.8	-0.8	1.5	-1.6	-0.1
February	-0.2	0.0	2.0	-2.5	1.2	1.1	0.0
March	1.5	-1.2	-2.2	1.5	-0.9	-2.1	0.2
April	-1.3	1.4	2.4	0.5	-0.7	0.7	-0.2
May	1.2	-0.9	-0.6	-0.6	2.6	0.1	0.7
June	-0.1	-5.2	-4.9	0.8	-2.0	0.0	-1.0
July	1.8	10.9	6.6	-0.5	-0.3	-0.2	1.9
August	2.0	-6.3	-0.1	0.1	0.9	0.6	0.5
September	-2.0	2.7	-1.9	-3.3	-1.1	-1.4	-1.6
October	1.4	-2.0	-2.5	1.3	1.9	1.7	1.0
November	2.0	-1.8	1.4	-1.8	-0.2	0.0	0.4
December	1.4	8.3	5.8	9.9	2.6	1.7	3.8
2009							
January	1.8	-0.5	0.8	-4.0	0.2	3.3	0.5
February	-0.4	-9.8	-2.7	-3.8	-0.3	-1.3	-2.0
March	0.4	13.2	6.4	1.3	1.5	1.4	2.2
TREND (% change from preceding month)(b)							
2008							
January	0.1	0.2	0.1	-0.2	0.6	-0.3	0.1
February	0.1	0.0	0.0	-0.2	0.5	-0.3	0.0
March	0.2	-0.2	-0.2	0.0	0.3	-0.3	0.0
April	0.3	-0.2	-0.1	0.1	0.1	-0.2	0.1
May	0.5	0.0	0.1	0.1	0.0	-0.1	0.2
June	0.6	0.1	0.1	0.0	-0.1	0.0	0.3
July	0.7	0.1	0.0	-0.3	0.0	0.1	0.3
August	0.8	0.0	-0.1	-0.6	0.1	0.1	0.2
September	0.7	-0.2	-0.2	-0.7	0.1	0.1	0.2
October	0.7	-0.4	-0.3	-0.8	0.2	0.1	0.2
November	0.7	-0.3	-0.3	-0.7	0.1	0.1	0.1
December	np	np	np	np	np	np	np
2009							
January	np	np	np	np	np	np	np
February	np	np	np	np	np	np	np
March	np	np	np	np	np	np	np

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) See paragraph 6 of Explanatory Notes.

(b) Trend calculated on data up to November 2008.

