

WESTERN AUSTRALIAN STATISTICAL INDICATORS

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C O N T E N T S

	<i>page</i>
Notes	2
Overview	3

FEATURE ARTICLES

Interpreting Time Series Data	14
<i>"Time series data are helpful for analysing real world dynamics such as cyclical movements in economic markets. However, analysing original time series data can be difficult due to seasonal or other influences masking the true direction of the series. This article is therefore aimed at the general user of time series data. It aims to explain the basic concepts of time series analysis, discusses issues users should be aware of, and provides an indication of the most appropriate series to use in different circumstances."</i>	

TABLES

List of Tables	26
Summary of Statistical Indicators: Australian Comparison	28
State Accounts	29
Price Indexes	30
Consumption	34
Finance	36
Business Expectations	39
Construction	40
Trade	43
Agriculture	45
Mining	47
Energy	48
Tourism	49
Labour Market	50
Population	59
Crime	61

ADDITIONAL INFORMATION

Appendix 1: Index of feature articles published in <i>Western Australian Statistical Indicators</i>	63
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- For more information about these and related statistics, contact the National Information Service on 1300 135 070.

NOTES

FORTHCOMING ISSUES

ISSUE

RELEASE DATE

June 2002

11 July 2002

September 2002

9 October 2002

CHANGES IN THIS ISSUE

This issue contains a new table (Table 7 on page 34) which provides monthly statistics on New Motor Vehicle Sales (NMVS). From January 2002, these statistics replace the New Motor Vehicle Registration statistics, which have historically provided a proxy for vehicle sales. The NMVS statistics are based on data from the Federal Chamber of Automotive Industries. They include sales of passenger vehicles, trucks, buses, vehicles with diplomatic and consular plates, State/Territory and Commonwealth owned vehicles, and vehicles belonging to the defence forces, but exclude motor cycles, plant and equipment and unpowered vehicles. For further information, refer to Sales of New Motor Vehicles, Electronic Delivery (Cat. no. 9314.0.55.001), and *Information Paper: Developments in New Motor Vehicle Statistics* (Cat. no. 9313.0).

SYMBOLS AND OTHER USAGES

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
GST	Goods and Services Tax
n.a.	not available
n.e.c.	not elsewhere classified
n.p.	not available for publication but included in totals where applicable
n.y.a.	not yet available
p	preliminary figure or series subject to revision
r	figure or series revised since previous issue
TNTS	The New Tax System
—	nil or rounded to zero (including null cells).
..	not applicable
*	estimate has a relative standard error of between 25% and 50% and should be used with caution
**	estimate has a relative standard error greater than 50% and is considered too unreliable for general use

EXPLANATORY NOTES

The statistics shown are the latest available as at 27 March 2002. Explanatory notes of the form found in other ABS publications are not included in *Western Australian Statistical Indicators*. Readers are directed to the explanatory notes contained in related ABS publications.

INQUIRIES

For information about other ABS statistics and services, please refer to the back of this publication.

COLIN NAGLE

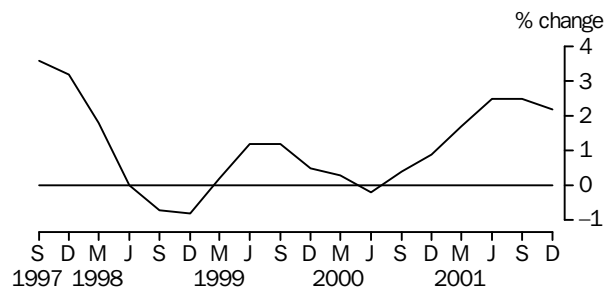
REGIONAL DIRECTOR, WESTERN AUSTRALIA

OVERVIEW

STATE FINAL DEMAND

State final demand (trend) in the December quarter 2001 increased by 2.2% (or \$367 million) to \$17,190 million, the sixth consecutive quarter of growth. Of this increase, 68% can be attributed to increased volume as opposed to increased prices. The rate of growth in State Final Demand slowed slightly in the December quarter 2001 in comparison with increases in the June and September quarters of 2.5%.

STATE FINAL DEMAND, Trend estimates—
Change from previous quarter



Significant factors contributing to the quarterly increase in State Final Demand were:

- continuing solid growth in household final consumption expenditure, up by \$135 million (or 1.4%) to \$9,555 million;
- on-going resurgence in new dwelling investment, increasing by \$78 million (or 8.2%) to \$1,027 million; and
- sustained investment in machinery and equipment, up by \$44 million (or 3.3%), and other buildings and structures, up \$30 million (or 4.5%) to levels last reached in the second half of 1999.

Marginally offsetting these increases was a \$20 million (or 5.0%) drop in intangible fixed assets, due in part to lower levels of mineral exploration expenditure.

Compared with the December quarter 2000, demand increased by 9.2% (or \$1,450 million), the highest annual increase since the March quarter 1998. The rate of annual growth strengthened over the 2001 calendar year, with 71% of the growth attributable to increased volumes as opposed to increased prices.

CONSUMER PRICE INDEX

Perth's Consumer Price Index (CPI) rose by 0.8% in the December quarter 2001, marginally below the increase in the weighted average of eight capital cities of 0.9%. All eight capital cities recorded a CPI increase in the December quarter 2001, Perth sharing the lowest increase with Hobart and Darwin.

Major contributors to the increase in the Perth December quarter 2001 CPI were:

- food (up 2.6%), particularly fruit prices (up 14.6%) and beef and veal prices (up 10.6%);
- household furnishings, supplies and services (up 1.8%), mainly due to the cost of furniture and other household supplies, both rising by 2.2%; and
- clothing and footwear (up 2.5%), with women's outerwear (dresses, blouses, suits, jeans and coats) rising by 4.3% and women's footwear by 6.3%.

Partially offsetting these increases were falls in:

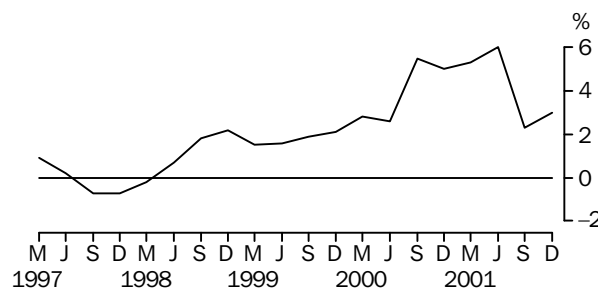
- transportation costs (down 1.2%), dominated by lower automotive fuel prices (down 4.1% in the December quarter 2001 after an 8.3% drop in the September quarter 2001) which could be attributed in part to diminished global demand for crude oil; and
- health (down 0.4%), due to a fall of 4.2% in the cost of pharmaceuticals as a result of the bi-annual adjustment to the government's pharmaceutical benefits scheme.

OVERVIEW *continued*

CONSUMER PRICE INDEX *continued*

Perth's CPI increased by 3.0% compared with the December quarter 2000, marginally lower than the increase for the weighted average of eight capital cities of 3.1%.

CONSUMER PRICE INDEX (ALL GROUPS), PERTH,
Change over corresponding quarter of previous year



The largest increase was in food prices (up 7.5%), mainly for lamb and mutton (up 26.2%) and beef and veal (up 23.6%). Large price increases were also recorded for alcohol and tobacco (up 4.7%), recreation (up 4.4%) and miscellaneous items such as insurance services, personal care and child care (also up 4.4%). Price decreases were recorded for transportation (down 0.8% with the cost of automotive fuel falling by 11.1%), and clothing and footwear (down 0.5% with men's outerwear falling 7.3%).

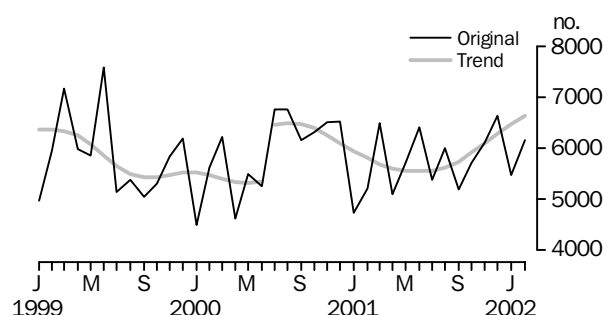
CONSUMPTION

New Motor Vehicle Sales

The number of new motor vehicles sold (trend) in February 2002 increased by 2.5% to 6,636, the eighth consecutive month of growth after sales reached a low in June 2001 of 5,555 vehicles. The increase in sales has been slightly higher for Passenger vehicles than Other vehicles; the monthly growth rate over the last six months averaging 2.9% and 2.6% respectively. By comparison, the average monthly growth rate in sales for Australia for both Passenger vehicles and Other vehicles has been lower at 1.5% and 2.3% respectively.

The level of new motor vehicle sales in February 2002 exceeds the high recorded in August 2000 (6,503 sales). The August 2000 figure was affected by buyers holding back their purchases until after the introduction of the GST (on 1 July 2000) when abolition of the wholesale sales tax was expected to result in lower vehicle prices.

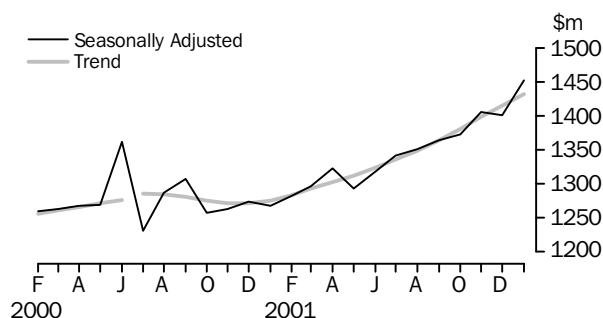
NEW MOTOR VEHICLE SALES



Retail Trade

Western Australia's retail industry continues to record strong growth, with retail turnover (trend) in January 2002 increasing by 1.2% to \$1,432.8 million. Over the last six months, Western Australia has recorded higher monthly growth rates than all other States and Territories. The average monthly growth for Western Australia over the last six months was 1.2% compared with 0.5% for Australia. The Northern Territory recorded the next highest average monthly increase over the last six months, of 0.8%.

MONTHLY RETAIL TURNOVER



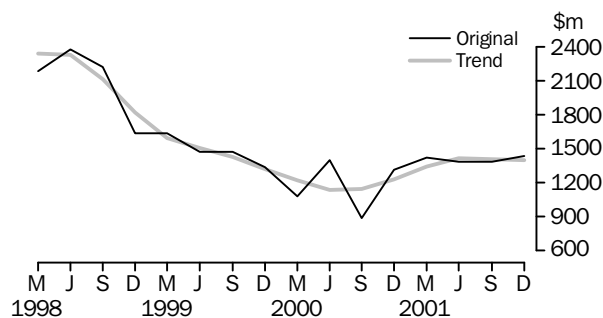
Western Australia's retail turnover (trend) over the three months to January 2002 increased by \$51.0 million. Growth has been dominated by increases in Hospitality and services turnover (including pubs, taverns, bars, cafes, restaurants and clubs), up \$18.3 million (or 10.9%) to \$186.3 million; and Food retailing turnover, up \$16.2 million (or 2.8%) to \$598.1 million.

While a significant impetus for the growth in Western Australia has come from the Hospitality and services industry, nationally, the industry has experienced a decline, down by \$55.3 million (or 2.3%) over the three months to January 2002. This is due mainly to decreases in retail turnover of 6.2% in Queensland and 4.6% in New South Wales over this period.

PRIVATE NEW CAPITAL EXPENDITURE

In trend terms, business investment in Western Australia has been in modest decline over the two quarters to December quarter 2001 after four consecutive quarters of positive growth. Private new capital expenditure decreased by \$8 million (0.6%) in the December quarter 2001 following a \$6 million (or 0.4%) decrease in the September quarter 2001. Nevertheless, the level of investment in the December quarter 2001 is a substantial \$172 million (or 14.0%) higher compared with the December quarter 2000. Nationally, private new capital expenditure has been steadily increasing over the last three quarters, rising by 2.7% in the December quarter 2001.

PRIVATE NEW CAPITAL EXPENDITURE



The recent decline in private new capital expenditure (trend) is the result of reduced investment in equipment, plant and machinery, which was down by 1.0% in the December quarter 2001 to \$959 million. By contrast, expenditure on buildings and structures increased for the fourth consecutive quarter, up by 0.5% in the December quarter 2001 to \$445 million.

In original terms, private new capital expenditure in the December quarter 2001 increased by \$55 million (or 46.6%) in the Manufacturing industry and by \$39 million (or 8.8%) in Other selected industries (which includes Retail trade, Property and business services and Construction). This more than compensated for a drop in expenditure by the Mining industry of \$48 million (or 5.8%).

OVERVIEW *continued*

BUSINESS EXPECTATIONS

Short-term: The expectations of business in Western Australia for the June quarter 2002 are more optimistic compared with the previous quarter. Operating income and profit are expected to grow by 0.2% and 0.4% respectively. For profits, in particular, this represents a marked turnaround from the 16.8% collapse in profits expected in the March quarter 2002. The expectation for selling prices is for continued decline, but by a smaller amount (0.1% compared with 0.9% for the March quarter 2002).

For the sixth consecutive quarter, business expects employment levels to contract, although the expectation for the June quarter 2002, at 0.4%, is less than half the decrease expected the previous quarter.

The expected increase in capital expenditure of 6.2% for the June quarter 2002 is the highest in almost four years. Investment on inventories, however, is expected to decline by 0.7%.

Medium-term: The medium-term expectations reflect a positive outlook for business in Western Australia. Full-time equivalent employment in the March quarter 2003 is expected to remain unchanged compared with the March quarter 2002. All other performance indicators are expected to increase over this period. Expectations for trading performance are being led by a 10.0% increase in profits and a 2.6% increase in operating income with selling prices increasing by a more subdued 0.3%.

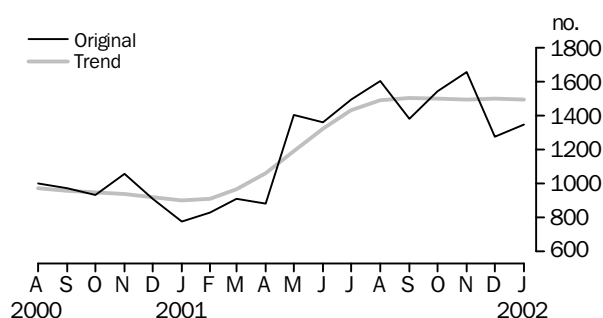
A 4.4% increase in capital expenditure is driving investment expectations, while inventories are expected to increase marginally by 0.2%.

CONSTRUCTION

Building Approvals

The number of house approvals (trend) has dropped marginally, to 1,497 in January 2002, after peaking at 1,506 in September 2001. The sustained level of approval activity over this period coincides with an environment of low interest rates and the availability of the First Home Owner Grant (FHOG) of \$14,000 for contracts signed for the purchase on new houses before 31 December 2001 and \$10,000 for contracts signed from 1 January 2002.

NUMBER OF DWELLINGS APPROVED, Houses



Although there has been a marginal decline in house approvals over the last four months, January 2002 approvals are up by 65.8% compared with the 10 year low recorded in January 2001 of 903 new houses.

The number of monthly approvals of dwellings other than houses (trend) has been in decline since peaking at 267 dwellings in August 2001. There were 186 other dwellings approved in January 2002, the lowest recorded since June 1997 and 11.8% below the level recorded in January 2001.

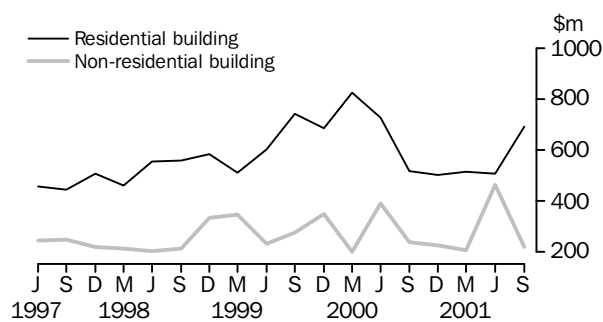
OVERVIEW *continued*

The value of non-residential building approvals (original) in January 2002 increased by 55.1% compared with December 2001 to \$88.1 million. The increase was due to a significant rise in the value of public sector non-residential building approvals, up from \$3.9 million to \$37.1 million (mainly in Educational building and Entertainment and recreational building approvals). The trend value of non-residential building approvals has been steadily increasing after a low in September 2001, growing by a monthly average of 9.6% over the four months to January 2002.

Building Activity

The strong resurgence in house approvals since April 2001 has begun to translate to a recovery in residential building activity. The value of residential building commencements in the September quarter 2001 (\$694.1 million) rose by 36.0% compared with the June quarter 2001 (\$510.2 million) and 33.8% compared with the September quarter 2000 (\$518.8 million). The September quarter 2001 increase over the June quarter 2001 was due to a 45.4% (or \$198.2 million) increase in new residential building, while alterations and additions detracted from this result, falling by 19.4% (or \$14.3 million).

VALUE OF BUILDING ACTIVITY COMMENCED



The value of residential building, either under construction at the end of the September quarter 2001 or completed during the September quarter 2001, increased compared with the June quarter 2001. Residential building under construction increased by \$87.2 million (or 6.4%) to \$1,447.7 million, while the value of completed residential building increased by \$30.5 million (or 5.1%) to \$623.8 million.

In contrast to residential building, the value of non-residential building commenced in the September quarter 2001 (\$219.9 million) was down 52.6% compared with the June quarter 2001. The decrease was primarily driven by a decline of 76.3% (or \$165.8 million) in the value of office commencements following a high value in the previous quarter. The value of non-residential building under construction at the end of September quarter 2001 was \$943.2 million. This value has increased in each of the last two quarters, buoyed by construction of a large office project and of education-related buildings.

Compared with the September quarter 2000, the value of non-residential building commencements in the September quarter 2001 declined by \$18.0 million (7.6%) while the value of non-residential building under construction increased by 13.8% to a 10 year high of \$943.2 million.

FINANCE

The number of housing finance commitments made for the construction or purchase of dwellings (trend) rose by 1.2% (or 80 commitments) to 6,524 in January 2002. This was the third consecutive month of growth. Compared with January 2001, the number of dwellings financed has risen by 15.4% (or 872 commitments). The value of total lending commitments to individuals (excluding alterations and additions) also rose for the third consecutive month by 1.7% in January 2002 to \$839 million.

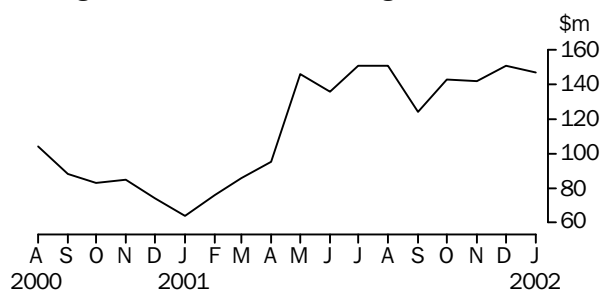
OVERVIEW *continued*

FINANCE *continued*

In January 2002, the value of the lending commitments for the construction of dwellings declined by 2.6% (or \$4.0 million) to \$147 million. This followed a 6.3% rise in December 2001, the last month of the \$14,000 FHOG scheme. The value of lending commitments for the purchase of newly erected dwellings was also down in January 2002, by 8.7% (or \$2 million) to \$21 million.

The FHOG scheme has had a positive influence on the level of lending commitments for the construction of dwellings and purchase of newly erected dwellings. Lending commitments for the three months to January 2002 were valued at \$508 million, an increase of 91.0% compared with commitments for the three months to January 2001 (\$266 million).

HOUSING FINANCE COMMITMENTS, Lending for the construction of dwellings



The value of lending commitments over the three months to January 2002, for the purchase of established dwellings and for alterations and additions, are significantly above levels recorded over the three months to January 2001, up by 30.1% (or \$350 million) and 33.3% (or \$28 million) respectively. Over the same period, the value of lending commitments for refinancing of existing dwellings has declined, by 6.6% (or \$30 million).

