



**INQUIRIES**

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**RETAIL SALES OF GOODS : AUSTRALIA  
DECEMBER 1976 (PROVISIONAL)**

**MAIN FEATURES**

**NOTE:** For various reasons, including those discussed below under *Reliability* and *Seasonal Adjustment*, care should be taken not to overemphasise the significance of changes in provisional estimates of retail sales between single months.

- The provisional estimate of the value of retail sales (excluding motor vehicles, parts, petrol, etc.) for December 1976 is \$2,388.0 m.
- Seasonally adjusted, the December 1976 estimate is 1.2% higher than November 1976.
- The value of retail sales (seasonally adjusted) for the three months ended December 1976 was 2.0% higher than the three months ended September 1976.
- On an approximate basis (the relationship of the old and new series at April 1976 – see paragraph 1 below) the value of retail sales (seasonally adjusted) in December 1976 was 13.5% higher than in December 1975.

**EXPLANATORY NOTES**

**Introduction**

All estimates in this bulletin are at current prices. Estimates are not made of monthly retail sales at constant prices. The table overleaf gives a provisional estimate of the total value of retail sales in Australia (excluding motor vehicles, parts, petrol, etc.) for the month of December 1976. This estimate is part of a new series of monthly estimates based on the 1973-74 Census of Retail Establishments. Figures for earlier months up to April 1976 on a basis comparable with the 1968-69 Census of Retail Establishments are also shown. The table includes percentage changes from the preceding month. For further details of the new series of estimates see monthly bulletin *Retail Sales of Goods : Australia* (Reference No. 11.6) of 13 July 1976.

**The Monthly Sub-Sample**

2. The provisional monthly estimates of retail sales are obtained from a sub-sample of those establishments

included in the quarterly sample of retail establishments. The monthly sub-sample is comparatively small since it is designed to provide prompt estimates of the total value of retail sales (excluding motor vehicles, parts, petrol, etc.) without placing an undue burden on either the resources of the Bureau or upon retail establishments. Monthly estimates are adjusted in accordance with final quarterly estimates as they become available.

**Reliability of Estimates**

3. As the provisional monthly estimates are derived from returns received from a sample of retail establishments they may differ somewhat from the results which would have been obtained from a comparable complete collection. A measure of the likely difference is given by the standard error of the estimate. The standard error of the provisional estimates of the total value of monthly retail sales (excluding motor vehicles, parts, petrol, etc.) is about 1.0 per cent.

4. The standard error of the month-to-month movement of the provisional estimates of the value of retail sales is generally about 0.3 per cent of the current monthly estimate. Since the proportionate movement in retail sales between November 1976 and December 1976 is 31.4 per cent and this has a standard error of 0.3 percentage points, this means that there are two chances in three that the true proportionate movement (as measured by a complete collection) was between 31.1 per cent and 31.7 per cent and nineteen chances in twenty that it was between 30.8 per cent and 32.0 per cent.

5. Estimates of retail sales are also subject to non-sampling errors. The major source of such possible error is the necessity to make forward estimates for every period to take account of the probable commencement of new retail businesses. These estimates can only be projected forward on the basis of past information obtained at regular annual intervals by new business censuses. However this information is of necessity approximately 1½ to 2 years out of date before the total estimates of retail sales can finally be adjusted and the adequacy of new business provisions assessed. The difficulty of making proper allowance for the value of retail sales of new businesses is increased in a period of substantial price increases.

**Seasonal Adjustment**

6. Seasonally adjusted statistics are also shown in

the table overleaf. In the seasonal adjustment, account has been taken of both normal seasonal factors and "trading-day" effects (arising from the varying numbers of Sundays, Mondays, Tuesdays, etc. in the month). While the normal seasonal factors should change only gradually from year to year, the trading-day adjustment for any month will vary from year to year in accordance with the combination of days which occur in the month. Adjustment has also been made for the effects of movement in the date of Easter and Australia Day. It should be noted that the seasonally adjusted figures still reflect the sampling and non-sampling errors to which the original figures are subject and do not remove random influences (e.g. abnormal weather, strikes). Details of the methods used in seasonally adjusting this

and other series are given in *Seasonally Adjusted Indicators 1976* (Reference No. 1.10) and the appendix to *Retail Sales of Goods* (Reference No. 11.4) June quarter 1976 of 16 November 1976.

#### Further Information

7. For further information relating to the basis of compilation of retail sales statistics see the quarterly bulletin *Retail Sales of Goods* (Reference No. 11.4) June quarter 1976 of 16 November 1976. All publications produced by the ABS are listed in *Publications of the Australian Bureau of Statistics* (Reference No. 1.8) which is available free of charge from any ABS office.