RETAIL TURNOVER, By state

Month	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
ORIGINAL (\$ million)									
2008									
January	5 647.3	4 454.5	3 692.5	1 268.7	1 948.8	392.4	165.4	335.2	17 904.9
February	5 206.1	4 119.9	3 352.5	1 181.6	1 819.4	369.9	162.6	326.1	16 538.2
March	5 502.5	4 367.4	3 578.2	1 245.0	1 941.0	387.0	174.4	345.2	17 540.6
April	5 403.1	4 307.7	3 470.8	1 233.2	1 955.6	379.4	180.3	341.3	17 271.3
May	5 574.5	4 443.4	3 625.2	1 278.1	2 034.8	394.0	194.6	353.9	17 898.6
June	5 358.6	4 239.6	3 511.0	1 234.9	1 940.9	370.9	196.3	338.5	17 190.7
July	r5 486.3	r4 416.2	r3 852.5	r1 315.4	r2 081.7	r400.1	r217.1	r340.0	18 109.3
August	r5 437.9	r4 413.8	r3 803.6	r1 286.1	r2 026.1	r395.3	r218.9	r339.7	17 921.4
September	r5 362.4	r4 316.0	r3 748.1	r1 265.2	r1 995.4	r385.6	r209.7	r332.6	17 615.0
October	r5 752.4	r4 705.7	r3 921.6	r1 366.4	r2 105.2	r420.7	r212.1	r359.9	18 844.0
November	5 932.4	4 827.1	3 921.3	1 369.6	2 111.8	427.4	206.0	371.9	19 167.4
December	7 706.5	6 257.4	4 994.3	1 772.5	2 715.2	562.7	245.1	463.5	24 717.2
2009									
January	5 975.8	4 748.2	3 941.9	1 360.4	2 079.7	426.7	193.9	356.3	19 082.9
February	5 185.4	4 196.0	3 354.3	1 178.1	1 818.3	388.9	181.4	325.6	16 627.9
March	5 745.2	4 746.3	3 816.1	1 332.1	2 026.3	428.6	209.1	359.5	18 663.2
SEASONALLY ADJUSTED (\$ million)									
2008									
January	5 713.8	4 527.6	3 691.1	1 275.2	1 996.0	389.4	185.8	352.0	18 130.9
February	5 728.6	4 480.7	3 708.8	1 276.6	1 994.3	389.6	187.8	355.9	18 122.2
March	5 678.2	4 502.6	3 741.1	1 279.9	2 022.8	391.1	188.3	354.4	18 158.6
April	5 686.4	4 466.6	3 706.3	1 284.3	2 038.9	397.5	191.7	354.4	18 126.1
May	5 709.1	4 506.5	3 731.7	1 302.3	2 049.1	402.7	192.3	354.5	18 248.3
June	5 646.2	4 422.9	3 698.0	1 308.9	2 051.1	398.4	192.7	347.9	18 066.2
July	5 642.1	4 550.5	3 826.4	1 336.1	2 102.4	409.5	197.6	348.9	18 413.4
August	5 659.1	4 598.1	3 839.3	1 339.4	2 104.7	412.3	201.4	345.9	18 500.3
September	5 526.7	4 523.4	3 799.5	1 331.0	2 064.5	409.8	204.1	344.8	18 203.6
October	5 635.1	4 601.8	3 790.2	1 330.7	2 048.6	413.8	203.0	354.4	18 377.7
November	5 634.1	4 648.1	3 823.9	1 331.3	2 040.0	416.8	207.8	355.5	18 457.5
December	5 910.7	4 829.8	3 944.4	1 363.1	2 096.7	434.2	217.9	366.0	19 162.8
2009									
January	6 024.2	4 788.9	3 943.5	1 364.4	2 125.7	421.4	217.1	371.6	19 256.8
February	5 878.1	4 727.4	3 854.9	1 331.1	2 068.3	426.8	216.9	369.9	18 873.4
March	5 950.3	4 856.9	3 978.8	1 363.7	2 114.1	436.3	226.1	369.4	19 295.7
TREND (\$ million) (a)									
2008									
January	5 717.7	4 502.3	3 711.2	1 264.8	2 006.9	390.3	187.9	351.8	18 134.0
February	5 712.7	4 498.3	3 709.9	1 273.7	2 009.8	391.5	188.6	353.2	18 137.8
March	5 705.5	4 490.1	3 711.4	1 282.6	2 019.0	393.5	189.3	354.1	18 145.1
April	5 693.9	4 484.0	3 720.8	1 292.6	2 034.5	396.2	190.4	353.7	18 165.7
May	5 677.1	4 485.2	3 737.4	1 303.6	2 053.0	399.7	192.3	352.1	18 200.4
June	5 658.6	4 498.0	3 758.1	1 314.3	2 068.7	403.3	194.8	350.1	18 245.9
July	5 640.9	4 520.2	3 778.5	1 323.5	2 076.5	406.6	197.5	348.7	18 292.4
August	5 625.6	4 546.5	3 796.2	1 330.0	2 076.7	409.5	200.1	348.5	18 333.1
September	5 614.0	4 573.8	3 809.9	1 333.9	2 072.1	412.0	202.6	349.2	18 367.5
October	5 606.0	4 601.1	3 820.4	1 336.4	2 064.8	414.3	205.0	350.3	18 398.3
November	5 600.6	4 626.9	3 827.5	1 337.1	2 055.4	416.4	207.3	351.9	18 423.1
December	np	np	np	np	np	np	np	np	np
2009									
January	np	np	np	np	np	np	np	np	np
February	np	np	np	np	np	np	np	np	np
March	np	np	np	np	np	np	np	np	np

np not available for publication but included in totals where applicable, unless otherwise indicated

r revised

(a) Trend calculated on data up to November 2008.

RETAIL TURNOVER PERCENTAGE CHANGE, By state

Month	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
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ORIGINAL (% change from preceding month)

2008									
January	-24.9	-23.9	-20.8	-21.1	-24.9	-22.3	-22.6	-23.8	-23.5
February	-7.8	-7.5	-9.2	-6.9	-6.6	-5.7	-1.7	-2.7	-7.6
March	5.7	6.0	6.7	5.4	6.7	4.6	7.3	5.8	6.1
April	-1.8	-1.4	-3.0	-0.9	0.8	-2.0	3.4	-1.1	-1.5
May	3.2	3.2	4.4	3.6	4.1	3.9	7.9	3.7	3.6
June	-3.9	-4.6	-3.1	-3.4	-4.6	-5.9	0.9	-4.3	-4.0
July	2.4	4.2	9.7	6.5	7.3	7.9	10.6	0.4	5.3
August	-0.9	-0.1	-1.3	-2.2	-2.7	-1.2	0.8	-0.1	-1.0
September	-1.4	-2.2	-1.5	-1.6	-1.5	-2.5	-4.2	-2.1	-1.7
October	7.3	9.0	4.6	8.0	5.5	9.1	1.1	8.2	7.0
November	3.1	2.6	0.0	0.2	0.3	1.6	-2.9	3.3	1.7
December	29.9	29.6	27.4	29.4	28.6	31.7	19.0	24.6	29.0