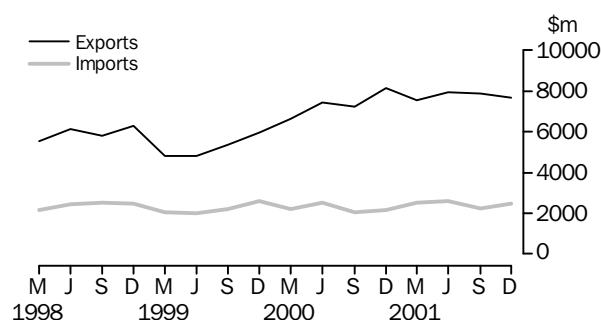
The number of dwellings financed by first home buyers (original) over the three months to January 2002 was slightly lower compared with the three months to October 2001, down by 41 dwellings (or 0.9%), although the value of commitments rose over the same period by \$13 million (or 2.2%). As a consequence, the average borrowing size for first home buyers has increased, from \$121,800 in October 2001 to \$130,700 in January 2002. Activity by other than first home buyers has been increasing, up by 111 dwellings (0.8%) and \$86 million in commitments (4.9%) over the three months to January 2002 compared with the three months to October 2001.

TRADE

Western Australia's trade surplus was \$5,199 million in the December quarter 2001, down 7.8% from the September quarter 2001. The decline is the result of an increase of 11.0% (or \$247 million) in the value of merchandise imports coupled with a decrease in exports of 2.4% (or \$193 million), with some commentators attributing the export decline to a slowing global economy.

The slight devaluation of the Australia dollar against the currencies of most of the State's major trading partners (except Japan) from the September quarter 2001 to the December quarter 2001 has placed upward pressure on the cost of merchandise imports. The decrease in the value of exports was mainly due to a decrease in the average price received for exports, particularly mineral fuels and manufactured products.

VALUE OF WESTERN AUSTRALIA'S MERCHANDISE TRADE



Although Western Australia recorded a fall in the quarterly trade surplus, over the 2001 calendar year the trade surplus (\$21,215 million) was much stronger than in 2000 (\$20,539 million) and in 1999 (\$12,185 million).

Exports

The value of Western Australian exports decreased by 2.5% to \$7,692 million in the December quarter 2001, with the export price index down by 1.7% from the September quarter 2001. Principal commodities contributing to the decrease in export value were Mineral fuels, lubricants and related materials (particularly Petroleum and petroleum products) which were down by \$234 million to \$1,937 million. According to the WA Department of Mineral and Petroleum Resources, the decline in export value for mineral fuels and lubricants was the result of lower world oil prices, which eased substantially (on average by 15%) over the course of 2001.

Decreases in the value of exports were also recorded for:

- Crude materials (such as hides, skins, crude rubber, cork, wood, textile fibres, etc), down by \$76 million. This decrease was mainly due to an \$85 million drop in the value of exports of Metalliferous ores and metal scrap; and
- Manufactured goods (down by \$63 million), just over half of which was due to decreases in Non-ferrous metal exports.

These decreases were partially offset by increased exports of Food and live animals, which rose by 32.1% (or \$197 million) in the December quarter 2001. This was mainly due to increased Cereal exports (up by \$109 million).

Over the 2001 calendar year, the total value of exports was \$1,583 million higher than in 2000. All commodity groups except Food and live animals and Animal and vegetable oils and fats recorded increased exports in 2001.

Western Australia's largest trading partner, Japan, received only marginally higher exports in 2001. Of the remaining top ten trading partners, the value of exports to Hong Kong more than doubled (from \$388 million in 2000 to \$822 million in 2001), exports to the United Kingdom increased by 42.3% (from \$1,112 million in 2000 to \$1,582 million in 2001) and exports to China were up by 39.1% (from \$2,249 million in 2000 to \$3,130 million in 2001).

Imports

The value of imports into Western Australia increased by 11.0% in the December quarter 2001 to \$2,493 million. Commodities which contributed to this increase were:

- Non-monetary gold imports, up by \$145 million;
- Chemicals and related products, up by \$54 million, mainly due to increased imports of Medicinal and pharmaceutical products (up by \$34 million); and

OVERVIEW *continued*

Imports *continued*

- Machinery and transport equipment, up by \$40 million, mainly due to increases in General industrial machinery and equipment (up by \$28 million), Office machines and data processing machines (up by \$14 million), and Telecommunications and sound recording apparatus (up by \$12 million). The increases were offset by a decrease in Specialised machinery imports (down by \$21 million).

Imports into Western Australia in the 2001 calendar year were almost one billion dollars higher than in 2000, due mainly to higher imports of Non-monetary gold (up \$223 million), Mineral fuels (up \$185 million) and Chemical and related products (up \$101 million).

Comparing the 2000 and 2001 calendar years, there was a slight drop in the value of imports from the State's top import trading partner, the United States of America, down \$63 million in 2001. This decrease was more than offset by a twofold increase in the value of imports from Indonesia (\$336 million in 2000 to \$1,013 million in 2001), as a result of a \$331 million increase in petroleum imports and a \$312 million increase in non-monetary gold imports.

MINERAL EXPLORATION

Expenditure on mineral exploration in Western Australia decreased by 8.2% in the December quarter 2001 to \$94.8 million. The decrease was driven by a \$4.4 million fall in expenditure on gold exploration.

Mineral exploration expenditure has been on the decline. In the six months to December 2000, expenditure totalled \$222.4 million. During the following six months (to June 2001), expenditure dropped to \$201.7 million due mainly to an \$8.7 million fall in exploration for base metals. Expenditure in the six months to December 2001 dropped further to \$198.1 million, a \$10.7 million decrease in gold exploration expenditure the main factor. This decline coincides with relatively poor international gold prices and lower world commodity prices for base metals, particularly copper and zinc during 2000–2001 (as reported by the WA Department of Mineral and Petroleum Resources).

MINERAL PRODUCTION

Diamond production in Western Australia dropped by 31.4% in the December quarter 2001 after an almost 3-year high of 8.0 million carats in the September quarter 2001. The WA Department of Mineral and Petroleum Resources attributes the fall to a decline in demand from the Indian cutting and polishing industry due to a weakening of the United States market.

Production volumes for other minerals were also down over the December quarter 2001, although the decreases were relatively small (6.0% for Nickel; 4.8% for Bauxite; 4.6% for Ilmenite; and 0.7% for Iron ore).

Diamond production recorded the most notable decrease in the 2001 calendar year compared with 2000 (10.6% lower at 23.7 million carats) while Nickel production recorded the largest increase (18.7% higher at 197,000 tonnes).

TOURISM

Tourist Accommodation

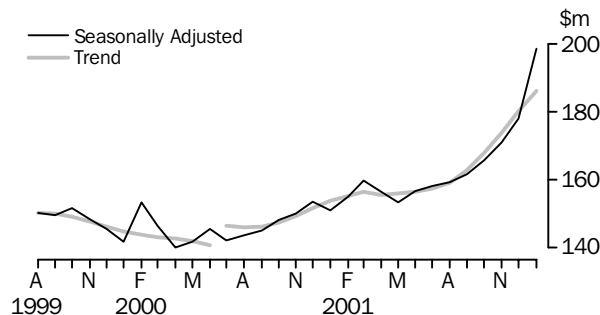
Comparing the December quarters of 2000 and 2001, the number of hotels, motels, guest houses and serviced apartments in Western Australia has fallen by 3.3% (or 11 establishments); the number of guest rooms is down by 1.0% (or 197 guest rooms); room occupancy rates have declined by 2.2 percentage points to 55.0%; the value of takings from accommodation is down 6.6% to \$99.2 million; and employment has dropped by 6.8% (or 707 persons) to 9,736. The WA Tourism Commission believes that the industry downturn can be partially attributed to the difficulties in the domestic airline industry. The Western Australian Tourism Council have also indicated that increases in public liability insurance premiums since the September 11 terrorist attacks on the United States have also had an adverse effect on Western Australian tourism.

OVERVIEW *continued*

Hospitality

Monthly retail turnover (trend) in the Western Australian hospitality and services industry (which includes Pubs, taverns and bars; Cafes and restaurants; Clubs; Video hire outlets; and Hairdressing and beauty salons) increased by 3.3% in January 2002, to \$186.3 million. Compared with January 2001 (\$153.9 million), hospitality and services turnover has increased by 21.1%. Nationally, the hospitality and services industry turnover decreased by 0.8% in January 2002 whereas, compared with January 2001, there was an increase of 3.3%.

HOSPITALITY AND SERVICES INDUSTRY RETAIL TURNOVER



Employment in the Accommodation, cafes and restaurants industry (which includes Accommodation; Pubs, taverns and bars; Cafes and restaurants; and Clubs) decreased by 4.2% (or 2,000 persons) to 45,900 in February 2002 compared with November 2001. The decrease was the result of 2,600 less employed females in the industry offset by 600 more employed males. Compared with February 2001, employment in the Accommodation, cafes and restaurants industry is up by 3,400 persons (or 8.0%), the majority (2,400) of which are female employees.

THE LABOUR MARKET

Employment

In trend terms, the number of employed persons in Western Australia has been growing over each of the eight months to February 2002. The monthly growth rate over this period has averaged 0.15% (or 1,375 employed persons). The national monthly growth rate was 0.14%. In February 2002, there were 948,500 employed Western Australians, 1,500 more than in January 2002.

Since May 2001, the number of full-time male employees (trend) has increased from 451,900 to be 461,700 in February 2002. For the same period, the number of full-time female employees has decreased, from 213,000 to 204,300 in February 2002.

Over the 12 months to February 2002, the total labour force has increased by 8,300 persons. The rise was driven by an 8,700 increase in the number of males, partly offset by a decrease of 400 females. The increase of 8,700 males in the labour force, together with a decrease in their unemployment rate (down by 0.3 percentage points), has seen the number of employed males rise by 10,100. In contrast, the exit of 400 females from the labour force together with an increase of 0.4 percentage points in their unemployment rate has resulted in a fall of 2,100 employed females over this period.

Industry Employment

Over the three months to February 2002, the largest growth in employment in percentage terms was recorded in the Mining industry (up 23.1% to 35,700 employees). Employment in this industry has almost returned to levels of a year ago (36,400 employees) after declining during 2001. Strong employment growth was also recorded in the Communication services industry, increasing 20.4% to 13,600 employees. As experienced by the Mining industry, the Communication services industry has almost returned to the same level of employment recorded in February 2001 (13,700 employees) after a decline in the second half of 2001.

OVERVIEW *continued*

Industry Employment *continued*

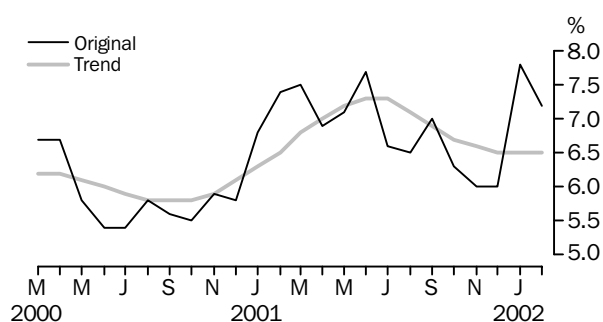
By contrast, the number of employees in the Personal and other services industry dropped by 22.6% in February 2002, down 11,600 employees to 39,700. Of this decrease, 68.1% can be attributed to a decline in the number of male employees.

Unemployment

The number of unemployed persons has been declining, down from 74,200 in June 2001 to 65,800 in February 2002. Over this period, there has been an overall increase in the number of persons in the labour force, from 1,011,700 persons to 1,014,300.

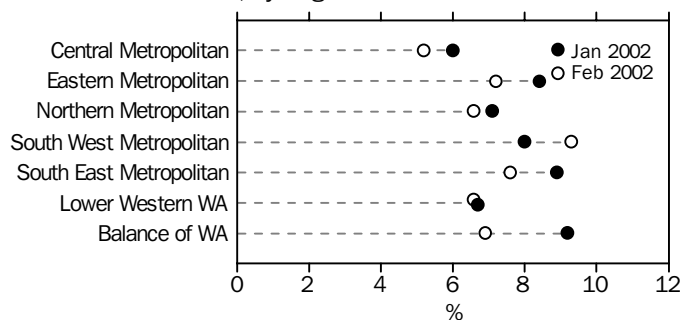
The unemployment rate (trend) in Western Australia has been in decline since peaking at 7.3% in June and July 2001. Over the three months to February 2002, the rate has remained steady at 6.5%. Nationally, the trend unemployment rate for February 2002 was 6.7%.

UNEMPLOYMENT RATE



Across all regions in Western Australia, the unemployment rate in February 2002 was lower than the previous month, the one exception being the South West Metropolitan region. The number of unemployed persons in the South West Metropolitan region increased by 14.3% in February 2002.

UNEMPLOYMENT RATE, By Region



In February 2002, there were 13,500 long-term unemployed persons in Western Australia (persons who had been unemployed for 52 weeks or more since their last employment). This figure has been increasing since October 2001 to be 31.1% higher in February 2002.

Youth Unemployment

The unemployment rate for persons aged 15 to 19 years (youths) dropped 1.3 percentage points, from 17.3% in January 2002 to 16.0% in February 2002. This drop is not typical of previous unemployment rates in February, the current decrease being the first for six years. While the unemployment rate for youths looking for full-time work remained unchanged from January 2002 to February 2002 at 23.0%, the unemployment rate increased for males (from 16.7% to 19.4%) and decreased for females (from 32.3% to 30.0%). While this trend was also recorded nationally, the differences were smaller.

Job Vacancies

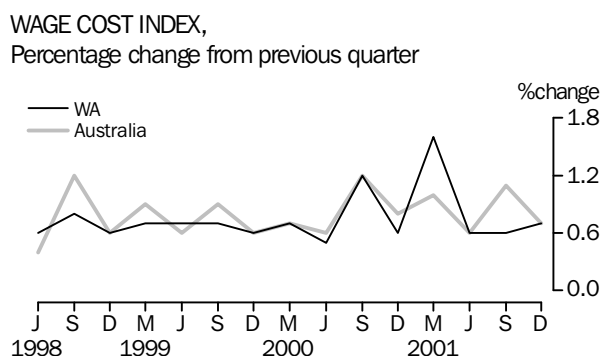
Job vacancies in Western Australia fell by 35.2% in November 2001, to a six year low of 6,200 vacancies. This compares with 8,600 vacancies in November 2000 and equates to 1 vacancy for every 10 persons looking for work (unemployed persons).



The low level of job vacancies in November 2001 was due to a fall in private sector vacancies, which was the lowest since 1993. Public sector vacancies, however, increased slightly from August 2001. Nationally, job vacancy estimates fell by 9.9% to 83,500 in November 2001, driven by an 11.0% drop in private sector job vacancies.

Wages

The index of total hourly rates of pay (excluding bonuses) for Western Australia increased by 0.7% in the December quarter 2001, the size of the increase being consistent with growth in previous December quarters. Nationally, the increase was also 0.7%. Over the 2001 calendar year, wages grew by 3.6% in Western Australia, slightly higher than the 3.5% growth reported in New South Wales and South Australia and the 3.4% growth reported nationally.



The Health and community services industry in Western Australia reported the highest wage increase (1.4%) in the December quarter 2001. Compared with the December quarter 2000, this industry also reported strong wages growth (3.8%), which anecdotal evidence suggests may be linked to a shortage of workers in this industry.

The lowest quarterly increase (0.3%) was for Education employees, who typically record low wages growth in the December quarter. Comparing December quarter 2001 with December quarter 2000, Education employees received the highest wage increase at 5.4% with the only other industry reporting above 4% wages growth being the Manufacturing industry (up 4.1%).

Among occupations, Labourers and related workers recorded the highest quarterly movement, up 1.4% and double the movement reported nationally (0.7%). Comparing the December quarters of 2000 and 2001, Professionals recorded the highest wage movement for both Western Australia and Australia, up 5.4% and 4.1% respectively, while Managers and administrators in Western Australia recorded the lowest wages growth (1.7%).

FEATURE ARTICLE – Interpreting Time Series Data

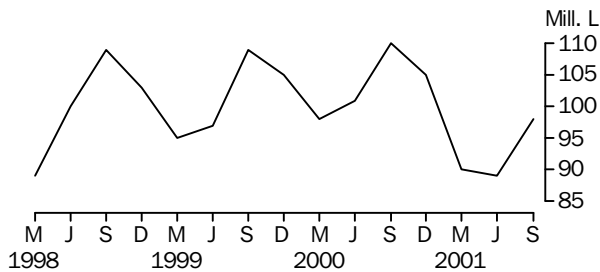
INTRODUCTION

Users of statistics regularly analyse time series data in an attempt to understand real world dynamics. For example, changes in the characteristics of the population, cyclical movements in economic markets, etc. This type of analysis is difficult when examining the original data as there can be seasonal or other influences masking the true direction of the series. For this reason, the ABS publishes seasonally adjusted and trend data for many of its series. While publication of these additional series can be extremely useful to the experienced analyst, it may result in some confusion for the general user in terms of understanding what each series is indicating. This article aims to explain the basic concepts of time series analysis, discuss issues users should be aware of, and provide an indication of the most appropriate series to use in different circumstances.

WHAT IS A TIME SERIES?

A *time series* is a collection of well-defined data points that have been measured at regular intervals of time. For example, the number of litres of milk produced each quarter would be a time series because a litre of milk is a well-defined concept and each measurement is taken over a period of three months.

WHOLE MILK INTAKE BY FACTORIES, Western Australia



Source: *Livestock Products, Australia* (Cat. no. 7215.0)

Data which are collected irregularly or only once cannot be defined as a time series. For example, a one-off count of the total number of persons who received the government's \$14,000 First Home Owner Grant is not a time series.

TYPES OF TIME SERIES

Time series can be classified as being either a *stock* or a *flow* series, depending on the type of measurements being taken.

Stock series are measures, or counts, taken at a point in time. For example, the number of bicycles in a store on a particular day. This figure will change from day to day depending on the amount of stock received that day and the number of bicycles sold. Similarly, the Labour Force Survey takes stock of the number of people employed in a particular reference week and is therefore considered to be a stock series.

Flow series are measures of activity over a given period of time. For example, the number of bicycles sold by a store in a particular month. This figure will change day by day, depending on the number of bicycles sold each day. At the end of the month, the total number of sales can be calculated. Similarly, the number of new motor vehicle sales each month is the sum of all new motor vehicles sold during each day of the month.

The main difference between a stock and a flow series is that a flow series can be affected by trading day effects (see Trading Day Effect section on page 16 for further information). Apart from this, both stock and flow series are treated in much the same way in the time series analysis process.

FEATURE ARTICLE – Interpreting Time Series Data *continued*

COMPONENTS OF A TIME SERIES

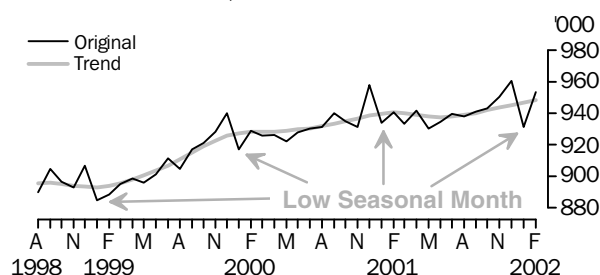
A time series can be thought of as comprising three separate components:

- the trend,
- any calendar related effects, and
- the residual effects.

The trend component is a measure of the underlying behaviour of the series over time. That is, whether the series is generally increasing, decreasing or remaining stable over time. This underlying behaviour could be due to influences such as population growth, price inflation or general economic development, and can often be hidden in the original time series data by the calendar related and/or residual effects.

For example, consider the original data in the figure below. A superficial examination of the data at the current end of the series would suggest that the number of employed persons in WA has taken a downward turn in January 2002. However, upon further examination, it can be seen that there is also a downward turn for the previous three Januaries, which would indicate that there may be a seasonal factor influencing the original data. The fact that January appears to be a low seasonal month could be caused, for example, by a high number of employees ending their contracts in January after working over the Christmas period. An examination of the underlying behaviour of the series shows that the number of employed persons in WA has actually remained relatively stable over most of 2001 and, if anything, the series seems to be slowly increasing, not decreasing.

EMPLOYED PERSONS, Western Australia



Source: Labour Force, Australia, Preliminary (Cat. no. 6202.0)

CALENDAR RELATED EFFECTS

Calendar related effects are systematic influences on the source data. They are predictable and persistent, and are sometimes referred to as 'seasonal effects' even though they encompass more than just seasonality. The four main types of calendar related effects are:

- seasonal effects;
- trading day effects;
- moving holiday effects; and
- other systematic effects.