**TOTAL VALUE OF RETAIL SALES OF GOODS  
(EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.)  
MONTHLY ESTIMATES : AUSTRALIA (a)(b)**

|                         | 1974-75         |                               | 1975-76 |                               |         |                               | 1976-77    |                               |
|-------------------------|-----------------|-------------------------------|---------|-------------------------------|---------|-------------------------------|------------|-------------------------------|
|                         | (c)             | (c)                           | (c)     | (c)                           | (d)     | (d)                           | (d)        | (d)                           |
|                         | \$m             | % change from preceding month | \$m     | % change from preceding month | \$m     | % change from preceding month | \$m        | % change from preceding month |
| ORIGINAL                |                 |                               |         |                               |         |                               |            |                               |
| July                    | 1,278.6         | 5.7                           | 1,484.4 | 5.7                           |         |                               | (e)1,670.0 | 3.9                           |
| August                  | 1,334.8         | 4.4                           | 1,494.3 | 0.7                           |         |                               | (e)1,650.0 | -1.2                          |
| September               | 1,273.3         | -4.6                          | 1,512.1 | 1.2                           |         |                               | (e)1,662.0 | 0.7                           |
| October                 | 1,379.9         | 8.4                           | 1,644.2 | 8.7                           |         |                               | (e)1,715.0 | 3.2                           |
| November                | 1,429.4         | 3.6                           | 1,637.3 | -0.4                          |         |                               | (e)1,817.0 | 5.9                           |
| December                | 1,756.5         | 22.9                          | 2,149.1 | 31.3                          |         |                               | (e)2,388.0 | 31.4                          |
| January                 | 1,354.6         | -22.9                         | 1,576.1 | -26.7                         |         |                               |            |                               |
| February                | 1,263.6         | -6.7                          | 1,486.5 | -5.7                          |         |                               |            |                               |
| March                   | 1,354.1         | 7.2                           | 1,645.9 | 10.7                          |         |                               |            |                               |
| April                   | 1,442.0         | 6.5                           | 1,674.6 | 1.7                           | 1,609.9 |                               |            |                               |
| May                     | 1,548.0         | 7.4                           |         |                               | 1,671.4 | 3.8                           |            |                               |
| June                    | 1,404.2         | -9.3                          |         |                               | 1,607.0 | -3.9                          |            |                               |
| <b>Total for years</b>  | <b>16,819.0</b> |                               |         |                               |         |                               |            |                               |
| SEASONALLY ADJUSTED (f) |                 |                               |         |                               |         |                               |            |                               |
| July                    | 1,325.9         | 1.7                           | 1,533.2 | 1.7                           |         |                               | (e)1,704.0 | 0.6                           |
| August                  | 1,341.3         | 1.2                           | 1,537.8 | 0.3                           |         |                               | (e)1,717.0 | 0.8                           |
| September               | 1,344.6         | 0.3                           | 1,567.9 | 2.0                           |         |                               | (e)1,712.0 | -0.3                          |
| October                 | 1,358.0         | 1.0                           | 1,593.6 | 1.6                           |         |                               | (e)1,709.0 | -0.2                          |
| November                | 1,362.1         | 0.3                           | 1,614.8 | 1.3                           |         |                               | (e)1,753.0 | 2.6                           |
| December                | 1,356.4         | -0.4                          | 1,625.6 | 0.7                           |         |                               | (e)1,774.0 | 1.2                           |
| January                 | 1,404.0         | 3.5                           | 1,639.0 | 0.8                           |         |                               |            |                               |
| February                | 1,429.5         | 1.8                           | 1,657.9 | 1.2                           |         |                               |            |                               |
| March                   | 1,449.5         | 1.4                           | 1,712.6 | 3.3                           |         |                               |            |                               |
| April                   | 1,486.7         | 2.6                           | 1,705.2 | -0.4                          | 1,639.3 |                               |            |                               |
| May                     | 1,485.2         | -0.1                          |         |                               | 1,663.4 | 1.5                           |            |                               |
| June                    | 1,508.1         | 1.5                           |         |                               | 1,694.6 | 1.9                           |            |                               |

(a) Excludes Northern Territory and Australian Capital Territory. (b) Figures from April 1976 are subject to revision when more precise information is available relating to trading by new businesses. (c) Based on 1968-69 Census. (d) Based on 1973-74 Census. (e) Provisional estimate. (f) See paragraph 6, page 1.

Notes on sampling aspects and on seasonal adjustment are shown overleaf.