2009									
January	-22.5	-24.1	-21.1	-23.3	-23.4	-24.2	-20.9	-23.1	-22.8
February	-13.2	-11.6	-14.9	-13.4	-12.6	-8.9	-6.5	-8.6	-12.9
March	10.8	13.1	13.8	13.1	11.4	10.2	15.3	10.4	12.2

SEASONALLY ADJUSTED (% change from preceding month)

2008									
January	-0.5	0.4	-0.5	1.9	-0.8	-0.9	-2.7	1.7	-0.1
February	0.3	-1.0	0.5	0.1	-0.1	0.1	1.1	1.1	0.0
March	-0.9	0.5	0.9	0.3	1.4	0.4	0.3	-0.4	0.2
April	0.1	-0.8	-0.9	0.3	0.8	1.6	1.8	0.0	-0.2
May	0.4	0.9	0.7	1.4	0.5	1.3	0.3	0.0	0.7
June	-1.1	-1.9	-0.9	0.5	0.1	-1.0	0.3	-1.9	-1.0
July	-0.1	2.9	3.5	2.1	2.5	2.8	2.5	0.3	1.9
August	0.3	1.0	0.3	0.2	0.1	0.7	1.9	-0.9	0.5
September	-2.3	-1.6	-1.0	-0.6	-1.9	-0.6	1.4	-0.3	-1.6
October	2.0	1.7	-0.2	0.0	-0.8	1.0	-0.6	2.8	1.0
November	0.0	1.0	0.9	0.0	-0.4	0.7	2.4	0.3	0.4
December	4.9	3.9	3.2	2.4	2.8	4.2	4.8	3.0	3.8

2009									
January	1.9	-0.8	0.0	0.1	1.4	-2.9	-0.4	1.5	0.5
February	-2.4	-1.3	-2.2	-2.4	-2.7	1.3	-0.1	-0.5	-2.0
March	1.2	2.7	3.2	2.4	2.2	2.2	4.2	-0.1	2.2

TREND (% change from preceding month) (a)

2008									
January	0.0	0.2	0.0	0.8	0.0	0.2	0.6	0.5	0.1
February	-0.1	-0.1	0.0	0.7	0.1	0.3	0.4	0.4	0.0
March	-0.1	-0.2	0.0	0.7	0.5	0.5	0.4	0.2	0.0
April	-0.2	-0.1	0.3	0.8	0.8	0.7	0.6	-0.1	0.1
May	-0.3	0.0	0.4	0.9	0.9	0.9	1.0	-0.5	0.2
June	-0.3	0.3	0.6	0.8	0.8	0.9	1.3	-0.6	0.3
July	-0.3	0.5	0.5	0.7	0.4	0.8	1.4	-0.4	0.3
August	-0.3	0.6	0.5	0.5	0.0	0.7	1.3	-0.1	0.2
September	-0.2	0.6	0.4	0.3	-0.2	0.6	1.3	0.2	0.2
October	-0.1	0.6	0.3	0.2	-0.4	0.6	1.2	0.3	0.2
November	-0.1	0.6	0.2	0.1	-0.5	0.5	1.1	0.5	0.1
December	np	np	np	np	np	np	np	np	np

2009									
January	np	np	np	np	np	np	np	np	np
February	np	np	np	np	np	np	np	np	np
March	np	np	np	np	np	np	np	np	np

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Trend calculated on data up to November 2008.

RETAIL TURNOVER, Chain Volume Measures(a)—By Industry(b)