Seasonal Effects

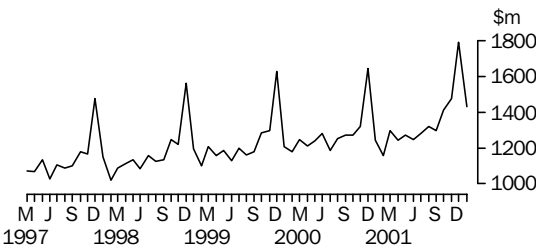
Seasonal effects are factors which recur one or more times per year. They are reasonably stable with respect to annual timing, consistent direction and predictable magnitude. They can be due to natural factors (eg. seasons, harvests), administrative or legal matters (eg. tax payments) or social traditions (eg. Christmas).

For example, the following figure shows large increases in the December retail turnover figures over the last five years. These increases are most likely due to increased Christmas spending in December.

FEATURE ARTICLE – Interpreting Time Series Data continued

Seasonal Effects continued

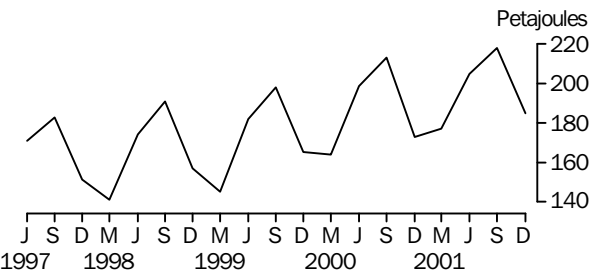
MONTHLY RETAIL TURNOVER, Western Australia



Source: Retail Trade, Australia (Cat. no. 8501.0)

The presence of seasonal effects can also be seen in the following gas production graph. There are distinct increases each winter, when gas heating is in high demand, and marked decreases over the summer months.

QUARTERLY GAS PRODUCTION, Australia



Source: Manufacturing Production, Australia (Cat. no. 8301.0)

Trading Day Effect

A trading day effect is caused by the number of high and low activity days in a given month. That is, since each month in the year has 28 days, plus one, two or three extra days, time series data can be affected by whether these extra days are high or low activity days. For example, in a 31 day month, if the three extra days were Sunday, Monday and Tuesday, then it would be expected that less retail sales would be recorded than if the three extra days were Thursday, Friday and Saturday, since there is generally a higher level of retail activity towards the end of the week.

Series are also affected by the varying number of extra days in the month. For example, suppose that a factory's average production of jelly beans has the following distribution.

AVERAGE JELLY BEAN PRODUCTION

Day of Week	Number
Sunday	0
Monday	4 000
Tuesday	6 000
Wednesday	6 000
Thursday	5 000
Friday	3 000
Saturday	0
Weekly Total	24 000

FEATURE ARTICLE – Interpreting Time Series Data continued

If the above distribution remains consistent from year to year, then the only difference between the production of jelly beans in the same month across different years will be due to the activity on the extra days. As shown below, the number of working days in March 1999, March 2000, March 2001 and March 2002 were 23, 23, 22 and 21 respectively, and the extra working days were Monday, Tuesday & Wednesday in 1999, Wednesday, Thursday & Friday in 2000, Thursday & Friday in 2001, and Friday in 2002.

MARCH 1999						
Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

MARCH 2000						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

MARCH 2001						
Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

MARCH 2002						
Su	Mo	Tu	We	Th	Fr	Sa
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Knowing the distribution of the factory's jelly bean production, the average number of jelly beans produced in each full four week period would be 24,000 x 4 = 96,000 and, hence, the total production of jelly beans in each March would have been:

TOTAL JELLY BEAN PRODUCTION	
March	Total number of jelly beans produced
1999	96 000 + 4 000 (Mo) + 6 000 (Tu) + 6 000 (We) = 112 000
2000	96 000 + 6 000 (We) + 5 000 (Th) + 3 000 (Fr) = 110 000
2001	96 000 + 5 000 (Th) + 3 000 (Fr) = 104 000
2002	96 000 + 3 000 (Fr) = 99 000

Moving Holiday Effect

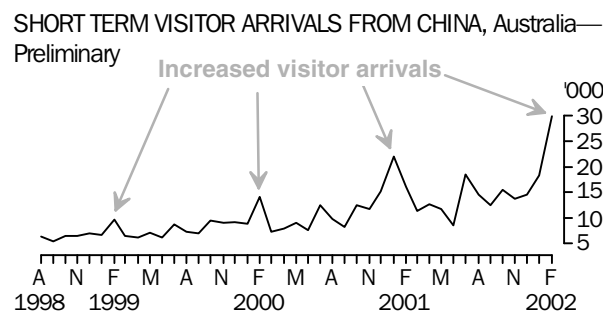
Moving holiday effects are caused by regular holidays which do not occur at the same time each year. For example, both Easter and Chinese New Year occur once a year but, since they follow the cycles of the moon, the exact month in which they occur can vary.

In most years, Easter falls in April, but can occur in March or March/April. The effects of Easter can be expected to be seen in confectionery production figures and tourism series as many people travel over the Easter holidays.

FEATURE ARTICLE – Interpreting Time Series Data *continued*

Moving Holiday Effect *continued*

Similarly, Chinese New Year normally occurs in February, but will sometimes fall in late January. Effects from this holiday are evident in Overseas Arrivals and Departure series from some Asian countries as many people travel over this holiday period. For example, the following graph shows short term visitor arrivals from China. Chinese New Year started on 16 February in 1999, 5 February in 2000, 24 January in 2001 and 12 February in 2002. Correspondingly, sharp increases in visitor arrivals can be seen in February 1999, February 2000, *January 2001* and February 2002.



Source: Overseas Arrivals and Departures, Australia (Cat. no. 3401.0)

Moving holidays can also affect data for months or quarters adjacent to the one where the holiday falls. This is called a *proximity effect* and will occur if the holiday falls close to the beginning or end of the month or quarter of interest. For example, the Retail Trade series is sometimes adjusted for an Easter proximity effect, depending on whether Easter falls in late March or early April.

Other Systematic Effects

Other systematic effects can have an impact on time series. For example, government social security payments are typically paid fortnightly. In some months, this will result in two payments and in other months there will be three. A series measuring the total monthly government outlays on, say, the Age Pension, would be affected by this systematic effect.

RESIDUAL EFFECT

Residual effects (sometimes referred to as 'irregulars') are short term fluctuations in the data which are generally not systematic or predictable with regards to timing, duration and degree of impact. These random fluctuations are typically caused by sampling and non-sampling errors in the data. Sampling errors are found in data collected through sample surveys and exist as a result of not enumerating the entire population. Non-sampling errors are all other errors in the data (such as reporting errors, processing errors, coverage errors, etc) and can affect collections regardless of whether or not they are sample surveys.

Aside from these random fluctuations, large impacts can sometimes be observed in the residual effect. For example, the effect of a flood on agricultural production data, or the effect of The New Tax System (TNTS) on retail turnover figures.

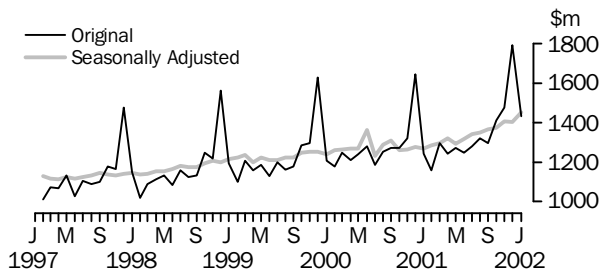
As it is not possible to identify the cause, timing or magnitude of most irregular effects, they cannot normally be individually removed from the series (except for some large irregular effects). Instead, the ABS uses a generalised statistical procedure known as filtering, or smoothing, to remove the short term residuals from the series, as described further in the section Calculating the Trend (see page 20).

SEASONAL ADJUSTMENT

Seasonal adjustment is the process by which calendar related effects are removed from the original series. A seasonally adjusted series, then, will be the combination of the underlying trend of the series and the irregular factors. Whether the seasonally adjusted series is a good estimate of the trend will depend on the strength of the irregulars in the series.

For example, as discussed above, the Monthly Retail Turnover series has strong seasonal factors (there are large spikes each December due to Christmas trading). When the series is seasonally adjusted, these factors are removed, as shown below.

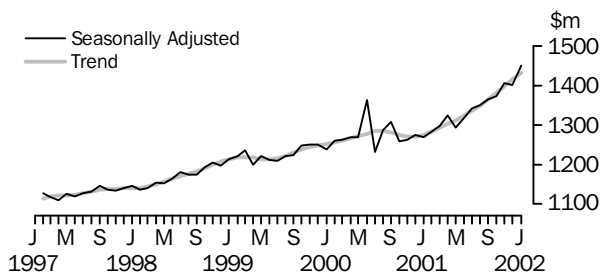
MONTHLY RETAIL TURNOVER, Western Australia



Source: Retail Trade, Australia (Cat. No. 8501.0)

The seasonally adjusted series can be seen to be quite similar to the underlying trend of the series. This is because the strength of the irregulars is generally small relative to that of the trend component (except in mid-2000 where a strong GST-related irregular can be observed).

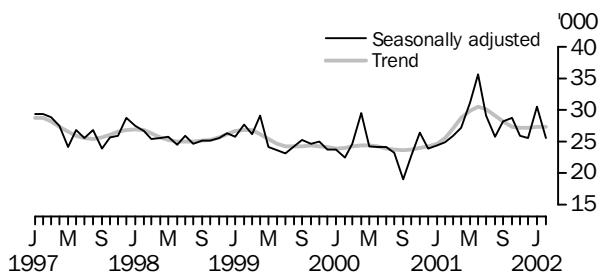
MONTHLY RETAIL TURNOVER, Western Australia



Source: Retail Trade, Australia (Cat. No. 8501.0)

In comparison, the seasonally adjusted Unemployed Females series shown below is relatively more volatile than retail sales and is therefore not as clear an indicator of the underlying direction of the series.

UNEMPLOYED FEMALES, Western Australia



Source: Labour Force, Australia, Preliminary (Cat. no. 6202.0)

FEATURE ARTICLE – Interpreting Time Series Data *continued*

SEASONAL ADJUSTMENT *continued*

The actual process for removing the calendar related effects is complex and will not be discussed in this article. Users who are interested in a technical explanation are referred to *Information Paper: An Introductory Course on Time Series Analysis* (Cat. no. 1346.0). In general, there are two approaches to the seasonal adjustment process:

- forward factors – where seasonal factors are estimated once a year and then kept fixed for a 12 month period; or
- concurrent adjustment – where the seasonal factors are re-estimated each time there is new data available.

Most ABS series use the forward factor approach.

The ABS recommends that at least seven years of data be used to ensure that the results of the seasonal adjustment process are reliable, as it can take some time for seasonal patterns to evolve. Experimental estimates are possible with fewer observations, although a minimum of five years of data is preferable.

CALCULATING THE TREND

Once the original data has been seasonally adjusted, the underlying trend of that series can be estimated by removing the irregular effects. This can be done by applying a moving average to the seasonally adjusted series. The ABS uses a *Henderson moving average* because it is able to dampen the irregular component without distorting the timing of turning points, it is relatively reliable and is easy to produce.

A 7-term Henderson moving average is generally used to smooth quarterly series while a 13-term is used for monthly series. This means that there are seven and thirteen data points respectively used to calculate the smoothed figure. The Henderson moving average is described as being 'centred' because the resulting values are placed in the centre of the series. For example, in the case of the 7-term moving average, the smoothed figure at time t is calculated using three past data points (up to time $t-3$), the data point at time t , and three future data points (up to time $t+3$), and the resulting moving average value is placed at time t .

The mathematical formula for the 7-term Henderson moving average is:

$$A_t = \sum_{i=t-3}^{t+3} w_i x_i$$

where A_t is the smoothed data at time t (the trend),

w_i are the weights, and

x_i are the seasonally adjusted data points.

The weights assign an importance to each data point in the calculation. There are specific techniques for deriving weights for different moving averages. For the 7-term symmetric Henderson moving average, the weighting pattern is:

$$(-0.059, 0.059, 0.294, 0.412, 0.294, 0.059, -0.059)$$

That is, the trend figure at time t is calculated as:

$$A_t = -0.059x_{t-3} + 0.059x_{t-2} + 0.294x_{t-1} + 0.412x_t + 0.294x_{t+1} + 0.059x_{t+2} - 0.059x_{t+3}$$

FEATURE ARTICLE – Interpreting Time Series Data *continued*

For example, suppose the following hypothetical data corresponds to seasonally adjusted quarterly jelly bean production data from the factory discussed in an earlier example.

HYPOTHETICAL JELLY BEAN PRODUCTION ('000)

	1998.....			1999.....			2000.....			2001.....			2002.....		
	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar
Seasonally Adjusted	291.2	300.3	313.7	318.4	320.0	309.7	298.2	298.1	283.9	285.5	286.2	283.0	277.1	285.2	295.6
Henderson Moving Average (Trend)				318.7	317.3	310.5	301.6	293.3	288.1	285.6	283.7	281.7			

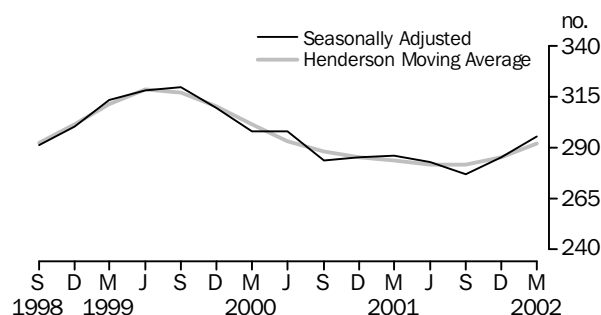
The trend figure for June 1999 would be calculated as:

$$\begin{aligned}
 A_t &= -(0.059 \times 291.2) + (0.059 \times 300.3) + (0.294 \times 313.7) + (0.412 \times 318.4) + \\
 &\quad (0.294 \times 320.0) + (0.059 \times 309.7) - (0.059 \times 298.2) \\
 &= 318.7
 \end{aligned}$$

The trend series can only be calculated using this formula for the middle time periods because there are insufficient data points available at the ends of the series. That is, the above table shows that the latest time period for which trend data are available is June 2001 (281.7). To calculate a trend figure for September 2001 would require data for June 2002, which is yet to be collected. This is known as the *end point problem* and can be overcome by using asymmetric Henderson moving averages. That is, instead of using the symmetric weights provided above, asymmetric weighting patterns (which do not require the three future data points) are used. The asymmetric weighting patterns vary for each time period and across data series, hence have not been included here.

The appropriate asymmetric weighting patterns have been used to calculate a trend figure for September 2001, December 2001 and March 2002 in the above table and the following graph shows the full jelly bean production series. It can be seen that the seasonally adjusted jelly bean production data is relatively stable with respect to the trend series, and that the factory's production of jelly beans is slowly starting to increase after declining since September 1999.

HYPOTHETICAL PRODUCTION OF JELLY BEANS



FEATURE ARTICLE – Interpreting Time Series Data continued

ISSUES TO BE AWARE OF

When analysing seasonally adjusted or trend data, there are a number of important issues that users need to be aware of. These are described below.

Revisions

Revisions to the seasonally adjusted and trend data are common and can occur for a number of reasons.

One of the major reasons for trend data revision is the 'end point problem' discussed earlier. That is, since there are insufficient data points available toward the ends of the series to use the standard smoothing technique, asymmetric Henderson moving averages are used. When the next data point becomes available, the type of moving average used (i.e. symmetric or asymmetric) is shifted across to the next time period, which results in changes to the trend estimates.

For example, the following table shows that when data for the March 2002 reference period is released, the September 2001, December 2001 and March 2002 trend estimates are calculated using asymmetric Henderson moving averages. When data for the June 2002 reference period become available, the September 2001 trend estimates are re-calculated using the standard symmetric moving average. Furthermore, the availability of a new data point affects the values calculated in December 2001 and March 2002, which are also revised.

END POINT PROBLEM: Timing of Symmetric and Asymmetric Moving Averages

TREND ESTIMATES										
Reference Period	Jun 2000	Sep 2000	Dec 2000	Mar 2001	Jun 2001	Sep 2001	Dec 2001	Mar 2002	Jun 2002	Sep 2002
Mar 2002	Sym	Sym	Sym	Sym	Sym	A-Sym	A-Sym	A-Sym		
Jun 2002	Sym	Sym	Sym	Sym	Sym	Sym	A-Sym	A-Sym	A-Sym	
Sep 2002	Sym	Sym	Sym	Sym	Sym	Sym	Sym	A-Sym	A-Sym	A-Sym

As a result of the end point problem, the most current trend estimate can be revised up to three times in a quarterly series and up to six times in a monthly series. Typically, the largest trend revisions occur the first time new data are available and are generally negligible after the first revision for quarterly series and after the third revision for monthly series.

Revisions can also be made to the seasonally adjusted series as a result of evolving seasonal patterns and/or trading day effects. Unlike trend revisions, which typically affect the last few data points, the method used to revise seasonal factors results in a minimum of five years worth of seasonally adjusted data being affected.

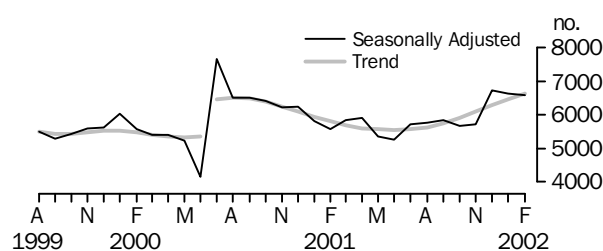
Any revisions which are made to the seasonally adjusted data will flow through to trend series revisions (although they have a small impact on the trend data). Similarly, any amendments made to the original data will flow through to both the seasonally adjusted and trend series. Generally, the degree of revision of the seasonally adjusted and trend data depends on the irregularity of the original series.

FEATURE ARTICLE – Interpreting Time Series Data *continued*

Structural Breaks

Long spans of time series data are rarely consistent. They are prone to the effects of structural changes, such as changes in data item definitions, changes in the coverage of the collection, changes in administrative practices, technological innovation and social changes. Such changes can result in an abrupt discontinuity in the underlying level of the original series. This effect is generally referred to as a 'trend break'. For example, consider the new motor vehicle sales series shown below. There is a clear and abrupt increase in the underlying level of the series between June and July 2000 due to the introduction of TNTS.

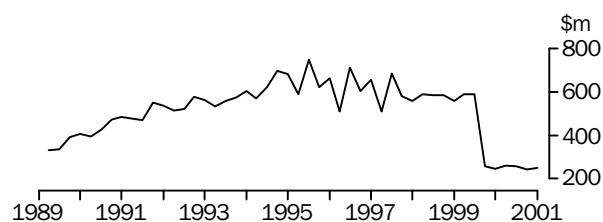
NEW MOTOR VEHICLE SALES, Western Australia



Source: *Sales of New Motor Vehicles, Electronic Delivery* (Cat. no. 9314.0.55.001)

A 'seasonal break' can occur when the seasonal behaviour of the series abruptly changes from one year to the next. For example, consider the Commonwealth Government benefit payments series below. This series includes education and training payments such as Austudy. The mild seasonal pattern which can be observed from 1990 to 1995 changes abruptly in 1996 when the timing of Austudy payments changed. The seasonal pattern changed again in 1998 when the timing of fortnightly government payments were changed to be made on any day of the week. The series also shows a trend break in 2000 due to the Sole Parents Pension being taken over by Centrelink (and the corresponding data being included in another series).

COMMONWEALTH GOVERNMENT BENEFIT PAYMENTS:
Other Than Health and Social Security



Source: *Australian National Accounts: National Income, Expenditure and Product* (Cat. no. 5206.0)

Outliers

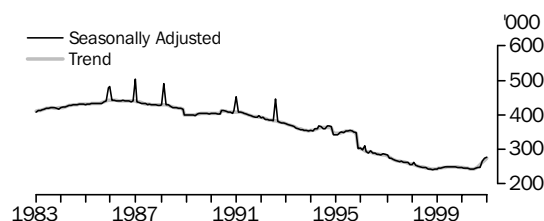
Time series data can be subject to large, one-off effects. These effects will remain in the seasonally adjusted series and can distort the trend path if they are not corrected during the trending process.

For example, the following graph shows extremes in the number of Commonwealth wage and salary earners during the conduct of the 1986 Census, the 1987 Federal election, the 1988 Referendum, the 1991 Census and the 1993 Federal election, due to the employment of additional temporary staff. More recent elections and censuses have possibly used different employment arrangements which do not appear as large extremes.