Quarter	Food retailing	Department stores	Clothing and soft good retailing	Household good retailing	Other retailing	Cafes, restaurants and takeaway food services	Total
ORIGINAL (\$ million)							
2007							
March	20 184.6	3 672.0	3 327.1	8 481.8	6 962.9	6 204.9	48 804.4
June	20 001.3	4 129.3	3 659.5	8 500.2	6 848.5	6 346.2	49 478.3
September	20 515.8	4 091.9	3 620.7	9 029.7	7 362.5	6 492.6	51 113.1
December	22 423.5	5 802.7	4 439.9	10 536.4	9 451.1	6 774.4	59 427.9
2008							
March	20 790.9	3 873.0	3 518.6	8 799.5	7 680.0	6 101.5	50 763.5
June	20 222.6	4 118.5	3 769.5	8 926.7	7 588.3	6 012.4	50 638.0
September	20 772.9	4 108.9	3 679.5	9 126.6	7 788.4	6 014.9	51 491.3
December	r22 636.3	r5 829.4	r4 470.9	r10 675.5	r9 705.3	r6 400.8	r59 718.2
2009							
March	21 181.0	3 777.8	3 647.3	8 710.4	7 743.3	6 030.8	51 090.6
SEASONALLY ADJUSTED (\$ million)							
2007							
March	20 540.9	4 375.2	3 660.2	8 938.7	7 487.5	6 403.3	51 371.9
June	20 613.8	4 345.3	3 712.1	8 990.9	7 408.4	6 493.4	51 578.8
September	20 885.6	4 519.4	3 841.3	9 248.5	7 687.4	6 529.3	52 711.5
December	21 167.1	4 475.4	3 848.3	9 324.9	8 022.2	6 417.8	53 255.5
2008							
March	20 947.1	4 506.6	3 868.0	9 331.4	8 207.9	6 269.0	53 130.0
June	20 953.0	4 384.6	3 791.1	9 387.7	8 164.2	6 165.0	52 845.6
September	21 179.7	4 499.2	3 900.1	9 346.4	8 102.0	6 072.4	53 099.7
December	21 373.4	4 441.3	3 862.9	9 417.2	8 236.0	6 083.8	53 414.5
2009							
March	21 654.1	4 472.4	4 007.3	9 223.4	8 337.8	6 264.2	53 959.1
TREND (\$ million)							
2007							
March	20 415.2	4 345.7	3 667.2	8 843.8	7 439.0	6 376.2	51 077.4
June	20 695.2	4 407.0	3 736.9	9 060.4	7 505.3	6 486.8	51 886.2
September	20 915.0	4 467.0	3 812.5	9 215.2	7 706.9	6 504.3	52 623.5
December	21 010.8	4 489.0	3 848.7	9 309.8	7 977.4	6 417.6	53 056.1
2008							
March	21 018.0	4 475.3	3 849.4	9 357.0	8 149.0	6 283.6	53 131.4
June	21 017.9	4 449.7	3 837.6	9 374.9	8 172.5	6 151.2	53 003.7
September	21 160.5	4 451.4	3 860.9	9 374.6	8 170.8	6 105.3	53 123.4
December	21 389.0	4 460.3	3 909.9	9 343.8	8 222.1	6 127.8	53 452.8
2009							
March	21 619.0	4 471.7	3 970.6	9 287.3	8 306.9	6 190.1	53 853.6

r revised

- (a) Reference year for chain volume measures is 2006–07. See paragraph 30 of the Explanatory Notes. Note: Historical data have been revised as a result of changes to the survey design.
- (b) See paragraph 6 of the Explanatory Notes.

RETAIL TURNOVER, Chain Volume Measures(a)—By Industry(b)

Quarter	Food retailing	Department stores	Clothing and soft good retailing	Household good retailing	Other retailing	Cafes, restaurants and takeaway food services	Total
ORIGINAL (% change from preceding quarter)							
2007							
March	-5.2	-34.3	-20.5	-12.1	-21.3	-5.3	-13.1
June	-0.9	12.5	10.0	0.2	-1.6	2.3	1.4
September	2.6	-0.9	-1.1	6.2	7.5	2.3	3.3
December	9.3	41.8	22.6	16.7	28.4	4.3	16.3
2008							
March	-7.3	-33.3	-20.7	-16.5	-18.7	-9.9	-14.6
June	-2.7	6.3	7.1	1.4	-1.2	-1.5	-0.2
September	2.7	-0.2	-2.4	2.2	2.6	0.0	1.7
December	9.0	41.9	21.5	17.0	24.6	6.4	16.0
2009							
March	-6.4	-35.2	-18.4	-18.4	-20.2	-5.8	-14.4
SEASONALLY ADJUSTED (% change from preceding quarter)							
2007							
March	2.3	1.8	1.2	4.6	0.1	3.3	2.3
June	0.4	-0.7	1.4	0.6	-1.1	1.4	0.4
September	1.3	4.0	3.5	2.9	3.8	0.6	2.2
December	1.3	-1.0	0.2	0.8	4.4	-1.7	1.0
2008							
March	-1.0	0.7	0.5	0.1	2.3	-2.3	-0.2
June	0.0	-2.7	-2.0	0.6	-0.5	-1.7	-0.5
September	1.1	2.6	2.9	-0.4	-0.8	-1.5	0.5
December	0.9	-1.3	-1.0	0.8	1.7	0.2	0.6
2009							
March	1.3	0.7	3.7	-2.1	1.2	3.0	1.0
TREND (% change from preceding quarter)							
2007							
March	1.3	1.2	1.6	2.7	-0.3	1.8	1.4
June	1.4	1.4	1.9	2.4	0.9	1.7	1.6
September	1.1	1.4	2.0	1.7	2.7	0.3	1.4
December	0.5	0.5	0.9	1.0	3.5	-1.3	0.8
2008							
March	0.0	-0.3	0.0	0.5	2.2	-2.1	0.1
June	0.0	-0.6	-0.3	0.2	0.3	-2.1	-0.2
September	0.7	0.0	0.6	0.0	0.0	-0.7	0.2
December	1.1	0.2	1.3	-0.3	0.6	0.4	0.6
2009							
March	1.1	0.3	1.6	-0.6	1.0	1.0	0.7

(a) Reference year for chain volume measures is 2006–07. See paragraph 30 of the Explanatory Notes. Note: Historical data have been revised as a result of changes to the survey design.

(b) See paragraph 6 of the Explanatory Notes.

RETAIL TURNOVER, Chain Volume Measures(a)—By State

Quarter	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Total
ORIGINAL (\$ million)									
2007									
March	15 480.2	12 208.8	9 705.0	3 384.1	5 522.9	1 091.9	455.4	955.5	48 804.4
June	15 657.4	12 270.3	9 934.4	3 386.8	5 629.6	1 089.4	509.2	1 000.7	49 478.3
September	16 245.5	12 438.4	10 637.4	3 416.5	5 715.9	1 103.6	560.8	995.1	51 113.1
December	19 001.7	14 703.9	12 021.5	4 074.5	6 638.2	1 277.3	576.6	1 134.2	59 427.9
2008									
March	16 007.3	12 669.0	10 337.4	3 593.2	5 566.4	1 124.2	489.2	976.9	50 763.5
June	15 844.2	12 589.4	10 196.0	3 621.1	5 724.2	1 115.5	550.3	997.3	50 638.0
September	15 689.0	12 660.0	10 868.6	3 700.8	5 852.3	1 138.2	616.4	965.8	51 491.3
December	r18 534.2	r15 074.8	r12 119.5	r4 270.8	r6 613.1	r1 344.5	r626.9	r1 134.5	r59 718.2
2009									
March	15 955.5	12 855.2	10 362.3	3 636.7	5 595.4	1 169.1	544.6	971.9	51 090.6
SEASONALLY ADJUSTED (\$ million)									
2007									
March	16 312.4	12 802.3	10 232.4	3 532.0	5 844.2	1 120.9	511.0	1 016.6	51 371.9
June	16 350.5	12 717.0	10 457.3	3 524.0	5 848.2	1 140.6	515.3	1 027.4	51 578.8
September	16 822.4	12 964.8	10 744.3	3 564.5	5 914.4	1 151.9	525.4	1 023.8	52 711.5
December	16 904.8	13 181.1	10 867.0	3 645.9	5 931.1	1 152.0	547.6	1 026.1	53 255.5
2008									
March	16 779.8	13 221.6	10 826.7	3 725.7	5 852.8	1 146.0	547.0	1 030.5	53 130.0
June	16 591.7	13 033.4	10 754.3	3 769.3	5 946.4	1 170.6	556.9	1 023.0	52 845.6
September	16 271.7	13 230.0	10 958.7	3 846.7	6 036.3	1 187.1	576.6	992.7	53 099.7
December	16 461.6	13 491.2	10 922.8	3 812.7	5 901.4	1 208.1	594.4	1 022.3	53 414.5
2009									
March	16 874.9	13 493.1	10 968.1	3 814.0	5 948.7	1 208.9	615.1	1 036.2	53 959.1
TREND (\$ million)									
2007									
March	16 196.2	12 731.3	10 223.6	3 499.0	5 782.6	1 121.5	507.3	1 015.0	51 077.4
June	16 491.8	12 819.8	10 480.2	3 536.0	5 878.8	1 137.9	517.4	1 024.6	51 886.2
September	16 743.5	12 973.2	10 715.7	3 579.5	5 907.8	1 148.3	529.2	1 027.0	52 623.5
December	16 864.9	13 112.9	10 820.3	3 640.4	5 898.2	1 150.4	540.0	1 029.1	53 056.1
2008									
March	16 777.9	13 153.6	10 836.2	3 719.4	5 915.1	1 154.4	549.6	1 025.0	53 131.4
June	16 533.5	13 159.0	10 840.1	3 783.9	5 943.5	1 168.2	559.8	1 015.6	53 003.7
September	16 435.6	13 249.5	10 885.1	3 814.6	5 964.6	1 187.0	575.6	1 011.4	53 123.4
December	16 515.8	13 398.4	10 939.9	3 824.4	5 959.6	1 202.7	594.9	1 017.2	53 452.8
2009									
March	16 703.1	13 551.5	10 984.3	3 823.4	5 935.0	1 213.5	613.4	1 029.0	53 853.6

r revised

(a) Reference year for chain volume measures is 2006–07. See paragraph 30 of the Explanatory Notes. Note: Historical data have been revised as a result of changes to the survey design.