FEATURE ARTICLE – Interpreting Time Series Data *continued*

Outliers *continued*

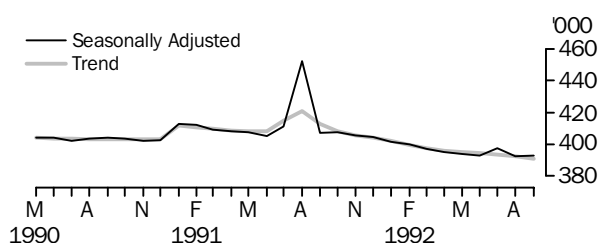
COMMONWEALTH WAGE AND SALARY EARNERS,
Australia



Source: *Wage and Salary Earners, Australia* (Cat. no. 6248.0)

If these extremes were not taken into consideration during the trending process, the trend line would be distorted, as shown below using the 1991 Census as an example.

COMMONWEALTH WAGE AND SALARY EARNERS,
Australia



Source: *Wage and Salary Earners, Australia* (Cat. no. 6248.0)

WHICH SERIES TO USE?

The original, seasonally adjusted and trend series are all useful measures for time series analysts. They do, however, serve different purposes and it is important to be able to distinguish which is the most appropriate series to use under different circumstances.

Often, users are interested in analysing the underlying direction of the series, unobscured by any seasonal or irregular effects, and in detecting possible turning points in the series. In such circumstances, the trend series would be the most appropriate to use as all seasonal and irregular effects have been removed.

While the trend series provides useful information about the underlying direction of the data, it does not provide any information about the seasonal patterns in the data. Some users may be interested in, for example, the relative magnitudes of the seasonal peaks and troughs from year to year, or how the seasonal effects have evolved over the years. In this case, the original data, which has not had the seasonal effects removed, would be the most appropriate. Users who are interested in comparing one month to the next may find the seasonally adjusted data more useful than the original as it is not obscured by seasonal patterns.

Some users may be interested in which months are the most or least irregular, or how much the irregularity is changing over time. Since the irregularity is removed from the trend series, the user would be interested in analysing the seasonally adjusted data. Other users may be interested in measuring the magnitude of the irregular so as to line it up with economic events or a change in government policy. For example, users may be interested in the magnitude of the impact of the Goods and Services Tax on retail turnover figures. Again, seasonally adjusted data would be the most appropriate for such purposes.

FEATURE ARTICLE – Interpreting Time Series Data *continued*

NON-ABS TIME SERIES

Time series data are collected by a wide range of government and non-government organisations and the concepts described above, regarding the analysis of such data, are not solely applicable to ABS series.

This article describes basic time series analysis concepts. It does not explain the complex statistical techniques actually used. ABS statistical consultants are available to assist external organisations with analysis of non-ABS time series. For further information and advice, contact the manager of Statistical Consultancy on (08) 9360 5144.

RELATED ABS PUBLICATIONS

Information Paper: A Guide to Smoothing Time Series - Estimates of "Trend" (Cat. no. 1316.0)

Information Paper: Time Series Decomposition - An Overview (Cat. no. 1317.0)

Information Paper: An Introductory Course on Time Series Analysis (Cat. no. 1346.0)

Information Paper: A Guide to Interpreting Time Series - Monitoring "Trends" An Overview (Cat. no. 1348.0)

Australian Economic Indicators, April 1991 (Cat. no. 1350.0) — Article titled "Picking Turning Points in the Economy"

Australian Economic Indicators, March 1992 (Cat. no. 1350.0) — Article titled "Smarter Data Use"

Australian Economic Indicators, January 1995 (Cat. no. 1350.0) — Article titled "A Guide to Interpreting Time Series"

LIST OF TABLES

Page

Summary

1	Summary of statistical indicators: Australian comparison	28
---	--	----

State Accounts

2	State final demand, current prices	29
---	------------------------------------	----

Price Indexes

3	Consumer price index, by group: Perth	30
4	Price index of all Western Australian produced hardwoods	32
5	Selected housing price indexes: Perth	32
6	Price index of materials used in building other than houses: Perth	33

Consumption

7	New motor vehicle sales	34
8	Monthly retail turnover	35

Finance

9	Banking statistics: all banks	36
10	Housing finance commitments, type of borrower	36
11	Housing finance commitments, dwelling units	37
12	Housing finance commitments	37
13	Private new capital expenditure, current prices: original	38
14	Actual private new capital expenditure, current prices: trend	38

Business Expectations

15	Business expectations, short-term outlook	39
16	Business expectations, medium-term outlook	39

Construction

17	Building approvals: original	40
18	Building approvals: trend	40
19	Residential building approvals, by region: original	41
20	Value of building activity: original	42

Trade

21	Exports and imports: selected commodities, by value of trade	43
22	Exports and imports: selected trading partner, by value of trade	44

Agriculture

23	Wool receivals and live sheep exports: original	45
24	Livestock slaughtered	45
25	Meat produced	46

Mining

26	Mineral exploration: expenditure by type of mineral sought	47
27	Mineral production	47

Energy

28	Energy production	48
----	-------------------	----

Tourism

29	Tourist accommodation: original	49
----	---------------------------------	----

LIST OF TABLES

Page

Labour Market

30	Labour force status, (aged 15 years and over), by sex: original	50
31	Labour force status, (aged 15 years and over), by sex: trend	51
32	Labour force status, (aged 15 years and over), by region: original	52
33	Employed persons, by industry and sex: original	53
34	Average weekly hours worked: original	54
35	Number of employees and hours worked, by occupation	54
36	Unemployment and participation rates, by age: original	55
37	Duration of unemployment: original	56
38	Indexes of total hourly rates of pay excluding bonuses	57
39	Industrial disputes causing stoppage of work: original	58
40	Job vacancies: original	58

Population

41	Estimated resident population	59
42	Population change, components	59
43	Registration of births, deaths, marriages and divorces	60
44	Rates of births, deaths, marriages and divorces	60

Crime

45	Reported offences, by region	61
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			WESTERN AUSTRALIA.....			AUSTRALIA.....		
			% change from.....			% change from.....		
Indicator	Period	Unit	Current figure	Previous figure	Same period previous year	Current figure	Previous figure	Same period previous year
State Accounts								
State final demand								
Original	Dec qtr 2001	\$m	17 740	6.7	9.9	183 294	7.4	7.1
Trend	Dec qtr 2001	\$m	17 190	2.2	9.2	175 203	1.7	5.6
Price Indexes								
Consumer price index								
All groups	Dec qtr 2001	index no.	132.6	0.8	3.0	135.4	0.9	3.1
Housing price indexes								
Materials used in house building	Dec qtr 2001	index no.	118.9	—	−0.1	125.2	0.4	0.6
Established homes	Dec qtr 2001	index no.	143.1	2.9	7.7	174.0	3.8	15.5
Project homes	Dec qtr 2001	index no.	128.5	0.6	2.1	137.6	0.9	2.1
Consumption								
New motor vehicle sales								
Original	Feb 2002	no.	6 159	12.4	18.1	64 795	10.7	10.6
Trend	Feb 2002	no.	6 636	2.5	14.3	71 077	1.6	9.6
Monthly retail turnover								
Original	Jan 2002	\$m	1 433.1	−20.0	15.1	13 972.2	−21.7	9.9
Trend	Jan 2002	\$m	1 432.8	1.2	12.3	14 003.3	0.5	7.8
Finance and Investment								
Banking								
Total deposits	Jan 2002	\$m	32 104	0.1	7.5	475 860	2.2	13.4
Loans	Jan 2002	\$m	54 192	2.5	12.3	566 769	1.4	10.8
Private new capital expenditure								
Original	Dec qtr 2001	\$m	1 435	3.3	9.0	10 970	16.9	4.8
Trend	Dec qtr 2001	\$m	1 404	−0.6	14.0	10 119	2.7	3.0
Construction								
Residential dwelling units approved								
Original	Jan 2002	no.	1 537	5.1	47.1	12 224	−1.1	36.8
Trend	Jan 2002	no.	1 683	−1.5	51.1	13 561	−2.8	44.6
Value of total buildings approved								
Original	Jan 2002	\$m	302.5	17.6	36.7	2 943.7	−3.8	11.8
Value of building activity commenced								
New residential building	Sep qtr 2001	\$m	634.5	45.4	36.3	6 220.9	43.3	53.4
Value of Building activity completed								
New residential building	Sep qtr 2001	\$m	561.0	9.0	11.3	4 696.4	8.3	−11.3
Total non-residential building	Sep qtr 2001	\$m	185.2	−42.0	−32.8	3 443.7	14.8	51.7
Merchandise Trade								
Imports	Dec qtr 2001	\$m	2 493	11.0	15.4	31 174	3.8	−0.8
Exports	Dec qtr 2001	\$m	7 692	−2.5	−5.7	31 164	−1.7	−0.4
Mineral Exploration								
Gold	Dec qtr 2001	\$m	60.4	−6.8	−15.6	84.2	−2.5	−13.6
All other minerals	Dec qtr 2001	\$m	34.4	−10.6	−19.7	86.5	6.8	−3.6
Tourism								
Hotels, motels etc and serviced apartments								
Guest arrivals	Dec qtr 2001	'000	723	6.5	−0.3	8 444	0.2	2.9
Room occupancy rates	Dec qtr 2001	%	55.0	0.7	−3.8	57.6	−1.9	−2.0
Takings from accommodation	Dec qtr 2001	\$'000	99 153	4.4	−6.6	1 209 554	−1.4	−4.5
Labour Market								
Total employed								
Trend	Feb 2002	'000	948.5	0.2	0.9	9 258.6	0.2	1.5
Total unemployed								
Trend	Feb 2002	'000	65.8	−0.2	0.5	670.2	−0.3	5.3
Participation rate								
Trend	Feb 2002	%	66.5	—	−0.7	63.9	0.2	0.5
Unemployment rate								
Trend	Feb 2002	%	6.5	—	—	6.7	−1.5	3.1
Job vacancies	Nov 2001	'000	6.2	−35.2	−27.7	83.5	−9.9	−23.1
Wage cost index (total hourly rates of pay excluding bonuses)	Dec qtr 2001	index no.	114.0	0.7	3.6	114.4	0.7	3.4
Population								
Estimated resident population	Sep qtr 2001	'000	1 918	0.4	1.3	19 442	0.3	1.2
Natural increase	Sep qtr 2001	no.	3 049	−16.0	−7.8	26 594	−16.5	−4.3

	Sep qtr 2000	Dec qtr 2000	Mar qtr 2001	Jun qtr 2001	Sep qtr 2001	Dec qtr 2001	Dec qtr 2000 to Dec qtr 2001
	\$m	\$m	\$m	\$m	\$m	\$m	% change
ORIGINAL							
Final consumption expenditure							
General Government	2 718	2 741	2 839	2 876	r 2 889	2 979	8.7
Households	r 9 044	r 9 528	r 8 768	r 9 173	r 9 347	10 176	6.8
Gross fixed capital expenditure							
Private							
Dwellings	969	895	869	r 854	r 958	1 019	13.9
Other buildings and structures	426	473	466	r 540	r 785	638	34.9
Machinery and equipment	r 824	r 1 080	r 1 436	r 1 296	r 1 246	1 480	37.0
Livestock	37	37	37	37	33	33	- 10.8
Intangible fixed assets	383	r 425	r 444	r 403	392	379	- 10.8
Ownership transfer costs	232	210	224	237	256	279	32.9
Total private	r 2 871	r 3 119	r 3 476	r 3 340	r 3 670	3 828	22.7
Public	r 644	r 753	r 718	r 1 034	r 725	757	0.5
State final demand	r 15 278	r 16 141	r 15 802	r 16 423	r 16 631	17 740	9.9
Compensation of employees	7 720	7 626	r 7 633	7 801	r 7 838	8 129	6.6
TREND ESTIMATES							
Final consumption expenditure							
General Government	2 769	2 767	2 795	2 866	2 932	2 975	7.5
Households	8 969	9 070	9 157	9 276	9 420	9 555	5.3
Gross fixed capital expenditure							
Private							
Dwellings	1 008	917	858	881	949	1 027	12.0
Other buildings and structures	471	442	493	591	663	693	56.8
Machinery and equipment	1 008	1 119	1 239	1 318	1 349	1 393	24.5
Livestock	36	37	37	36	34	33	- 10.8
Intangible fixed assets	392	416	425	417	400	380	- 8.7
Ownership transfer costs	230	223	222	236	257	275	23.3
Total private	3 145	3 155	3 274	3 478	3 652	3 798	20.4
Public	723	755	791	812	828	825	9.3
State final demand	15 603	15 740	16 006	16 414	16 823	17 190	9.2
Compensation of employees	7 572	7 655	7 712	7 776	7 871	7 957	3.9

Source: Australian National Accounts (Cat no. 5206.0).

<i>Period</i>	<i>Food</i>	<i>Alcohol and tobacco</i>	<i>Clothing and footwear</i>	<i>Housing</i>	<i>Household furnishings, supplies and services</i>	<i>Health</i>
ANNUAL AVERAGE						
1998–1999	128.0	159.2	105.3	90.5	113.6	155.3
1999–2000	129.7	165.7	104.2	94.7	113.1	152.6
2000–2001	134.7	184.7	110.9	101.3	115.4	157.0
PERCENTAGE CHANGE (from previous year, annual average)						
1998–1999	4.1	2.5	–0.9	1.5	–0.1	1.1
1999–2000	1.3	4.1	–1.0	4.6	–0.4	–1.8
2000–2001	3.9	11.5	6.4	7.0	2.0	2.9
QUARTERS						
2000						
September	132.9	179.8	112.7	101.3	114.7	155.5
December	132.7	182.7	111.0	101.3	115.3	154.7
2001						
March	135.2	187.7	108.6	101.1	114.5	158.7
June	138.1	188.7	111.2	101.6	117.2	158.9
September	139.1	190.7	107.8	102.5	116.2	158.9
December	142.7	191.2	110.5	103.1	118.3	158.2
PERCENTAGE CHANGE (from same quarter of previous year)						
2000						
September	2.7	11.1	7.2	8.8	1.5	2.7
December	2.6	11.0	7.1	6.5	1.6	2.8
2001						
March	3.7	12.5	6.0	6.3	1.9	3.4
June	6.5	11.3	5.3	6.5	3.2	2.6
September	4.7	6.1	–4.3	1.2	1.3	2.2
December	7.5	4.7	–0.5	1.8	2.6	2.3
PERCENTAGE CHANGE (from previous quarter)						
2000						
September	2.5	6.1	6.7	6.2	1.0	0.5
December	–0.2	1.6	–1.5	—	0.5	–0.5
2001						
March	1.9	2.7	–2.2	–0.2	–0.7	2.6
June	2.1	0.5	2.4	0.5	2.4	0.1
September	0.7	1.1	–3.1	0.9	–0.9	—
December	2.6	0.3	2.5	0.6	1.8	–0.4

Period	Transportation	Communication	Recreation	Education	Miscellaneous	All Groups
ANNUAL AVERAGE						
1998–1999	122.3	102.6	117.0	173.2	145.7	120.1
1999–2000	129.1	96.4	117.8	182.0	155.4	122.9
2000–2001	137.0	102.7	121.8	190.5	165.4	129.6
PERCENTAGE CHANGE (from previous year, annual average)						
1998–1999	0.7	–4.2	1.6	5.1	3.3	1.8
1999–2000	5.6	–6.1	0.7	5.1	6.7	2.4
2000–2001	6.1	6.5	3.4	4.7	6.4	5.5
QUARTERS						
2000						
September	136.0	103.7	120.9	187.5	161.7	128.6
December	136.3	102.8	121.1	187.5	164.7	128.8
2001						
March	136.0	102.2	122.0	193.5	166.8	129.6
June	139.6	102.0	123.1	193.5	168.4	131.4
September	136.8	101.8	125.2	193.5	170.4	131.5
December	135.2	103.7	126.4	193.5	172.0	132.6
PERCENTAGE CHANGE (from same quarter of previous year)						
2000						
September	6.8	7.3	2.5	6.3	7.9	5.5
December	7.3	7.1	1.3	6.3	6.9	5.0
2001						
March	4.3	6.7	5.0	3.2	6.1	5.3
June	6.0	5.0	4.9	3.2	4.9	6.0
September	0.6	–1.8	3.6	3.2	5.4	2.3
December	–0.8	0.9	4.4	3.2	4.4	3.0
PERCENTAGE CHANGE (from previous quarter)						
2000						
September	3.3	6.8	3.0	—	0.7	3.7
December	0.2	–0.9	0.2	—	1.9	0.2
2001						
March	–0.2	–0.6	0.7	3.2	1.3	0.6
June	2.6	–0.2	0.9	—	1.0	1.4
September	–2.0	–0.2	1.7	—	1.2	0.1
December	–1.2	1.9	1.0	—	0.9	0.8

(a) Base of each index: 1989–1990 = 100.0.

Note: For more details of changes resulting from the introduction of the 14th Series Consumer Price Index, refer to *Information Paper: Introduction of the 14th Series Australian Consumer Price Index* (Cat. no. 6456.0) which was released on 29 September 2000.

Source: ABS data available on request, *Consumer Price Index*.

4

PRICE INDEX OF ALL WESTERN AUSTRALIAN PRODUCED HARDWOODS

Period	Index number(a)	% change from corresponding quarter of previous year	% change from previous period
1998–1999	105.6	. .	–1.6
1999–2000	110.6	. .	4.7
2000–2001	119.8	. .	8.3
2000			
September	119.6	10.7	1.6
December	120.0	6.8	0.3
2001			
March	119.9	2.9	–0.1
June	119.7	1.7	–0.2
September	119.1	–0.4	–0.5
December	119.4	–0.5	0.2

(a) Base of each index: 1992–1993 = 100.0.

Source: *Price Index of Western Australian Produced Hardwoods* (Cat no. 6410.5).

5

SELECTED HOUSING PRICE INDEXES: Perth(a)

Period	Materials used in house building	Established homes	Project homes
1998–1999	116.1	118.9	106.1
1999–2000	117.7	125.9	114.8
2000–2001	118.8	133.9	126.2
2000			
September	118.3	130.2	126.3
December	119.0	132.9	125.9
2001			
March	118.9	135.1	125.8
June	119.1	137.2	126.9
September	118.9	139.1	127.7
December	118.9	143.1	128.5

(a) Base of each index: 1989–1990 = 100.0.

Source: *Producer Price Indexes* (Cat no. 6427.0); *House Price Indexes* (Cat no. 6416.0).

SPECIAL SERIES.....					SELECTED MAJOR BUILDING MATERIALS.....			
<i>Period</i>	<i>All groups</i>	<i>All electrical materials</i>	<i>All mechanical services</i>	<i>All plumbing materials</i>	<i>Structural timber</i>	<i>Ready mixed concrete</i>	<i>Structural steel</i>	<i>Aluminium windows</i>
1998–1999	114.1	107.8	116.1	124.3	105.0	114.5	117.5	115.0
1999–2000	115.4	108.4	117.6	130.1	103.3	114.1	119.2	116.6
2000–2001	115.6	106.2	113.4	129.4	106.1	110.2	120.6	122.8
2000								
September	114.0	105.9	112.0	127.9	106.4	110.2	120.5	119.3
December	115.6	106.1	113.3	129.6	106.5	110.5	120.5	122.9
2001								
March	116.0	105.9	114.0	129.9	105.3	109.4	120.5	123.1
June	116.8	106.7	114.1	130.3	106.0	110.5	120.9	125.9
September	116.6	106.4	114.7	130.5	105.9	107.3	120.9	126.6
December	117.3	107.2	116.5	130.1	104.9	104.2	124.4	126.6

(a) Base of each index: 1989–1990 = 100.0.

Source: *Producer Price Indexes* (Cat no. 6427.0).

	<i>Passenger vehicles</i>	<i>Other vehicles</i>	<i>Total vehicles</i>
<i>Period</i>	<i>no.</i>	<i>no.</i>	<i>no.</i>

ORIGINAL

1998–1999	52 413	24 467	76 880
1999–2000	42 729	21 933	64 662
2000–2001	49 432	23 324	72 756
2000			
December	4 422	2 104	6 526
2001			
January	3 177	1 554	4 731
February	3 519	1 698	5 217
March	4 355	2 147	6 502
April	3 329	1 768	5 097
May	3 657	2 068	5 725
June	4 142	2 272	6 414
July	3 626	1 765	5 391
August	3 997	2 014	6 011
September	3 351	1 846	5 197
October	3 788	1 937	5 725
November	3 969	2 149	6 118
December	4 562	2 087	6 649
2002			
January	3 501	1 980	5 481
February	3 879	2 280	6 159

TREND

2000			
December	4 156	1 940	6 096
2001			
January	4 022	1 921	5 943
February	3 891	1 917	5 808
March	3 785	1 903	5 688
April	3 714	1 891	5 605
May	3 676	1 892	5 568
June	3 643	1 912	5 555
July	3 626	1 941	5 567
August	3 646	1 975	5 621
September	3 721	2 023	5 744
October	3 839	2 080	5 919
November	3 974	2 132	6 106
December	4 112	2 185	6 297
2002			
January	4 236	2 241	6 477
February	4 337	2 299	6 636

(a) This series replaces New Motor Vehicle Registrations from January 2002.

For further information, see *Changes In This Issue* on page 2 of this publication.

Note: Discrepancies may occur between sums of component items and totals due to rounding.

Source: *Sales of New Motor Vehicles, Electronic Delivery* (Cat no. 9314.0.55.001)

	Food	Department stores	Clothing and soft goods	Household goods	Recreational goods	Hospitality and services	Other	Total
Month	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
ORIGINAL								
2000								
November	551.5	118.8	78.7	192.5	68.8	151.6	157.6	1 319.4
December	640.4	204.9	109.1	229.0	94.7	179.0	188.2	1 645.3
2001								
January	544.5	91.9	72.5	175.9	73.0	148.6	138.2	1 244.6
February	505.9	80.5	65.1	156.2	67.1	144.9	138.3	1 158.1
March	568.6	97.3	72.2	172.7	67.4	165.2	151.4	1 294.8
April	547.4	99.9	66.1	166.0	69.0	149.1	145.4	1 243.0
May	552.6	112.0	77.6	164.4	68.4	146.0	151.9	1 272.8
June	528.7	100.9	70.6	181.4	73.5	146.3	146.0	1 247.4
July	545.3	103.6	66.8	183.8	76.0	155.5	150.0	1 281.0
August	571.5	94.5	68.7	184.5	82.4	158.0	162.2	1 321.8
September	553.0	96.4	64.3	175.9	75.5	158.6	171.8	1 295.5
October	585.5	108.4	76.5	196.7	74.0	174.8	194.7	1 410.5
November	595.9	140.1	85.3	199.5	79.5	178.0	200.4	1 478.7
December	677.4	211.8	110.5	235.8	108.9	204.4	242.9	1 791.8
2002								
January	619.6	95.7	72.8	196.9	79.7	198.3	170.1	1 433.1
SEASONALLY ADJUSTED								
2000								
November	543.9	103.8	73.8	180.8	67.0	150.2	144.3	1 263.8
December	548.5	109.7	79.2	181.4	67.9	153.6	133.9	1 274.2
2001								
January	540.9	108.0	75.5	177.4	72.5	151.1	143.5	1 268.9
February	540.0	110.4	78.3	172.0	73.2	155.1	154.2	1 283.2
March	548.7	109.4	75.5	175.5	72.2	159.9	156.1	1 297.3
April	565.6	109.1	71.0	183.0	75.1	156.6	162.7	1 323.2
May	558.5	110.0	73.2	168.0	71.3	153.5	158.8	1 293.2
June	556.2	111.7	70.5	186.3	75.7	156.7	161.7	1 318.8
July	567.7	111.8	69.7	192.2	80.1	158.2	162.7	1 342.5
August	570.4	109.1	73.9	192.7	80.6	159.5	165.8	1 352.1
September	580.1	108.5	72.4	184.9	80.5	161.8	177.0	1 365.2
October	581.4	109.0	74.9	188.0	72.7	165.8	181.4	1 373.2
November	584.0	124.1	77.8	187.6	79.2	171.0	182.5	1 406.2
December	589.7	111.0	79.4	184.2	80.4	178.3	178.8	1 401.8
2002								
January	608.1	110.7	78.3	196.6	81.2	198.6	179.0	1 452.3
TREND ESTIMATES								
2000								
November	543.9	107.6	76.6	178.8	69.0	149.4	142.4	1 271.7
December	543.8	107.6	76.9	178.5	69.5	151.7	143.2	1 271.6
2001								
January	544.6	108.0	76.8	177.3	70.4	153.9	145.9	1 275.8
February	546.8	108.9	76.0	176.1	71.5	155.4	150.1	1 283.4
March	550.1	109.7	74.8	175.9	72.6	156.5	154.4	1 293.0
April	554.1	110.3	73.4	177.4	73.9	(a) 155.5	157.9	1 303.2
May	558.4	110.4	72.0	180.1	75.2	156.0	160.5	1 312.9
June	562.9	110.4	71.3	183.7	76.5	156.6	162.8	1 323.8
July	566.9	110.2	71.3	186.5	77.5	157.4	165.8	1 335.6
August	571.1	110.0	72.2	188.1	78.2	159.2	169.6	1 349.1
September	576.1	109.9	73.7	188.6	78.6	162.9	173.7	1 364.9
October	581.9	110.0	75.3	188.6	78.7	168.0	177.3	1 381.8
November	587.8	110.2	76.8	188.6	78.9	174.0	179.8	1 399.0
December	593.4	110.5	78.1	188.8	79.2	180.3	181.4	1 416.1
2002								
January	598.1	110.9	79.1	189.5	79.5	186.3	182.3	1 432.8

(a) Possible break in series. For more information, refer to source publication.

Source: Retail Trade, Australia (Cat no. 8501.0).

9

BANKING STATISTICS: All Banks(a)

Month	DEPOSITS.....				LOANS	
	Current bearing interest	Current not bearing interest	Term deposits(b)	Other(c)	Total deposits	Other lending(d)
	\$m	\$m	\$m	\$m	\$m	\$m
2000						
November	7 215	1 450	14 656	5 906	29 227	47 623
December	7 429	1 635	15 132	5 662	29 859	47 698
2001						
January	7 429	1 596	15 263	5 587	29 875	48 236
February	7 666	1 521	14 485	5 460	29 133	48 600
March	7 821	1 527	14 278	5 514	29 139	48 429
April	7 926	1 600	13 950	5 515	28 992	48 505
May	7 876	1 445	14 313	5 574	29 209	49 580
June	8 040	1 691	14 694	5 621	30 045	50 303
July	8 033	1 582	14 949	5 615	30 180	50 542
August	8 263	1 460	14 342	5 666	29 732	51 674
September	8 881	1 568	15 203	5 756	31 407	51 887
October	8 193	1 483	14 560	5 804	30 040	52 638
November	8 595	1 525	15 182	5 893	31 196	53 273
December	9 371	1 671	15 040	5 986	32 068	52 878
2002						
January	9 389	1 657	14 986	6 072	32 104	54 192

(a) Details are the averages of weekly figures for each month. The figures are derived from returns submitted by banks under the Banking Act together with similar returns voluntarily submitted by the State Banks. They exclude the Reserve Bank of Australia.

(b) Includes certificates of deposits.

(c) Includes passbook/school savings, investment savings, statement savings and other.

(d) Excludes non-resident loans.

Source: Reserve Bank of Australia.

10

HOUSING FINANCE COMMITMENTS(a), Type of Borrower

Month	FIRST HOME BUYERS.....				OTHER.....			
	Number of dwellings financed	Number as a percent of total	Value of commitments	Average borrowing size	Number of dwellings financed	Number as a percent of total	Value of commitments	Average borrowing size
	no.	%	\$m	\$'000	no.	%	\$m	\$'000
2000								
November	1 349	22.5	141	104.5	4 647	77.5	523	112.5
December	1 143	21.8	125	109.5	4 095	78.2	484	118.1
2001								
January	1 125	21.6	119	106.0	4 082	78.4	490	120.0
February	1 329	23.2	143	107.6	4 401	76.8	498	113.2
March	1 390	21.7	153	110.3	5 023	78.3	611	121.6
April	1 383	24.3	162	117.1	4 312	75.7	541	125.5
May	1 839	25.3	215	117.0	5 430	74.7	693	127.6
June	1 693	25.4	201	119.0	4 984	74.6	616	123.6
July	1 774	26.8	213	119.9	4 855	73.2	602	123.9
August	1 689	25.0	203	120.0	5 071	75.0	632	124.6
September	1 469	26.1	181	123.1	4 160	73.9	534	128.3
October	1 642	25.9	200	121.8	4 686	74.1	594	126.7
November	1 704	25.7	210	123.4	4 917	74.3	648	131.7
December	1 565	25.6	192	122.5	4 555	74.4	586	128.6
2002								
January	1 490	24.6	195	130.7	4 556	75.4	612	134.4

(a) Includes new dwellings, established dwellings and refinancing; excludes alterations and additions.

Source: ABS data available on request, Housing Finance for Owner Occupation.

11

HOUSING FINANCE COMMITMENTS(a), Dwelling Units

Month	ORIGINAL.....		TREND ESTIMATES.....	
	Total number of dwellings(a)	Total value of commitments	Total number of dwellings(a)	Total value of commitments
	no.	\$m	no.	\$m
2000				
November	5 996	664	5 622	628
December	5 238	609	5 604	630
2001				
January	5 207	609	5 652	645
February	5 730	641	5 791	675
March	6 413	764	5 996	713
April	5 695	703	6 222	754
May	7 269	908	6 423	790
June	6 677	818	6 540	812
July	6 629	815	6 548	818
August	6 760	834	6 477	813
September	5 629	714	6 396	806
October	6 328	794	6 360	805
November	6 621	858	6 382	813
December	6 120	778	6 444	825
2002				
January	6 046	807	6 524	839

(a) Includes new dwellings, established dwellings and refinancing; excludes alterations and additions.

Source: Housing Finance for Owner Occupation, Australia (Cat no. 5609.0).

12

HOUSING FINANCE COMMITMENTS

Period	LENDING COMMITMENTS FOR THE CONSTRUCTION OR PURCHASE OF DWELLINGS.....					TOTAL LENDING COMMITMENTS TO INDIVIDUALS FOR HOUSING(b).....	
	Construction of dwellings	Purchase of newly erected dwellings	Purchase of established dwellings(a)	Refinancing of existing dwellings	Alterations and additions	Original	Trend
	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1998-1999							
1999-2000							
2000-2001							
2000							
November	85	14	405	160	26	664	628
December	74	13	375	147	36	609	630
2001							
January	64	16	383	145	22	609	645
February	76	15	403	148	27	641	675
March	86	19	477	181	29	764	713
April	95	18	434	157	24	703	754
May	146	23	543	196	36	908	790
June	136	21	493	167	35	818	812
July	151	26	483	155	33	815	818
August	151	23	503	158	32	834	813
September	124	24	443	124	31	714	806
October	143	21	485	145	36	794	805
November	142	24	543	148	37	858	813
December	151	23	473	131	42	778	825
2002							
January	147	21	497	143	33	807	839

(a) Excludes refinancing.

(b) Excludes alterations and additions.

Source: ABS data available on request, Housing Finance for Owner Occupation.

13

PRIVATE NEW CAPITAL EXPENDITURE, Current Prices: Original

Period	SELECTED INDUSTRIES.....		TYPE OF ASSET.....			TOTAL
	Mining	Manufacturing	Other selected industries	Buildings and structures	Equipment, plant and machinery	
	\$m	\$m	\$m	\$m	\$m	\$m
.....						
ACTUAL						
1998-1999	3 648	1 284	r 2 045	r 2 398	4 579	6 977
1999-2000	2 298	r 1 152	r 1 852	1 717	3 586	5 302
2000-2001	r 2 456	754	1 809	r 1 590	3 432	5 021
2000						
September	417	122	352	306	585	892
December	486	216	614	507	810	1 316
2001						
March	725	254	446	328	1 098	1 426
June	828	162	397	449	939	1 387
September	r 829	r 118	r 442	r 464	r 925	r 1 389
December	781	173	481	426	1 009	1 435
.....						
EXPECTED						
2001-2002	r 3 662	r 612	r 1 759	r 1 937	r 4 095	r 6 032
2002-2003	4 010	509	1 220	2 078	3 661	5 738

Source: Private New Capital Expenditure, State Estimates (Cat no. 5646.0).

14

ACTUAL PRIVATE NEW CAPITAL EXPENDITURE, Current Prices: Trend

Period	TYPE OF ASSET.....		TOTAL
	Buildings and structures	Equipment, plant and machinery	
	\$m	\$m	\$m
.....			
1998-1999	2 411	4 638	7 049
1999-2000	1 650	3 466	5 116
2000-2001	1 649	3 498	5 147
2000			
September	421	728	1 149
December	395	837	1 232
2001			
March	402	946	1 348
June	431	987	1 418
September	443	969	1 412
December	445	959	1 404

Source: Private New Capital Expenditure, State Estimates (Cat no. 5646.0).

15

BUSINESS EXPECTATIONS, Short-Term Outlook

EXPECTED AGGREGATE CHANGE OVER PREVIOUS QUARTER.....

	Mar qtr 2001	Jun qtr 2001	Sep qtr 2001	Dec qtr 2001	Mar qtr 2002	Jun qtr 2002
<i>Business Performance Indicators</i>	%	%	%	%	%	%
Trading performance						
Operating income	-3.0	-1.2	-0.5	0.5	-1.3	0.2
Selling prices	0.4	-1.3	0.6	-0.4	-0.9	-0.1
Profit	-18.2	-5.3	-4.7	0.7	-16.8	0.4
Investment						
Capital expenditure	3.0	2.2	0.7	0.9	5.1	6.2
Inventories	0.4	-2.0	-1.6	0.9	-1.0	-0.7
Employment						
Full-time equivalent	-0.7	-2.0	-0.3	-1.5	-0.9	-0.4

Source: Australian Business Expectations (Cat no. 5250.0).

16

BUSINESS EXPECTATIONS, Medium-Term Outlook

EXPECTED AGGREGATE CHANGE OVER THE SAME QUARTER OF THE PREVIOUS
YEAR.....

	Dec qtr 2001	Mar qtr 2002	Jun qtr 2002	Sep qtr 2002	Dec qtr 2002	Mar qtr 2003
<i>Business Performance Indicators</i>	%	%	%	%	%	%
Trading performance						
Operating Income	0.5	0.8	2.1	0.3	2.6	2.6
Selling prices	1.0	0.1	0.8	0.6	1.9	0.3
Profit	-7.5	6.5	13.4	-5.4	4.4	10.0
Investment						
Capital expenditure	2.7	2.2	4.8	4.6	-0.8	4.4
Inventories	0.1	-1.2	-0.9	-0.7	1.7	0.2
Employment						
Full-time equivalent	0.1	-1.5	-0.3	-0.2	0.1	0.0

Source: Australian Business Expectations (Cat no. 5250.0).

17

BUILDING APPROVALS: Original

	NEW HOUSES.....		NEW OTHER RESIDENTIAL BUILDING.....		TOTAL RESIDENTIAL(a)...		NON-RESIDENTIAL BUILDING(b).....		TOTAL BUILDING
	Dwelling units	Value	Dwelling units	Value	Dwelling units	Value	Private sector	Public sector	Value
Period	no.	\$m	no.	\$m	no.	\$m	\$m	\$m	\$m
1998-1999	17 490	1 912.9	2 949	298.3	20 578	2 436.0	897.5	210.7	3 544.3
1999-2000	18 653	2 173.7	4 068	513.2	22 869	2 931.4	666.1	535.0	4 132.3
2000-2001	11 956	1 526.9	2 637	314.3	15 085	2 111.1	r 1047.1	247.6	r 3 405.6
2000									
November	1 058	135.8	168	18.5	1 227	172.7	51.4	11.6	235.7
December	912	123.6	150	23.0	1 063	159.6	31.9	11.8	203.3
2001									
January	779	105.0	150	18.4	1 045	158.0	49.6	13.8	221.3
February	831	110.2	162	43.2	1 001	172.5	25.4	19.7	217.6
March	911	120.8	189	22.2	1 164	163.7	123.5	17.2	304.4
April	882	113.7	307	31.9	1 303	185.0	324.1	15.3	524.4
May	1 408	175.1	222	21.3	1 721	226.4	99.6	51.4	377.4
June	1 365	164.2	402	42.2	1 773	224.7	r 58.3	8.1	r 291.0
July	r 1 498	r 188.1	243	36.8	r 1 745	r 242.9	48.4	15.5	r 306.7
August	r 1 608	r 202.2	236	21.6	r 1 854	r 247.5	79.6	13.9	r 341.0
September	r 1 381	r 173.4	180	31.0	r 1 568	r 226.8	47.4	10.4	r 284.7
October	r 1 543	r 200.5	198	21.1	r 1 747	r 248.7	r 49.2	r 55.1	r 353.0
November	1 661	211.5	346	34.4	2 013	267.9	72.4	26.0	366.3
December	1 280	169.4	178	15.9	1 463	200.5	52.9	3.9	257.3
2002									
January	1 350	175.3	187	21.9	1 537	214.4	51.0	37.1	302.5

(a) Includes alterations, additions and conversions.

(b) Includes the value of alterations, additions and conversions made to non-residential buildings.

Source: *Building Approvals, Western Australia* (Cat no. 8731.5), *Building Approvals, Australia* (Cat no. 8731.0).

18

BUILDING APPROVALS: Trend

	HOUSES	OTHER DWELLINGS	TOTAL DWELLINGS.....		NON-RESIDENTIAL BUILDINGS(a)	TOTAL BUILDING
Month	no.	no.	no.	\$m	\$m	\$m
2000						
November	938	222	1 160	162.4	69.6	232.0
December	919	214	1 133	163.8	r 72.4	r 236.2
2001						
January	903	211	1 114	164.8	81.4	r 246.2
February	913	209	1 122	167.2	92.1	259.3
March	967	213	1 180	173.0	r 101.0	r 274.0
April	1 066	222	1 288	r 183.6	r 103.9	r 287.5
May	r 1 194	r 231	r 1 425	r 198.1	r 98.6	r 296.7
June	r 1 327	r 243	r 1 570	r 214.9	r 87.6	r 302.5
July	r 1 433	r 257	r 1 690	r 230.3	r 75.6	r 305.9
August	r 1 491	r 267	r 1 758	r 240.7	r 67.9	r 308.6
September	r 1 506	r 266	r 1 772	r 244.9	r 67.6	r 312.5
October	r 1 503	r 253	r 1 756	r 244.5	r 73.3	r 317.8
November	1 499	234	1 733	242.1	81.0	323.1
December	1 500	209	1 709	239.1	89.3	328.4
2002						
January	1 497	186	1 683	234.8	97.4	332.2

(a) Includes the value of alterations, additions and conversions made to non-residential buildings.

Source: *Building Approvals, Western Australia* (Cat no. 8731.5), *Building Approvals, Australia* (Cat no. 8731.0).

2000..... 2001.....

Region Mar qtr Jun qtr Sep qtr Dec qtr Mar qtr Jun qtr Sep qtr Dec qtr

NEW HOUSES (no.)

Perth Statistical Division	3 101	2 506	2 135	2 134	1 836	2 629	3 416	3 236
Central Metropolitan	151	125	116	115	108	127	160	153
East Metropolitan	652	464	368	367	336	418	569	585
North Metropolitan	862	790	689	686	486	870	1 064	992
South West Metropolitan	677	598	488	484	444	616	754	765
South East Metropolitan	759	529	474	482	462	598	869	741
South West(a)	741	565	416	445	406	642	643	795
Dale	240	198	142	166	155	265	..	..
Mandurah	..	..	..	..	..	..	249	288
Bunbury	..	..	..	..	..	..	132	122
Preston	280	155	141	135	122	198	96	155
Vasse	184	185	119	125	106	149	149	205
Blackwood	37	27	14	19	23	30	17	25
Lower Great Southern	158	130	73	80	78	89	99	109
Pallinup	11	18	5	1	3	5	1	3
King	147	112	68	79	75	84	98	106
Upper Great Southern	18	38	20	13	6	13	8	11
Hotham	16	30	20	13	2	12	7	9
Lakes	2	8	—	—	4	1	1	2
Midlands	128	147	106	85	92	74	95	103
Moore	52	68	55	42	45	36	64	62
Avon	72	66	41	42	40	36	24	37
Campion	4	13	10	1	7	2	7	4
South Eastern(a)	59	66	22	27	31	37	56	53
Kalgoorlie.Boulder City Part A	..	..	..	..	..	..	12	16
Lefroy	30	27	8	10	13	19	—	10
Johnston	29	39	14	17	18	18	44	27
Central(a)	117	85	64	52	42	84	71	76
Geraldton	..	..	..	..	..	..	47	34
Gascoyne	10	16	11	2	6	7	5	21
Carnegie	6	8	3	5	1	4	3	—
Greenough River	101	61	50	45	35	73	16	21
Pilbara	22	26	1	31	14	23	24	34
De Grey	19	9	—	11	3	5	3	9
Fortescue	3	17	1	20	11	18	21	25
Kimberley	64	120	68	41	31	68	85	91
Ord	3	40	19	7	8	2	6	33
Fitzroy	61	80	49	34	23	66	79	58

TOTAL OTHER RESIDENTIAL BUILDING (no.)