RETAIL TURNOVER, Chain Volume Measures(a)—By State

Quarter	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Total
ORIGINAL (% change from preceding quarter)									
2007									
March	-13.4	-14.1	-12.4	-12.1	-12.4	-10.8	-12.7	-13.8	-13.1
June	1.1	0.5	2.4	0.1	1.9	-0.2	11.8	4.7	1.4
September	3.8	1.4	7.1	0.9	1.5	1.3	10.1	-0.6	3.3
December	17.0	18.2	13.0	19.3	16.1	15.7	2.8	14.0	16.3
2008									
March	-15.8	-13.8	-14.0	-11.8	-16.1	-12.0	-15.2	-13.9	-14.6
June	-1.0	-0.6	-1.4	0.8	2.8	-0.8	12.5	2.1	-0.2
September	-1.0	0.6	6.6	2.2	2.2	2.0	12.0	-3.2	1.7
December	18.1	19.1	11.5	15.4	13.0	18.1	1.7	17.5	16.0
2009									
March	-13.9	-14.7	-14.5	-14.8	-15.4	-13.0	-13.1	-14.3	-14.4
SEASONALLY ADJUSTED (% change from preceding quarter)									
2007									
March	2.6	0.9	2.6	2.7	4.1	1.8	2.8	1.9	2.3
June	0.2	-0.7	2.2	-0.2	0.1	1.8	0.8	1.1	0.4
September	2.9	1.9	2.7	1.1	1.1	1.0	2.0	-0.3	2.2
December	0.5	1.7	1.1	2.3	0.3	0.0	4.2	0.2	1.0
2008									
March	-0.7	0.3	-0.4	2.2	-1.3	-0.5	-0.1	0.4	-0.2
June	-1.1	-1.4	-0.7	1.2	1.6	2.1	1.8	-0.7	-0.5
September	-1.9	1.5	1.9	2.1	1.5	1.4	3.5	-3.0	0.5
December	1.2	2.0	-0.3	-0.9	-2.2	1.8	3.1	3.0	0.6
2009									
March	2.5	0.0	0.4	0.0	0.8	0.1	3.5	1.4	1.0
TREND (% change from preceding quarter)									
2007									
March	1.4	0.3	2.0	1.3	2.4	1.2	1.4	1.9	1.4
June	1.8	0.7	2.5	1.1	1.7	1.5	2.0	0.9	1.6
September	1.5	1.2	2.2	1.2	0.5	0.9	2.3	0.2	1.4
December	0.7	1.1	1.0	1.7	-0.2	0.2	2.0	0.2	0.8
2008									
March	-0.5	0.3	0.1	2.2	0.3	0.3	1.8	-0.4	0.1
June	-1.5	0.0	0.0	1.7	0.5	1.2	1.9	-0.9	-0.2
September	-0.6	0.7	0.4	0.8	0.4	1.6	2.8	-0.4	0.2
December	0.5	1.1	0.5	0.3	-0.1	1.3	3.3	0.6	0.6
2009									
March	1.1	1.1	0.4	0.0	-0.4	0.9	3.1	1.2	0.7

(a) Reference year for chain volume measures is 2006–07. See paragraph 30 of the Explanatory Notes. Note: Historical data have been revised as a result of changes to the survey design.

EXPLANATORY NOTES

INTRODUCTION

1 This publication presents monthly trend estimates of the value of turnover of retail businesses classified by industry, and by state and territory. The estimates of turnover are compiled from the monthly Retail Business Survey (RBS).

2 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 62% of the total estimate ensures a highly reliable Australian total turnover estimate.

3 Quarterly chain volume measures at the state and industry levels are updated with the March, June, September and December issues of this publication.

SCOPE AND COVERAGE

4 The scope of the RBS is all employing businesses with at least one retail outlet. Like most Australian Bureau of Statistics (ABS) economic surveys, the frame used for the RBS 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 (as defined below) included on the ABS Business Register is classified to the Australian and New Zealand Standard Industrial Classification (ANZSIC) industry in which it mainly operates. The frame is supplemented with information about businesses which are classified as non-retail but which have significant retail activity.