Perth Statistical Division	850	980	513	514	431	755	659	516
Central Metropolitan	397	363	176	112	227	214	115	83
East Metropolitan	25	99	64	15	3	72	39	55
North Metropolitan	199	237	200	297	109	178	247	228
South West Metropolitan	81	133	43	44	54	196	52	69
South East Metropolitan	148	148	30	46	38	95	90	81
South West	54	98	22	22	37	70	74	162
Lower Great Southern	10	19	6	2	4	16	2	22
Upper Great Southern	—	3	—	2	—	9	—	2
Midlands	3	18	10	—	2	4	11	5
South Eastern	22	47	45	32	25	37	18	2
Central	6	23	13	14	2	28	5	3
Pilbara	—	—	—	—	—	4	—	—
Kimberley	5	4	—	2	—	8	6	10

(a) The Statistical Divisions South West, South Eastern and Central have changed since the June quarter 2001 due to the implementation of the Australian Standard Geographical Classification (ASGC) 2001 on 1 July 2001. For more details of these changes, refer to *Statistical Geography Volume 1 Australian Standard Geographical Classification (ASGC) (Cat no. 1216.0)*.

Source: *Building Approvals, Western Australia (Cat. no. 8731.5)*.

	RESIDENTIAL BUILDING....			NON-RESIDENTIAL BUILDING.....							
	New residential building	Alterations and additions	Hotels etc(a)	Shops	Factories	Offices	Other business premises	Education	Health	Other(b)	Total
Period	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
COMMENCED											
1998-1999	2 038.4	226.7	51.3	380.3	90.0	101.6	163.0	108.7	57.5	177.5	1 129.9
1999-2000	2 719.4	265.0	42.2	174.1	99.9	120.1	130.3	261.5	117.0	274.6	1 219.7
2000-2001 r	1 772.1	276.2	21.9	183.4	69.8	305.3	117.2	171.8	55.8	209.0	1 134.2
2000											
June	660.5	66.9	5.9	48.3	23.0	45.7	41.1	53.9	61.4	111.0	390.2
September	465.6	53.2	3.5	61.8	20.1	25.8	24.8	48.5	8.9	44.6	237.9
December	446.7	56.5	4.5	59.5	15.7	32.6	35.0	38.7	3.1	36.2	225.3
2001											
March	423.5	92.6	7.9	23.6	17.0	29.6	17.0	16.5	20.8	74.5	207.0
June r	436.3	73.9	5.9	38.5	17.0	217.4	40.3	68.1	23.0	53.7	463.9
September	634.5	59.6	3.1	60.3	25.4	51.6	16.9	28.2	7.2	26.3	219.9
UNDER CONSTRUCTION AT END OF PERIOD											
1998-1999	1 076.6	112.5	58.0	290.8	43.2	54.9	73.3	62.2	47.1	130.2	759.7
1999-2000	1 597.9	112.3	23.9	164.8	48.1	70.4	57.1	190.9	101.6	224.3	881.1
2000-2001	1 214.0	146.5	14.9	101.1	29.2	254.0	56.1	148.9	82.3	209.1	895.4
2000											
June	1 597.9	112.3	23.9	164.8	48.1	70.4	57.1	190.9	101.6	224.3	881.1
September	1 585.2	118.3	11.6	97.4	35.4	65.5	61.5	218.7	94.7	244.4	828.9
December	1 390.2	109.0	12.6	121.9	32.2	68.0	42.0	207.6	81.7	231.6	797.6
2001											
March	1 279.8	151.1	16.2	117.0	30.6	56.1	36.0	118.1	88.5	280.9	743.4
June r	1 214.0	146.5	14.9	101.1	29.2	254.0	56.1	148.9	82.3	209.1	895.4
September	1 302.9	144.8	12.1	114.7	47.6	277.1	36.2	166.4	82.4	206.6	943.2
COMPLETED											
1998-1999	1 892.8	200.5	46.1	179.4	82.3	111.2	156.1	110.0	164.7	135.3	985.1
1999-2000	2 231.9	272.4	82.6	318.1	98.8	108.1	150.6	138.0	63.6	185.6	1 145.5
2000-2001	r 2 203.1	r 251.1	r 30.0	257.2	r 89.4	119.8	r 116.3	214.9	71.9	221.8	r 1 121.3
2000											
June	709.9	72.1	23.1	35.4	33.1	36.5	42.7	37.6	18.6	29.0	256.0
September	504.2	50.8	14.6	130.1	32.0	27.1	19.1	18.1	10.7	24.3	275.8
December	650.6	69.4	3.7	40.0	18.2	30.6	52.7	52.9	19.9	45.3	263.4
2001											
March	533.6	52.2	4.6	27.8	19.3	42.3	23.5	104.2	13.9	26.9	262.5
June	r 514.6	r 78.7	r 7.1	59.3	r 19.9	19.9	r 20.9	39.7	27.4	125.4	r 319.5
September	561.0	62.8	5.9	48.5	7.9	31.9	36.8	13.2	7.1	33.9	185.2

(a) Includes motels, hostels, boarding houses, guest houses, and holiday apartment buildings.

(b) Includes religious, entertainment and recreational and miscellaneous.

Source: Building Activity, Western Australia (Cat no. 8752.5).

Commodity	DEC QTR 2001.....		12 MONTHS ENDING DEC 2000.....		12 MONTHS ENDING DEC 2001.....	
	Exports \$'000	Imports \$'000	Exports \$'000	Imports \$'000	Exports \$'000	Imports \$'000
Section						
0 Food and live animals	809 119	60 167	3 185 278	187 774	2 911 872	211 344
1 Beverages and tobacco	7 883	14 298	24 028	32 818	33 246	40 910
2 Crude materials, inedible, except fuels	1 728 811	26 340	6 177 545	92 473	6 906 274	102 153
3 Mineral fuels, lubricants, and related materials	1 936 795	403 676	8 016 010	1 286 315	8 103 951	1 470 648
4 Animal and vegetable oils, fats and waxes	4 888	4 107	20 219	16 960	16 752	18 017
5 Chemical and related products	237 749	213 317	868 803	791 614	1 012 353	892 177
6 Manufactured goods classified chiefly by material	423 477	269 319	1 775 767	1 033 703	1 907 849	1 076 261
7 Machinery and transport equipment	179 649	815 440	763 014	3 616 149	840 258	3 633 190
8 Miscellaneous manufactured articles	29 527	146 131	79 919	518 644	105 084	565 540
9 Commodities and transactions n.e.c.	2 334 585	540 695	8 555 116	1 350 578	9 211 217	1 823 919
93 Special transactions and commodities	5 975	144	17 816	1 414	16 365	1 908
95 Gold coin whether or not legal tender	21 601	1 074	70 716	7 362	58 951	6 178
96 Coin (excluding gold coin), not being legal tender	16	70	33	1 479	46	130
97 Gold, non-monetary (excluding gold ores and concentrates)	906 833	409 309	2 917 215	1 108 391	3 546 818	1 331 312
98 Combined confidential items of trade	1 400 161	130 097	5 549 335	231 932	5 589 037	484 391
Total	7 692 483	2 493 490	29 465 698	8 927 027	31 048 857	9 834 159

Note: Discrepancies may occur between sums of component items and totals due to rounding.

Source: ABS data available on request, International Trade.

	DEC QTR 2001.....		12 MONTHS ENDING DEC 2000.....		12 MONTHS ENDING DEC 2001.....	
<i>Trading Partner</i>	<i>Exports</i> \$'000	<i>Imports</i> \$'000	<i>Exports</i> \$'000	<i>Imports</i> \$'000	<i>Exports</i> \$'000	<i>Imports</i> \$'000
Association of South East Asian Nations (ASEAN)						
Brunei Darussalam	2 128	57	5 302	83	6 558	82
Cambodia	360	0	7 301	92	5 416	73
Indonesia	269 393	307 765	724 845	335 920	767 850	1 012 741
Laos	1 494	0	3 471	441	10 656	183
Malaysia	112 704	54 679	352 260	438 803	408 553	360 350
Myanmar	1 368	554	5 866	1 494	17 706	1 780
Philippines	25 606	15 669	272 115	6 341	163 945	25 441
Singapore	270 599	149 710	1 966 267	565 077	1 390 565	676 215
Thailand	103 636	50 690	447 823	186 662	356 000	171 474
Viet Nam	6 036	85 283	66 841	316 615	47 804	284 589
<i>Total</i>	793 326	664 407	3 852 091	1 851 529	3 175 052	2 532 928
European Union (EU)						
Austria	1 513	18 432	6 518	50 428	11 431	63 829
Belgium–Luxembourg	43 829	9 160	410 349	35 047	278 628	40 306
Denmark	397	8 593	70 729	20 816	3 529	29 916
Finland	55 033	24 731	426 103	87 020	362 882	90 255
France	57 021	29 419	219 489	132 704	220 045	148 520
Germany	23 593	99 400	218 795	338 932	187 763	408 722
Greece	804	1 596	132 798	5 160	33 040	5 942
Ireland	567	3 311	2 470	12 524	5 841	11 584
Italy	48 474	131 148	210 948	279 391	217 722	401 481
Netherlands	133 807	14 174	619 098	43 021	543 182	56 020
Portugal	763	2 050	12 789	5 488	5 059	5 566
Spain	110 908	13 845	245 368	58 246	355 309	60 681
Sweden	2 025	24 095	11 302	98 683	9 717	89 394
United Kingdom	352 779	103 666	1 111 592	428 208	1 582 212	366 647
<i>Total</i>	831 512	483 619	3 698 347	1 595 668	3 816 361	1 778 864
Other Countries						
Canada	159 397	38 584	420 391	380 817	640 186	272 983
China	833 079	106 785	2 249 340	323 693	3 129 876	405 719
Hong Kong	186 312	14 006	387 668	45 622	822 235	64 027
Japan	2 029 647	277 929	7 944 112	1 100 684	8 213 491	1 198 288
Korea, Republic of	969 049	279 445	2 887 045	777 224	3 382 452	729 893
New Zealand	86 103	99 183	415 220	340 539	391 517	369 072
South Africa	163 355	26 545	660 416	155 410	606 729	142 361
Switzerland	7 042	17 181	69 761	21 968	111 674	48 091
Taiwan	419 775	41 443	1 734 844	158 552	1 847 368	148 244
United Arab Emirates	173 051	58 791	412 754	163 763	562 798	261 954
United States of America	518 271	211 697	2 613 601	1 317 230	2 354 667	1 254 043
All other countries	522 563	173 874	2 120 108	694 327	1 994 452	627 691
<i>Total</i>	6 067 644	1 345 463	21 915 260	5 479 830	24 057 444	5 522 366
Total Trade	7 692 483	2 493 490	29 465 698	8 927 027	31 048 857	9 834 159

Note: Discrepancies may occur between sums of component items and totals due to rounding.

Source: ABS data available on request, International Trade.

23

WOOL RECEIVALS AND LIVE SHEEP EXPORTS: Original

Period	RECEIVALS OF TAXABLE WOOL BY BROKERS AND DEALERS(a).....		EXPORT OF LIVE SHEEP(b).....		
	Bales '000	Tonnes '000	Quantity '000	Gross value \$'000	Gross weight '000t
1998-1999	688 021	145.5	4 033.2	148 855	206.6
1999-2000	685 050	143.4	3 762.2	145 962	186.1
2000-2001	558 764	115.5	4 299.6	190 788	205.8
2000					
September	166 270	33.4	1 185.6	46 832	58.2
December	149 037	31.8	1 196.8	50 659	57.5
2001					
March	166 407	33.6	1 113.3	54 155	51.5
June	77 050	16.7	804.0	39 142	38.6
September	r 128 993	r 26.6	r 1 006.9	r 56 374	r 47.4
December	124 800	26.6	1 289.0	79 765	61.6

(a) Source: National Council of Wool Selling Brokers.

(b) Source: ABS data available on request, International Trade.

24

LIVESTOCK SLAUGHTERED

Period	CATTLE.....			OTHER.....			
	Bulls, bullocks, steers	Cows, heifers	Total (excluding calves)	Calves	Sheep	Lambs	Pigs
	'000	'000	'000	'000	'000	'000	'000
ORIGINAL							
1998-1999	197.9	240.8	438.8	6.5	2 672.1	2 076.4	568.8
1999-2000	181.5	212.4	393.8	10.6	3 418.2	2 345.0	513.8
2000-2001	187.0	228.4	415.4	5.6	3 235.0	2 020.0	542.6
2000							
September	45.8	54.7	100.5	1.6	835.3	489.4	128.7
December	59.3	59.3	118.6	1.4	r 1 092.2	549.3	131.0
2001							
March	39.8	58.8	98.6	1.2	840.5	524.0	134.4
June	42.1	55.6	97.7	1.4	467.0	457.3	148.5
September	34.3	64.6	98.9	1.8	549.4	418.5	142.3
December	40.3	58.6	98.8	1.8	591.5	565.2	140.9
TREND ESTIMATES							
2000							
September	47.9	55.1	103.0	1.8	948.8	536.5	130.7
December	47.3	55.8	103.1	1.3	881.8	520.9	134.3
2001							
March	46.0	58.1	104.1	1.3	757.4	508.6	137.5
June	43.0	60.7	103.7	1.5	638.7	487.8	140.1
September	38.7	61.4	100.1	1.7	572.2	464.6	143.4
December	34.1	59.8	93.9	1.8	537.1	458.7	148.1

Note: Discrepancies may occur between sums of component items and totals due to rounding.

Source: Livestock Products (Cat no. 7215.0).

<i>Period</i>	<i>Beef</i> tonnes	<i>Veal</i> tonnes	<i>Mutton</i> tonnes	<i>Lamb</i> tonnes	<i>Pig meat</i> tonnes
ORIGINAL					
1998-1999	104 979	436	54 451	39 021	37 535
1999-2000	94 973	859	69 077	44 135	34 201
2000-2001	100 525	382	64 935	37 071	36 781
2000					
September	24 059	116	16 932	8 929	8 771
December	29 510	98	22 052	9 864	8 786
2001					
March	23 555	82	16 610	9 745	9 074
June	23 401	86	9 341	8 533	10 150
September	23 022	118	11 154	7 745	9 848
December	24 289	106	11 988	10 828	9 212
TREND ESTIMATES					
2000					
September	24 943	133	19 117	9 906	8 719
December	24 905	92	17 628	9 539	9 164
2001					
March	24 202	84	15 138	9 316	9 374
June	25 123	95	12 833	9 045	9 564
September	24 034	103	11 533	8 735	9 676
December	22 218	109	10 892	8 729	9 788

(a) Weight refers to carcass weight and excludes offal.

Source: *Livestock Products* (Cat no. 7215.0).

26

MINERAL EXPLORATION: Expenditure By Type of Mineral Sought

	METALLIC MINERALS.....					NON-METALLIC MINERALS.....			
	<i>Base metals(a).....</i>								
Period	Copper	Silver, lead-zinc	Nickel, cobalt	Total	Gold	Other(b)	Diamonds	Other(b)	Total minerals(c)
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1998-1999	n.a.	n.a.	n.a.	90.9	330.7	3.4	32.9	0.9	523.1
1999-2000	n.a.	n.a.	n.a.	88.3	253.0	n.p.	24.8	n.p.	415.0
2000-2001	2.7	19.3	60.5	82.5	271.9	10.5	n.p.	n.p.	424.1
2000									
September	0.4	5.5	14.3	20.2	64.4	1.2	9.2	0.3	104.4
December	0.7	6.2	18.5	25.4	71.6	3.3	8.2	0.2	118.0
2001									
March	0.6	3.7	12.3	16.6	62.2	2.7	n.p.	—	90.8
June	1.0	3.9	15.4	20.3	73.7	3.3	5.6	n.p.	110.9
September	1.4	3.4	13.3	18.1	64.8	5.7	n.p.	0.1	103.3
December	1.4	2.6	14.7	18.7	60.4	5.8	9.8	0.1	94.8

(a) From September quarter 2000, the 'base metals' category was split to show separate exploration for the component minerals. Prior to this, the three categories were reported as a 'total' figure.

(b) From September quarter 2000, the 'other' category includes tin, tungsten, scheelite, wolfram and other construction materials.

(c) Total includes minerals not listed (does not include petroleum).

Source: Mineral and Petroleum Exploration (Cat no. 8412.0); ABS data available on request, Mineral and Petroleum Exploration.

27

MINERAL PRODUCTION

	Iron ore	Bauxite	Gold	Ilmenite	Nickel	Diamonds
Period	'000 tonnes	'000 tonnes	tonnes	'000 tonnes	'000 tonnes	'000 carats
1998-1999	146 221	29 237	218.2	2 045	130	35 910
1999-2000	154 809	32 477	206.9	2 053	141	29 524
2000-2001	170 628	35 959	205.7	2 010	194	22 381
2000						
September	44 855	9 120	52.1	540	44	6 757
December	43 246	8 993	51.1	447	50	5 520
2001						
March	39 414	8 885	49.9	504	48	5 082
June	43 113	8 960	52.5	519	52	5 022
September p	47 066	8 995	49.4	458	50	8 047
December p	46 759	8 562	48.3	437	47	5 520

Source: ABARE, Australian Mineral Statistics.

<i>Period</i>	<i>Coal(a)</i> '000 tonnes	<i>Electricity generated(b)</i> million kWh	<i>Crude oil(c)(d)</i> mega-litres	<i>Natural gas(d)</i> million m ³
1998–1999	5 797	16 718	15 493	18 336
1999–2000	6 504	18 033	17 925	18 588
2000–2001	5 890	18 113	18 812	18 641
2000				
September	1 584	4 541	4 685	4 815
December	1 182	4 501	4 713	4 480
2001				
March	1 562	4 642	4 931	4 666
June	1 561	4 429	4 482	4 680
September	1 601	4 599	4 713	4 869
December	1 481	4 420	p 4 616	p 4 885

(a) Source: Department of Mineral and Petroleum Resources.

(b) Source: ABS data available on request, Manufacturing Production.

(c) Includes condensate.

(d) Source: ABARE, Australian Mineral Statistics.

HOTELS, MOTELS, GUEST HOUSES AND SERVICED APARTMENTS.....

<i>Period</i>	<i>Establishments</i> no.	<i>Guest rooms</i> no.	<i>Employment</i> persons	<i>Room occupancy rates</i> %	<i>Guest arrivals</i> '000	<i>Takings from accommodation</i> \$'000
2000						
September	326	19 052	10 185	53.9	683	96 222
December	332	19 325	10 443	57.2	725	106 139
2001						
March	327	19 257	10 027	54.4	676	98 564
June	327	19 059	9 645	52.1	632	90 341
September	323	19 043	9 642	54.6	679	94 970
December	321	19 128	9 736	55.0	723	99 153

Source: *Tourist Accommodation, Small Area Data, Western Australia*, (Cat no. 8635.5.40.001).

EMPLOYED.....