5 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.

6 The following industries included in the survey are as defined in ANZSIC:

- Food retailing

- Supermarkets and grocery stores (5110) and non-petrol sales of convenience stores of selected petrol stations

- Liquor retailing (5123)

- Other food retailing

- Fresh meat, fish and poultry retailing (5121)

- Fruit and vegetable retailing (5122)

- Bread and cake retailing (5124)

- Specialised food retailing n.e.c. (5129)

- Department stores (5210)

- Clothing and soft good retailing

- Clothing retailing (5221)

- Footwear, fabric and other soft good retailing

- Footwear retailing (5222)

- Fabric and other soft good retailing (5223)

- Household good retailing

- Furniture and floor covering retailing

- Furniture retailing (5231)

- Floor covering retailing (5232)

- Domestic hardware and houseware retailing (5233)

- Domestic appliance and recorded music retailing

- Domestic appliance retailing (5234)

- Recorded music retailing (5235)

EXPLANATORY NOTES *continued*

SCOPE AND COVERAGE

continued

- Other retailing
 - Newspaper, book and stationery retailing (5243)
 - Other recreational goods retailing
 - Sport and camping equipment retailing (5241)
 - Toy and game retailing (5242)
 - Photographic equipment retailing (5244)
 - Pharmaceutical, cosmetic and toiletry retailing (5251)
 - Other retailing n.e.c.
 - Antique and used good retailing (5252)
 - Garden supplies retailing (5253)
 - Flower retailing (5254)
 - Watch and jewellery retailing (5255)
 - Retailing n.e.c. (5259)
- Cafes, restaurants and takeaway food services
 - Takeaway food retailing (5125)
 - Cafes and restaurants (5730).

STATISTICAL UNITS DEFINED ON THE ABS BUSINESS REGISTER

7 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.

8 The units model allocates businesses to one of two sub-populations. The vast majority of businesses are in what is called the ATO Maintained Population, while the remaining businesses are in the ABS Maintained Population. Together, these two sub-populations make up the ABS Business Register population.

ATO Maintained Population

9 Most businesses and organisations in Australia need to obtain an ABN, and are then included on the ATO Australian Business Register. Most of these businesses have simple structures; therefore the unit registered for an ABN will satisfy ABS statistical requirements. The businesses with simple structures constitute the ATO Maintained Population, and the ABN unit is used as the statistical unit for all economic collections.

ABS Maintained Population

10 For the population of businesses where the ABN unit is not suitable for ABS statistical requirements, the ABS maintains its own units structure through direct contact with each business. These businesses constitute the ABS Maintained Population. This

EXPLANATORY NOTES *continued*

ABS Maintained Population
continued

population consists typically of large, complex and diverse businesses. The statistical units model described below is used for these 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 (i) a single legal entity or business entity, or (ii) 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 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 are 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

11 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.

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

13 The July 2008 issue saw the introduction of a 'one in two out' strategy for collecting data from sampled units. Businesses in the sample sector were allocated evenly across the three months of a quarter with approximately 900 sample sector businesses included each month. These businesses were required to provide a monthly estimate of turnover for the month of the quarter to which they had been allocated. They were then not required to report data for the next two months i.e. a business allocated to the first month of a quarter were required to report a monthly estimate for the July and October reference months. This strategy ceased in October 2008.

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.

15 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.

EXPLANATORY NOTES *continued*

SURVEY METHODOLOGY *continued*

16 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 head office or main outlet.

DEFINITION OF TURNOVER

17 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.). From July 2000, turnover includes the goods and services tax.

COMPARABILITY OF ESTIMATES

18 Due to the increased sampling error and rotation of the 'one in two out' sampling methodology, detailed industry by state data for July to October 2008 were of limited use for measuring month to month movements and were suppressed. Due to the independent sample sectors selected for each month in a quarter, the monthly estimates could differ due to the businesses included in each sample. However, this methodology enabled reliable quarterly estimates to be derived from a small sample, while providing reliable broad level monthly trend estimates. In the March 2009 issue of this publication, modelled state by industry subgroup estimates for these months were introduced and are available from the Downloads tab of this issue.

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. increased spending in December as a result of Christmas) and trading day influences (arising from the varying length of each month and the varying number of Sundays, Mondays, Tuesdays, etc. in each month). Each influence is estimated by separate seasonal and trading day factors which, when combined, are referred to as the combined adjustment factors.