Month	Full-time '000	Part-time '000	Total '000	Total unemployed '000	Total labour force '000	Participation rate %	Unemployment rate %
MALES							
2000							
December	465.3	68.1	533.4	36.4	569.8	76.1	6.4
2001							
January	453.9	72.1	526.0	41.0	567.0	75.6	7.2
February	460.2	68.6	528.8	45.9	574.8	76.6	8.0
March	444.2	77.2	521.5	45.4	566.9	75.4	8.0
April	451.7	76.4	528.0	40.1	568.1	75.5	7.1
May	449.4	73.1	522.5	38.5	561.0	74.5	6.9
June	452.2	75.0	527.2	44.2	571.4	75.7	7.7
July	457.1	73.6	530.7	40.9	571.6	75.7	7.2
August	451.1	74.0	525.1	41.6	566.8	74.9	7.3
September	453.9	73.0	526.9	43.4	570.3	75.3	7.6
October	451.9	78.9	530.8	38.8	569.6	75.1	6.8
November	462.3	72.5	534.9	36.3	571.2	75.2	6.4
December	463.6	78.3	542.0	37.4	579.4	76.1	6.5
2002							
January	462.5	68.6	531.2	45.8	576.9	75.7	7.9
February	461.8	75.8	537.7	43.4	581.1	76.2	7.5
FEMALES							
2000							
December	230.2	194.3	424.5	22.3	446.8	59.6	5.0
2001							
January	221.1	186.9	408.0	26.7	434.7	57.9	6.1
February	222.3	189.5	411.9	29.6	441.5	58.8	6.7
March	219.5	192.6	412.1	30.0	442.1	58.8	6.8
April	209.3	204.1	413.4	29.6	443.1	58.8	6.7
May	208.4	199.4	407.8	32.7	440.5	58.4	7.4
June	202.8	204.5	407.3	33.9	441.2	58.4	7.7
July	207.3	201.5	408.8	25.4	434.3	57.4	5.9
August	211.2	201.9	413.0	23.3	436.3	57.6	5.3
September	212.4	201.9	414.3	27.6	441.9	58.3	6.3
October	207.7	205.0	412.6	24.9	437.5	57.6	5.7
November	208.3	207.2	415.5	24.0	439.5	57.8	5.5
December	213.0	205.5	418.5	23.8	442.3	58.1	5.4
2002							
January	206.2	194.2	400.3	33.5	433.8	56.9	7.7
February	208.0	207.8	415.8	30.5	446.2	58.5	6.8
PERSONS							
2000							
December	695.5	262.4	957.9	58.7	1 016.6	67.9	5.8
2001							
January	675.0	259.0	934.0	67.7	1 001.7	66.8	6.8
February	682.6	258.1	940.7	75.6	1 016.3	67.7	7.4
March	663.7	269.8	933.5	75.5	1 009.0	67.1	7.5
April	661.0	280.5	941.5	69.7	1 011.2	67.2	6.9
May	657.8	272.5	930.3	71.2	1 001.5	66.4	7.1
June	655.0	279.5	934.6	78.1	1 012.7	67.1	7.7
July	664.4	275.1	939.5	66.3	1 005.9	66.5	6.6
August	662.3	275.9	938.2	64.9	1 003.0	66.3	6.5
September	666.3	274.9	941.2	71.0	1 012.2	66.8	7.0
October	659.5	283.9	943.4	63.7	1 007.1	66.3	6.3
November	670.6	279.8	950.4	60.3	1 010.7	66.5	6.0
December	676.6	283.9	960.5	61.2	1 021.7	67.1	6.0
2002							
January	668.7	262.8	931.5	79.3	1 010.8	66.3	7.8
February	669.8	283.6	953.4	73.9	1 027.3	67.3	7.2

(a) From April 2001, the implementation of the redesigned Labour Force questionnaire has resulted in minor revisions to the data. For more details on the content of the redesigned questionnaire, see *Information Paper: Questionnaires Used in the Labour Force Survey* (Cat. no. 6232.0)

Source: ABS data available on request, Labour Force.

EMPLOYED.....

Month	Full-time employed '000	Total employed '000	Total unemployed '000	Total labour force '000	Participation rate %	Unemployment rate %
MALES						
2000						
December	454.4	525.1	37.3	562.4	75.1	6.6
2001						
January	454.2	525.7	38.4	564.1	75.3	6.8
February	453.7	526.3	39.9	566.2	75.4	7.0
March	453.0	526.6	41.3	567.9	75.6	7.3
April	452.4	526.7	42.6	569.3	75.6	7.5
May	451.9	526.7	43.4	570.1	75.7	7.6
June	452.0	526.9	43.7	570.6	75.6	7.7
July	452.7	527.5	43.4	570.9	75.6	7.6
August	453.6	528.4	42.6	571.0	75.5	7.5
September	454.9	529.5	41.6	571.1	75.4	7.3
October	456.4	530.9	40.5	571.4	75.3	7.1
November	458.0	532.4	39.6	572.0	75.3	6.9
December	459.5	533.9	39.0	572.9	75.3	6.8
2002						
January	460.7	535.2	38.7	573.9	75.3	6.7
February	461.7	536.4	38.5	574.9	75.4	6.7
FEMALES						
2000						
December	220.3	413.5	24.2	437.7	58.4	5.5
2001						
January	220.4	414.1	24.6	438.7	58.5	5.6
February	219.5	414.2	25.6	439.8	58.5	5.8
March	217.6	413.7	27.1	440.8	58.6	6.2
April	215.2	412.7	28.7	441.4	58.6	6.5
May	213.0	411.5	29.9	441.4	58.5	6.8
June	211.1	410.6	30.5	441.1	58.4	6.9
July	210.0	410.5	30.2	440.7	58.3	6.8
August	209.2	410.6	29.2	439.8	58.1	6.6
September	208.6	410.9	28.2	439.1	57.9	6.4
October	207.7	411.1	27.4	438.5	57.7	6.3
November	206.6	411.3	27.2	438.5	57.7	6.2
December	205.6	411.4	27.2	438.6	57.6	6.2
2002						
January	204.9	411.8	27.3	439.1	57.6	6.2
February	204.3	412.1	27.3	439.4	57.6	6.2
PERSONS						
2000						
December	674.7	938.5	61.4	999.9	66.8	6.1
2001						
January	674.7	939.9	63.0	1 002.9	66.9	6.3
February	673.2	940.5	65.5	1 006.0	67.0	6.5
March	670.6	940.3	68.5	1 008.8	67.1	6.8
April	667.6	939.4	71.2	1 010.6	67.1	7.0
May	664.9	938.1	73.3	1 011.4	67.1	7.2
June	663.2	937.5	74.2	1 011.7	67.0	7.3
July	662.7	938.0	73.5	1 011.5	66.9	7.3
August	662.9	939.0	71.8	1 010.8	66.8	7.1
September	663.5	940.4	69.8	1 010.2	66.6	6.9
October	664.1	942.0	68.0	1 010.0	66.5	6.7
November	664.6	943.7	66.8	1 010.5	66.5	6.6
December	665.1	945.3	66.2	1 011.5	66.4	6.5
2002						
January	665.7	947.0	65.9	1 012.9	66.5	6.5
February	666.0	948.5	65.8	1 014.3	66.5	6.5

Source: Labour Force, Australia (Cat no. 6202.0).

	2000..	2001.....												2002.....	
Status	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
CENTRAL METROPOLITAN															
Employed ('000)	62.3	59.0	62.2	61.6	60.9	61.9	60.0	59.5	61.6	60.1	60.1	59.6	59.0	56.2	63.4
Unemployed ('000)	2.8	3.6	4.5	6.8	4.2	2.8	3.5	2.9	3.5	3.5	3.2	1.7	2.9	3.6	3.5
Unemployment rate (%)	4.3	5.8	6.7	9.9	6.5	4.3	5.5	4.6	5.3	5.5	5.1	2.7	4.6	6.0	5.2
Participation rate (%)	67.7	65.0	68.1	67.5	62.5	62.2	61.4	64.7	62.7	61.9	61.6	59.6	64.1	60.2	64.2
EASTERN METROPOLITAN															
Employed ('000)	104.6	107.2	112.7	113.0	115.0	109.3	110.8	114.4	113.5	115.3	112.8	109.6	112.2	109.9	112.1
Unemployed ('000)	7.9	8.7	10.2	9.2	7.9	7.6	9.3	8.2	7.9	8.4	8.9	7.4	8.9	10.0	8.6
Unemployment rate (%)	7.0	7.5	8.3	7.5	6.4	6.5	7.8	6.7	6.5	6.8	7.3	6.3	7.3	8.4	7.2
Participation rate (%)	66.9	66.9	69.1	68.1	69.3	65.7	66.8	67.5	65.9	66.5	65.6	64.0	65.1	66.0	67.1
NORTHERN METROPOLITAN															
Employed ('000)	234.3	220.0	213.7	215.3	214.6	215.8	216.4	216.6	218.7	220.6	224.7	227.5	225.8	215.6	221.3
Unemployed ('000)	17.1	17.6	18.0	20.2	17.6	14.7	19.9	13.0	12.4	14.5	12.7	12.8	13.4	16.6	15.6
Unemployment rate (%)	6.8	7.4	7.8	8.6	7.6	6.4	8.4	5.7	5.4	6.2	5.4	5.3	5.6	7.1	6.6
Participation rate (%)	71.0	68.1	67.9	68.1	68.2	68.0	70.0	68.9	69.3	69.6	70.4	70.7	69.7	66.8	67.9
SOUTH WEST METROPOLITAN															
Employed ('000)	146.6	143.4	142.1	138.4	140.4	138.9	142.5	146.7	145.9	145.8	140.0	141.6	148.7	144.8	140.7
Unemployed ('000)	10.3	10.1	12.1	9.3	10.3	12.2	10.1	10.5	10.2	9.0	10.8	11.8	11.7	12.6	14.4
Unemployment rate (%)	6.6	6.6	7.9	6.3	6.8	8.1	6.6	6.7	6.5	5.8	7.2	7.7	7.3	8.0	9.3
Participation rate (%)	65.4	64.8	65.8	64.5	65.3	63.4	63.1	63.5	64.7	64.7	62.6	63.0	65.3	64.6	64.7
SOUTH EAST METROPOLITAN															
Employed ('000)	156.9	157.0	161.3	160.3	163.9	158.7	157.4	150.7	151.9	155.7	156.4	161.9	163.3	161.9	164.6
Unemployed ('000)	9.1	12.8	13.1	12.4	11.5	12.4	13.8	16.0	12.2	14.4	12.2	11.8	9.9	15.9	13.5
Unemployment rate (%)	5.5	7.5	7.5	7.2	6.6	7.3	8.1	9.6	7.5	8.5	7.2	6.8	5.7	8.9	7.6
Participation rate (%)	64.7	65.1	65.5	65.4	65.6	65.2	65.7	62.7	62.2	64.8	64.0	66.0	66.1	67.6	67.7
LOWER WESTERN WA															
Employed ('000)	129.5	130.0	127.6	127.9	130.1	129.6	124.9	134.1	128.7	126.4	126.4	128.0	131.3	130.5	136.2
Unemployed ('000)	7.5	9.7	12.0	12.8	11.5	12.4	11.5	8.9	7.2	11.1	7.6	6.7	7.1	9.3	9.6
Unemployment rate (%)	5.5	7.0	8.6	9.1	8.1	8.7	8.5	6.2	5.3	8.1	5.7	5.0	5.2	6.7	6.6
Participation rate (%)	64.3	64.7	64.0	63.9	63.6	65.2	64.6	65.7	65.5	65.0	64.2	65.0	65.2	62.9	64.7
REMAINDER-BALANCE WA															
Employed ('000)	122.1	114.8	118.9	115.6	116.5	116.0	122.6	117.4	117.8	117.3	123.0	122.3	120.2	112.7	115.1
Unemployed ('000)	6.0	8.1	7.9	7.2	6.7	9.2	9.9	6.9	11.4	10.1	8.2	8.1	7.4	11.4	8.5
Unemployment rate (%)	4.7	6.6	6.3	5.8	5.4	7.4	7.5	5.6	8.8	7.9	6.2	6.2	5.8	9.2	6.9
Participation rate (%)	75.3	73.3	76.3	74.7	75.8	74.6	75.6	73.5	71.9	72.2	73.1	71.9	72.1	74.1	75.0

Source: ABS data available on request, Labour Force.

	Nov 2000	Feb 2001	May 2001	Aug 2001	Nov 2001	Feb 2002
Industry	'000	'000	'000	'000	'000	'000
MALES						
Agriculture, forestry and fishing	30.8	33.1	28.6	35.2	31.9	31.0
Mining	28.8	31.4	27.6	24.0	23.7	30.2
Manufacturing	71.8	72.4	75.0	70.2	71.6	75.1
Electricity, gas and water supply	7.1	7.5	7.4	5.6	5.2	4.8
Construction	69.2	68.0	67.4	70.0	69.4	66.0
Wholesale trade	28.6	30.6	32.0	29.3	30.7	33.2
Retail trade	64.4	60.4	63.1	64.2	74.3	81.2
Accommodation, cafes and restaurants	18.4	18.5	22.6	20.9	18.9	19.5
Transport and storage	33.0	32.0	30.2	30.1	28.3	32.4
Communication services	8.5	8.6	9.7	8.8	7.5	8.0
Finance and insurance	11.8	8.7	9.2	10.5	11.8	11.6
Property and business services	55.9	63.5	63.1	62.3	61.5	54.7
Government administration and defence	20.5	21.1	20.7	20.1	22.3	23.3
Education	22.3	22.8	21.2	21.6	20.4	20.5
Health and community services	19.3	18.9	19.9	17.3	17.4	16.2
Cultural and recreational services	10.2	10.5	8.6	12.9	11.9	9.5
Personal and other services	20.3	20.1	16.2	22.2	28.2	20.3
Total	520.9	528.1	522.5	525.2	535.0	537.5
FEMALES						
Agriculture, forestry and fishing	12.8	14.2	15.1	15.9	16.2	14.5
Mining	4.9	5.1	6.3	4.1	5.3	5.6
Manufacturing	20.9	23.7	21.0	19.6	16.1	16.5
Electricity, gas and water supply	2.0	1.6	1.0	1.4	1.5	1.4
Construction	13.4	11.4	10.7	12.7	12.2	13.6
Wholesale trade	11.4	12.4	12.4	10.8	15.2	18.3
Retail trade	71.1	72.3	70.2	77.9	75.5	78.1
Accommodation, cafes and restaurants	27.0	24.0	29.7	32.2	29.0	26.4
Transport and storage	12.8	14.3	11.5	9.1	9.1	10.9
Communication services	5.1	5.1	6.7	4.3	3.9	5.6
Finance and insurance	15.2	15.6	15.3	14.4	16.8	18.5
Property and business services	50.3	50.9	46.9	47.4	42.8	43.0
Government administration and defence	17.4	16.5	13.8	14.6	14.1	18.1
Education	46.4	44.0	42.5	45.2	50.0	49.6
Health and community services	67.7	71.5	78.3	74.8	72.9	64.5
Cultural and recreational services	11.6	9.7	8.7	7.6	11.9	12.0
Personal and other services	18.4	18.0	17.8	21.0	23.1	19.3
Total	408.4	410.3	407.9	413.0	415.6	415.9
PERSONS						
Agriculture, forestry and fishing	43.6	47.4	43.7	51.1	48.2	45.5
Mining	33.7	36.4	33.9	28.1	29.0	35.7
Manufacturing	92.7	96.1	95.9	89.8	87.6	91.6
Electricity, gas and water supply	9.1	9.1	8.4	7.0	6.8	6.2
Construction	82.6	79.4	78.1	82.8	81.6	79.5
Wholesale trade	39.9	43.0	44.4	40.1	45.9	51.5
Retail trade	135.5	132.7	133.3	142.1	149.8	159.3
Accommodation, cafes and restaurants	45.4	42.5	52.3	53.0	47.9	45.9
Transport and storage	45.7	46.3	41.7	39.2	37.5	43.3
Communication services	13.6	13.7	16.4	13.1	11.3	13.6
Finance and insurance	27.0	24.3	24.4	24.9	28.5	30.1
Property and business services	106.3	114.4	110.1	109.7	104.2	97.7
Government administration and defence	37.9	37.7	34.6	34.7	36.4	41.5
Education	68.7	66.8	63.7	66.7	70.4	70.1
Health and community services	87.0	90.4	98.2	92.1	90.3	80.7
Cultural and recreational services	21.9	20.2	17.3	20.5	23.8	21.5
Personal and other services	38.7	38.1	34.0	43.2	51.3	39.7
Total	929.3	938.5	930.4	938.1	950.5	953.4

(a) From April 2001, the implementation of the redesigned Labour Force questionnaire has resulted in minor revisions to the data. For more details on the content of the redesigned questionnaire, see *Information Paper: Questionnaires Used in the Labour Force Survey* (Cat. no. 6232.0)

Source: ABS data available on request, Labour Force.

34 AVERAGE WEEKLY HOURS WORKED(a): Original

Period	FULL-TIME WORKERS.....		PART-TIME WORKERS.....	
	Males	Females	Males	Females
1998-1999	43.4	37.7	15.3	15.2
1999-2000	43.3	37.8	15.2	15.4
2000-2001	42.6	37.5	15.3	15.4
2000				
December	45.5	40.2	15.9	16.6
2001				
January	33.1	28.6	14.2	12.7
February	44.4	39.8	16.2	16.2
March	42.6	37.0	15.9	15.4
April	41.6	36.8	15.7	15.1
May	44.9	40.3	17.1	16.4
June	42.2	37.7	15.4	15.6
July	42.6	37.5	15.5	15.3
August	43.4	39.0	16.3	15.7
September	43.4	39.2	15.0	15.8
October	39.5	33.3	16.2	13.6
November	45.5	40.2	15.5	16.0
December	45.4	40.7	16.4	16.7
2002				
January	39.9	33.4	15.7	14.0
February	44.0	39.6	16.1	16.0

(a) Persons who worked one hour or more in the reference week.

Source: ABS data available on request, Labour Force.

35 NUMBER OF EMPLOYEES AND HOURS WORKED, By Occupation: February 2002

Occupation	Employee(a) total '000	Aggregate weekly hours worked '000	Average weekly hours no.
Managers and administrators	42.5	2 026.4	47.7
Professionals	146.5	5 476.1	37.4
Associate professionals	94.6	3 782.8	40.0
Tradespersons and related workers	96.3	3 909.8	40.6
Advanced clerical and service workers	36.0	1 057.2	29.3
Intermediate clerical, sales and service workers	151.9	4 564.9	30.1
Intermediate production and transport workers	75.4	2 868.1	38.0
Elementary clerical, sales and service workers	92.3	2 135.0	23.1
Labourers and related workers	75.3	2 034.5	27.0
All occupations	810.8	27 854.7	34.4

(a) Persons who worked one hour or more in the reference week.

Source: ABS data available on request, Labour Force.

	15–19 YEARS.....		20–24 YEARS.....		25–34 YEARS.....	
	<i>Unemployment rate</i>	<i>Participation rate</i>	<i>Unemployment rate</i>	<i>Participation rate</i>	<i>Unemployment rate</i>	<i>Participation rate</i>
<i>Month</i>	%	%	%	%	%	%
2000						
December	16.9	69.4	8.3	85.3	4.1	81.5
2001						
January	17.2	69.0	10.8	83.5	5.5	80.5
February	20.3	64.1	12.6	83.1	7.6	81.1
March	18.9	63.5	13.4	82.9	7.3	80.5
April	18.0	63.9	11.3	82.2	6.3	81.7
May	17.1	64.9	10.9	79.9	6.3	80.5
June	18.6	66.9	12.3	80.6	7.6	81.4
July	14.7	66.7	10.8	79.3	6.3	82.2
August	11.5	65.1	11.0	80.7	6.6	81.1
September	16.9	67.1	10.7	82.7	7.0	80.4
October	16.4	66.5	9.5	81.7	6.2	80.9
November	15.4	64.9	8.6	80.9	5.5	80.3
December	14.5	71.2	10.1	83.8	5.7	80.9
2002						
January	17.3	70.7	12.1	80.3	9.5	80.0
February	16.0	68.4	10.7	82.9	7.6	80.9

	35–44 YEARS.....		45–54 YEARS.....		55 YEARS AND OVER.....	
	<i>Unemployment rate</i>	<i>Participation rate</i>	<i>Unemployment rate</i>	<i>Participation rate</i>	<i>Unemployment rate</i>	<i>Participation rate</i>
<i>Month</i>	%	%	%	%	%	%
2000						
December	4.2	84.1	4.0	81.7	3.5	27.1
2001						
January	4.9	82.5	4.6	79.9	3.7	27.0
February	5.0	84.3	4.0	82.5	3.2	28.8
March	5.6	83.7	4.3	83.0	2.7	27.5
April	5.8	83.9	3.8	81.4	2.8	28.1
May	6.2	83.4	4.3	80.8	4.1	27.4
June	6.0	83.7	3.7	80.2	5.3	28.6
July	5.6	82.8	3.5	79.5	4.1	27.6
August	5.3	82.0	3.9	80.6	4.8	27.4
September	5.1	82.0	4.4	81.8	4.0	27.8
October	4.6	80.9	3.6	81.7	3.6	27.3
November	4.7	81.4	3.8	82.1	3.5	28.7
December	4.8	81.3	3.0	81.4	3.0	28.0
2002						
January	5.1	80.1	4.5	81.4	3.8	28.0
February	6.8	82.2	3.5	81.9	3.2	29.4

Source: ABS data available on request, Labour Force.