20 The seasonally adjusted estimates also have an allowance for an Easter proximity effect, which is caused when Easter falls late in March or early in April. This effect, when present, is combined with the seasonal and trading day factors to form the combined adjustment factors. There is also a similar allowance for the variable timing of Father's Day. See the Appendix of the July 2001 and August 2002 issues, respectively, of this publication for more information.

21 From the November 2008 issue, forward factors are used to seasonally adjust the Retail series. For more information about forward factors methodology, see *Information Paper: Introduction of Concurrent Seasonal Adjustment into the Retail Trade Series* (cat. no. 8514.0).

22 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 published monthly. The ARIMA model is assessed as part of the annual reanalysis. For more information on ARIMA modelling see *Feature article: Use of ARIMA modelling to reduce revisions in the October 2004 issue of Australian Economic Indicators* (cat. no. 1350.0).

23 The seasonal and trading day factors are reviewed annually at a more detailed level than possible in the monthly processing cycle. The annual reanalysis will not normally result in significant changes. For Retail Trade, the results of the latest review are normally included in the July issue.

EXPLANATORY NOTES *continued*

SEASONAL ADJUSTMENT AND TREND ESTIMATION *continued*

24 A "two-dimensional reconciliation" methodology has been used on the seasonally adjusted time series in this publication to force additivity - that is, to force the sum of fine-level (state by industry) estimates to be equal to the Australian total.

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 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 to analyse month-to-month movements.

26 The monthly trend estimates are derived by applying a 13-term Henderson moving average to the seasonally adjusted estimates (7-term for 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. A standard end-weight parameter 3.5 of the asymmetric moving average is used to produce trend estimates for all monthly Retail series. 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 (or three quarters). As a result of the improvement, most revisions to the trend estimates will be observed for the most recent six months (or three quarters).

27 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.

28 For further information on trend estimates, see *Information Paper: A Guide to Interpreting Time Series - Monitoring Trends, 2003* (cat. no. 1349.0) or contact the Assistant Director, Time Series Analysis on Canberra (02) 6252 6345 or by email at <time.series.analysis@abs.gov.au>.

ANALYSING TREND ESTIMATES

29 The following terms are used in this publication 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

30 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 2006–07. 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 latest incomplete year. Data for the 2007–08 financial year will initially be based upon price data for the 2006–07 financial year. Comparability with previous years is achieved by linking (or chaining) the series together to form a continuous time series. While current price estimates reflect both price and volume changes, chain volume estimates measure changes in value after the direct effects of price changes have been eliminated and hence only reflect volume changes. Further information on the nature and concepts of chain volume measures is

EXPLANATORY NOTES *continued*

CHAIN VOLUME MEASURES

continued

contained in the ABS publication *Information Paper: Introduction of Chain Volume Measures in the Australian National Accounts* (cat. no. 5248.0).

RELIABILITY OF ESTIMATES

31 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, see below. Sampling error for each month will be influenced by the rotation effect of having a different third of the sample reporting each month and by some businesses in each month being replaced by other businesses so that the reporting load can be spread across retailers.

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

32 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.

33 Estimates, in original terms, are available from the Downloads tab of this publication. 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.

34 To further assist users in assessing the reliability of estimates, key data series has 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 is reliable for movement analysis purposes.

35 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

	<i>Food retailing</i>	<i>Department Stores</i>	<i>Clothing and soft good retailing</i>	<i>Household good retailing</i>	<i>Other retailing</i>	<i>Cafes, restaurants and takeaway food services</i>	<i>Total</i>
RSE (%)	A	A	B	A	B	B	A

EXPLANATORY NOTES *continued*

STANDARD ERRORS *continued*

RELATIVE STANDARD ERRORS BY STATE

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

36 Standard errors for the Australian estimates (original data) for March 2009 contained in this publication are:

<i>Data Series</i>	<i>Estimate</i>	<i>Standard error</i>
Level of retail turnover (\$m)	18 663.2	140.3
Change from preceding month (\$m)	2 035.3	73.9
% change from preceding month (%)	12.2	0.5

RELIABILITY OF TREND ESTIMATES

37 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.

ABS DATA AVAILABLE ON REQUEST

38 As well as the statistics included in this and related publication, the ABS may have other relevant data available. Inquires should be made to the Retail Business Survey contact officer on (02) 6252 5990 or any ABS office.

RELATED PUBLICATIONS

39 Current publications and other products released by the ABS are available from the *Statistics View* of the ABS web site <<http://www.abs.gov.au>>. The ABS also issues a daily *Release Advice* on the web site which details products to be released in the week ahead.

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
RBS	Retail Business Survey
RSE	relative standard error
TAU	type of activity unit

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

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