NUMBER OF PERSONS UNEMPLOYED FOR.....

Period	Under 4 weeks '000	4 and under 13 weeks '000	13 and under 26 weeks '000	26 and under 52 weeks '000	52 weeks and over '000	Total '000
.....						
SINCE LAST FULL-TIME JOB						
February 1998	16.9	21.1	8.2	10.8	17.0	74.0
February 1999	19.5	25.3	8.7	7.5	18.2	79.2
February 2000	21.4	20.2	9.4	7.4	13.2	71.6
2000						
December	20.2	13.7	5.8	8.3	12.7	60.7
2001						
January	19.7	21.6	7.3	9.2	12.9	70.7
February	18.2	27.1	8.2	6.8	17.5	77.7
March	20.1	27.2	12.0	6.1	12.4	77.8
April	12.6	22.2	15.5	8.0	11.5	69.7
May	15.1	19.0	17.3	7.4	12.4	71.2
June	18.0	18.7	20.1	8.6	12.8	78.1
July	14.4	15.0	12.1	12.5	12.4	66.3
August	16.3	15.5	9.7	12.1	11.4	64.9
September	15.6	21.1	9.0	10.3	14.9	71.0
October	13.9	15.3	10.1	12.9	11.5	63.7
November	14.1	15.0	7.3	11.7	12.2	60.3
December	19.5	13.3	8.9	7.6	11.9	61.2
2002						
January	24.7	23.1	8.0	10.8	12.7	79.3
February	19.3	22.8	10.4	6.8	14.7	73.9
.....						
SINCE LAST EMPLOYMENT						
2001						
April	13.6	21.8	15.7	7.9	10.8	69.7
May	15.1	19.4	17.6	8.0	11.1	71.2
June	18.6	20.7	19.5	7.9	11.4	78.1
July	14.8	15.9	11.6	11.9	12.0	66.3
August	16.5	15.6	10.1	11.8	10.8	64.9
September	16.3	21.8	8.9	10.0	14.0	71.0
October	14.7	15.9	10.5	12.3	10.3	63.7
November	14.3	15.3	7.6	11.5	11.5	60.3
December	20.4	13.2	8.9	7.2	11.6	61.2
2002						
January	25.4	23.0	7.8	11.0	12.2	79.3
February	19.3	23.5	11.2	6.4	13.5	73.9

(a) An additional definition has been introduced from April 2001 to allow comparison with international labour force standards. For more information, refer to *Labour Force, Australia* (Cat no. 6203.0).

Source: ABS data available on request, *Labour Force*.

INDEX NUMBERS.....	Sep qtr 2001 to Dec qtr 2001		Dec qtr 2000 to Dec qtr 2001					
	Sep qtr 2000	Dec qtr 2000	Mar qtr 2001	Jun qtr 2001	Sep qtr 2001	Dec qtr 2001	% change	% change
Selected Industries								
Mining	111.2	111.5	113.4	114.5	115.1	115.7	0.5	3.8
Manufacturing	110.1	111.5	116.9	118.7	115.4	116.1	0.6	4.1
Retail trade	108.6	108.9	110.1	110.3	111.3	112.4	1.0	3.2
Accommodation, cafes and restaurants	109.8	110.4	110.5	111.4	112.7	113.1	0.4	2.4
Property and business services	107.5	108.5	109.1	111.2	111.6	112.0	0.4	3.2
Government administration and defence	111.0	112.6	114.0	114.0	115.2	115.9	0.6	2.9
Education	106.9	107.1	110.2	110.8	112.6	112.9	0.3	5.4
Health and community services	109.4	109.6	110.3	110.5	112.2	113.8	1.4	3.8
Personal and other services	107.6	107.9	108.9	108.9	109.4	110.0	0.5	1.9
All industries	109.3	110.0	111.8	112.5	113.2	114.0	0.7	3.6
Occupations								
Managers and administrators	109.2	109.6	112.1	113.7	111.2	111.5	0.3	1.7
Professionals	108.4	109.2	112.0	113.1	114.2	115.1	0.8	5.4
Associate professionals	109.0	109.6	110.8	111.3	112.6	113.2	0.5	3.3
Tradespersons and related workers	110.3	111.0	113.3	114.0	115.2	115.9	0.6	4.4
Intermediate clerical, sales and service workers	109.4	109.8	110.8	111.0	112.6	113.3	0.6	3.2
Intermediate production and transport workers	109.5	110.4	111.5	112.0	113.3	113.9	0.5	3.2
Elementary clerical, sales and service workers	109.3	109.6	111.2	111.6	112.0	112.5	0.4	2.6
Labourers and related workers	108.9	110.2	110.6	111.1	111.8	113.4	1.4	2.9
All occupations	109.3	110.0	111.8	112.5	113.2	114.0	0.7	3.6

(a) Base of each index: September 1997 = 100.0.

Source: ABS data available on request, Wage Cost Index.

39

INDUSTRIAL DISPUTES CAUSING STOPPAGE OF WORK: Original

Period	Number of disputes	Number of workers involved	Working days lost	Working days lost per thousand employees, 12 months ended
	no.	'000	'000	no.
1999	124	32.1	43.4	57
2000	96	24.7	53.6	68
2001	73	20.0	25.0	32
2000				
October	6	0.4	1.0	70
November	7	0.5	1.5	70
December	5	0.2	0.3	68
2001				
January	6	0.5	0.9	60
February	7	0.9	1.7	58
March	8	0.8	1.3	42
April	7	1.5	2.4	36
May	5	0.6	0.7	31
June	13	1.2	2.0	28
July	15	1.3	3.7	30
August	8	1.4	3.0	31
September	10	1.0	0.6	24
October	11	0.8	1.9	25
November	18	3.9	5.7	31
December	8	0.9	1.2	32

Source: Industrial Disputes, Australia (Cat no. 6321.0); ABS data available on request, Industrial Disputes.

40

JOB VACANCIES: Original

SECTOR.....

Period	Job vacancies	Public	Private	Job vacancy rate
	'000	'000	'000	%
2000				
August	10.6	1.8	8.7	1.47
November	8.6	1.9	6.7	1.19
2001				
February	9.8	1.6	8.2	1.43
May	6.4	1.3	5.0	0.89
August	9.6	1.2	* 8.4	1.37
November	6.2	*1.5	4.7	0.91

PERCENTAGE CHANGE (from previous quarter)

2000				
August	34.3	6.3	42.2	36.2
November	-18.7	5.0	-23.7	-19.1
2001				
February	14.2	-19.0	23.8	20.0
May	-35.2	-13.8	-39.3	-37.6
August	50.8	-13.2	68.0	54.2
November	-35.2	27.6	-43.9	-33.5

Note: Discrepancies may occur between sums of component items and totals due to rounding.

Source: Job Vacancies, Australia (Cat no. 6354.0).

41 ESTIMATED RESIDENT POPULATION

	Males	Females	Persons
Period	no.	no.	no.
1998–1999	935 288	922 298	1 857 586
1999–2000	948 356	935 322	1 883 678
2000–2001 p	961 442	948 309	1 909 751
1998	928 394	916 326	1 844 720
1999	941 895	929 280	1 871 175
2000 p	954 983	942 216	1 897 199
2000			
June	948 356	935 322	1 883 678
September p	952 061	939 287	1 891 348
December p	954 983	942 216	1 897 199
2001			
March p	958 569	945 497	1 904 066
June p	961 442	948 309	1 909 751
September p	964 657	952 059	1 916 716

Source: Australian Demographic Statistics (Cat no. 3101.0).

42 POPULATION CHANGE, Components

	Natural increase	Net estimated overseas migration(a)	Net estimated interstate migration	Total increase
Period	no.	no.	no.	no.
1998–1999	14 509	12 157	1 775	28 441
1999–2000	13 829	p 12 947	–684	p 26 092
2000–2001 p	13 943	14 841	–2 711	26 073
1998	14 458	14 792	3 874	33 124
1999	14 249	p 12 196	10	p 26 455
2000 p	14 084	13 490	–1 550	26 024
2000				
June	3 332	p 2 115	73	p 5 520
September p	3 308	4 930	–568	7 670
December p	3 653	2 953	–755	5 851
2001				
March p	3 352	4 087	–572	6 867
June p	3 630	2 871	–816	5 685
September p	3 049	4 675	–759	6 965

(a) Includes an adjustment for 'category jumping'. Category jumping is the term used to describe changes between intended and actual duration of stay of travellers to and from Australia, such that their classification as short term or as long term/permanent movers is different at arrival from that at departure.

Source: Australian Demographic Statistics (Cat no. 3101.0).

43

REGISTRATION OF BIRTHS, DEATHS, MARRIAGES AND DIVORCES

<i>Period</i>	<i>Live births(a)</i> no.	<i>Infant deaths(a)</i> no.	<i>Total deaths(a)</i> no.	<i>Marriages</i> no.	<i>Divorces</i> no.
1998–1999	25 224	120	10 735	10 496	5 410
1999–2000	24 910	114	11 081	10 742	5 323
2000–2001 p	24 442	118	10 499	10 259	5 132
1998	25 145	121	10 687	10 705	5 268
1999	25 204	114	10 955	10 197	5 301
2000	p 24 711	p 114	p 10 627	11 000	5 276
2000					
June	6 066	28	2 734	2 531	1 384
September	p 6 103	p 22	p 2 795	1 499	1 431
December	p 6 298	p 36	p 2 645	3 698	1 249
2001					
March p	5 800	32	2 448	2 592	1 193
June p	6 241	28	2 611	2 470	1 259
September p	6 023	31	2 974	1 262	1 503

(a) With the exception of preliminary data, estimates of births and deaths are included by State or Territory of usual residence and year of occurrence. For preliminary estimates, births and deaths are included by State or Territory of usual residence and year of registration.

Source: Australian Demographic Statistics (Cat no. 3101.0).

44

RATES OF BIRTHS, DEATHS, MARRIAGES AND DIVORCES

<i>Period</i>	<i>Live births(a)</i> no.	<i>Infant deaths(b)</i> no.	<i>Total deaths(a)</i> no.	<i>Marriages(a)</i> no.	<i>Divorces(a)</i> no.
1998–1999	13.6	4.8	5.8	5.7	2.9
1999–2000	13.2	4.6	5.9	5.7	2.8
2000–2001 p	12.8	4.8	5.5	5.4	2.7
1998	13.6	4.8	5.8	5.8	2.9
1999	13.5	4.5	5.9	5.4	2.8
2000	p 13.0	p 4.6	p 5.6	5.8	2.8
2000					
June	12.9	4.6	5.8	5.4	2.9
September	p 12.9	p 3.6	p 5.9	3.2	3.0
December	p 13.3	p 5.7	p 5.6	7.8	2.6
2001					
March p	12.2	5.5	5.2	5.5	2.5
June p	13.1	4.5	5.5	5.2	2.6
September p	12.6	5.1	6.2	2.6	3.1

(a) For financial and calendar years the rate is per 1,000 estimated resident population at 31 December and 30 June, respectively. For quarters, the rate is per 1,000 of the average of the previous and current quarterly populations.

(b) Infant deaths per 1,000 live births.

Source: Australian Demographic Statistics (Cat no. 3101.0).

	1999.....	2000.....	2001.....						
	Dec qtr	Mar qtr	Jun qtr	Sep qtr	Dec qtr	Mar qtr	Jun qtr	Sep qtr	Dec qtr
Selected Offences	no.	no.	no.	no.	no.	no.	no.	no.	no.
CENTRAL METROPOLITAN									
Homicide(a)	1	1	2	1	3	4	1	—	—
Assault(b)	498	517	408	398	470	564	471	443	446
Robbery(c)	103	81	100	64	96	100	87	63	96
Burglary(d)	976	1 351	1 024	1 010	1 216	1 313	1 317	1 188	1 353
Theft	2 766	3 088	3 072	3 266	3 576	3 160	3 066	2 956	3 311
Steal motor vehicle	377	423	324	369	378	367	323	332	362
Property damage	737	780	733	885	870	810	781	734	842
Graffiti	380	320	347	434	474	474	523	821	438
Drugs	362	418	433	540	453	398	444	497	357
Total reported offences(e)	6 691	7 380	6 982	7 575	8 029	7 725	7 474	7 470	7 594
EASTERN METROPOLITAN									
Homicide(a)	4	3	2	2	4	1	5	6	—
Assault(b)	393	413	380	370	527	503	474	393	447
Robbery(c)	59	76	58	47	69	76	68	77	48
Burglary(d)	1 737	1 657	1 581	1 462	1 969	1 910	2 221	1 620	1 858
Theft	2 107	2 045	2 209	2 597	2 480	2 198	2 270	2 264	2 409
Steal motor vehicle	326	287	265	327	374	280	314	362	337
Property damage	864	730	822	902	931	923	856	895	931
Graffiti	215	353	445	403	270	358	238	304	259
Drugs	403	440	383	412	359	418	362	310	293
Total reported offences(e)	6 513	6 324	6 538	6 921	7 389	7 175	7 181	6 578	6 908
NORTHERN METROPOLITAN									
Homicide(a)	9	3	2	4	3	—	2	4	1
Assault(b)	760	747	651	706	740	861	754	551	690
Robbery(c)	129	139	137	133	150	126	144	97	122
Burglary(d)	2 990	3 570	3 080	3 044	3 596	3 651	3 632	3 035	3 233
Theft	4 597	4 373	4 820	4 736	4 791	4 732	4 819	4 748	4 978
Steal motor vehicle	879	829	823	726	741	688	690	838	747
Property damage	1 596	1 612	1 539	1 581	1 645	1 752	1 750	1 677	1 716
Graffiti	1 400	982	969	1 358	1 037	999	1 111	1 271	1 329
Drugs	449	501	636	734	556	669	669	628	614
Total reported offences(e)	13 374	13 464	13 429	13 870	14 108	14 377	14 323	13 571	14 196
SOUTH WEST METROPOLITAN									
Homicide(a)	1	6	3	2	—	1	—	—	2
Assault(b)	507	465	433	422	559	620	498	522	587
Robbery(c)	70	71	60	64	74	62	73	79	70
Burglary(d)	2 207	2 344	1 935	2 020	2 034	2 111	1 823	1 801	1 942
Theft	2 797	3 114	2 913	3 027	3 524	3 330	3 125	3 155	3 580
Steal motor vehicle	547	566	505	447	472	519	447	422	492
Property damage	1 161	1 082	1 121	1 179	1 227	1 152	1 078	1 208	1 354
Graffiti	203	179	200	208	181	189	213	485	564
Drugs	472	485	630	652	605	637	659	725	552
Total reported offences(e)	8 348	8 687	8 167	8 403	9 100	9 050	8 323	8 776	9 645
SOUTH EAST METROPOLITAN									
Homicide(a)	3	4	3	4	2	2	3	5	4
Assault(b)	603	685	655	587	743	745	759	687	788
Robbery(c)	117	91	134	115	143	96	130	94	118
Burglary(d)	3 261	3 612	3 312	3 163	3 604	3 266	3 360	3 149	3 583
Theft	3 761	3 697	3 514	3 842	4 328	3 989	4 068	4 591	4 724
Steal motor vehicle	947	911	699	718	820	644	720	763	845
Property damage	1 503	1 361	1 404	1 429	1 492	1 481	1 582	1 643	1 945
Graffiti	649	136	176	852	1 769	1 507	1 470	963	1 356
Drugs	380	329	483	483	366	440	435	441	440
Total reported offences(e)	11 865	11 516	10 938	11 888	13 992	12 952	13 092	13 029	14 474

	1999.....	2000.....	2001.....						
	Dec qtr	Mar qtr	Jun qtr	Sep qtr	Dec qtr	Mar qtr	Jun qtr	Sep qtr	Dec qtr
<i>Selected Offences</i>	no.	no.	no.	no.	no.	no.	no.	no.	no.
.....									
LOWER WESTERN WA									
Homicide(a)	3	2	3	3	5	3	3	2	2
Assault(b)	520	536	427	634	498	572	448	508	540
Robbery(c)	20	17	27	18	28	46	23	24	36
Burglary(d)	1 469	1 524	1 435	1 403	1 524	1 500	1 475	1 552	1 668
Theft	1 980	2 225	2 039	2 283	2 579	2 684	2 332	2 324	2 468
Steal motor vehicle	186	220	251	201	175	172	213	235	246
Property damage	1 103	964	1 010	997	1 091	1 138	1 068	1 244	1 272
Graffiti	60	54	36	58	51	67	227	89	83
Drugs	562	573	605	484	511	661	739	525	467
Total reported offences(e)	6 182	6 527	6 186	6 454	6 790	7 231	6 918	6 818	7 063
.....									
REMAINDER—BALANCE WA									
Homicide(a)	5	4	6	6	7	1	4	6	1
Assault(b)	1 200	1 133	965	954	1 194	1 268	1 094	996	1 089
Robbery(c)	39	29	37	28	35	35	28	33	36
Burglary(d)	2 249	2 377	2 061	1 964	2 049	2 242	2 077	1 976	2 201
Theft	2 840	2 543	2 555	2 810	2 719	2 694	2 663	2 629	2 860
Steal motor vehicle	344	296	275	271	351	314	292	294	297
Property damage	1 677	1 451	1 383	1 418	1 648	1 617	1 518	1 674	1 773
Graffiti	64	55	80	88	52	62	74	72	86
Drugs	708	716	628	835	738	676	725	677	685
Total reported offences(e)	9 538	8 996	8 399	8 805	9 234	9 403	8 919	8 779	9 469
.....									
TOTAL									
Homicide(a)	26	23	21	22	24	12	18	23	10
Assault(b)	4 481	4 496	3 919	4 071	4 731	5 133	4 498	4 100	4 587
Robbery(c)	537	504	553	469	595	541	553	467	526
Burglary(d)	14 889	16 435	14 428	14 066	15 992	15 993	15 905	14 321	15 838
Theft	20 848	21 085	21 122	22 561	23 997	22 787	22 343	22 667	24 330
Steal motor vehicle	3 606	3 532	3 142	3 059	3 311	2 984	2 999	3 246	3 326
Property damage	8 641	7 980	8 012	8 391	8 904	8 873	8 633	9 075	9 833
Graffiti	2 971	2 079	2 253	3 401	3 834	3 656	3 856	4 005	4 115
Drugs	3 336	3 462	3 798	4 140	3 588	3 899	4 033	3 803	3 408
Total reported offences(e)	62 511	62 894	60 639	63 916	68 642	67 913	66 230	65 021	69 349

(a) Includes driving causing death.

(b) Includes sexual assault.

(c) Includes armed and unarmed offences.

(d) Includes burglary to dwellings and buildings other than dwellings.

(e) Includes other offences not shown in the table such as fraud, arson and threatening behaviour.

Note: Reported offences are selected offences reported to, or becoming known to, police and resulting in the submission of a report.

The number of reported offences in a period may include offences that occurred during earlier periods. The data is also subject to revisions as further data becomes available. Offences are classified according to Offence Information System offence codes.

Offence classifications may alter between periods due to changes in legislation or administrative recording practices and, therefore, time series may be broken.

Source: Western Australian Police Service, Offence Information System.

APPENDIX

Index of Feature Articles Published in *Western Australian Statistical Indicators*

<i>Issue</i>	<i>Title</i>	<i>Reference Pages</i>
September 2000 (First issue)	Western Australia's merchandise trade with the rest of the world	9 – 16
December 2000	Small Business in Western Australia	11 – 21
March 2001	Crime and Safety in Western Australia	13 – 21
June 2001	Use of Information Technology in Western Australia	12 – 21
	Methods of Setting Pay in Western Australia	22 – 30
September 2001	A Century of Population Change in Western Australia	13 – 25
	Foreign Capital Expenditure in Western Australia	26 – 31
December 2001	A View of Housing Density in Perth	13 – 20
	Educational Participation in Western Australia	21 – 28
March 2002	Interpreting Time Series Data	14 – 25

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