Queensland Economic Review

2003/2

Office of Economic and Statistical Research
Coal is one of Queensland’s most important industries, accounting for about 8% of gross state product and some 37% of the State’s overseas merchandise exports. The feature article in this issue of the Queensland Economic Review examines the coal industry in Queensland, Australia and overseas. The article also provides a detailed outlook for the industry.

This issue also includes an article analysing the results of the November 2002 Queensland Household Survey, which included questions on awareness of consumer warnings, who to contact for information, managing the environment, fire ants and emergency services.

The usual detailed updates on the Queensland, national and international economies are included. Queensland’s economy continues to perform strongly, with trend growth in gross state product accelerating to 1.8% in December quarter 2002. The main drivers of growth were household consumption and business investment.

An overview of the national economic outlook presented in the 2003-04 Commonwealth Budget papers is included in this issue. For further details on the economic outlook for Queensland, see 2003-04 State Budget Paper No. 2, released today, 3 June 2003.
The Queensland Economic Review is also now available through the Queensland Treasury Internet site:
www.treasury.qld.gov.au

For further economic, financial and statistical information relating to Queensland, visit the Office of Economic and Statistical Research Internet sites:

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Notes for Contributors

The Queensland Economic Review (QER) invites articles from organisations and individuals on a broad range of topics suitable for inclusion in future issues of the publication. Three or four issues are published each year and 16 pages are set aside in each issue for articles. Some of the articles are prepared by officers of Queensland Treasury.

To get an idea of the types of articles that are published, please peruse previous issues. Please note aspects such as length and style of articles. Each article is usually two, three or four pages in length. Allow about 750 words per QER page, without headings or illustrations. Articles should be written in a style that is understandable to a diverse range of readers, and should include tables/charts/diagrams and one or two levels of headings.

Completed articles or ideas for articles can be emailed to oesr@treasury.qld.gov.au. Text should preferably be in Word. All tables, charts and diagrams should be in Excel, Illustrator, etc. as appropriate rather than imported into the Word document. Some editing of articles may occur. A typeset copy will be sent to authors for approval before printing.
Summary

International Economy
Forecast economic growth in North America and Europe has been revised down due to continuing economic weakness and political uncertainty. An additional factor affecting economic activity in Asia is the SARS epidemic.

National Economy
Growth in the Australian economy continued to moderate slightly in December quarter 2003, with trend GDP rising 0.7%. Investment remained strong, while household consumption was solid.

Exchange Rates
The $A continues to appreciate, rising to about US64¢ in early May, assisted by subdued economic growth and low interest rates in the US.

Monetary Policy
Australia’s official cash rate has remained unchanged at 4.75% since June 2002. Global economic weakness has kept the rate on hold despite the nation’s buoyant housing and retail sectors.

Bond and Bill Yields
Bill yields remain steady, while bond yields have fallen slightly due to strong demand from Japan.

Queensland Economy
The State economic outlook continues to be positive, with household consumption and business investment remaining strong, and with employment rising rapidly. However, net exports remain weak.

Employment
Rapid jobs growth continued in Queensland in March quarter 2003, with employment rising 1.2% in the quarter, reflecting high population growth and solid housing and retail sectors.

Unemployment
Strong labour force growth resulted in a marginal rise in the State’s unemployment rate to 7.1% in the March quarter, despite rapid employment growth.

Job Vacancies
The number of job vacancies fell in Queensland in the March quarter with overseas events possibly delaying hiring decisions, but vacancies remain at high levels.

Employment by Industry
The strongest employment growth in Queensland over the year to the March quarter was in construction, and property and business services. Agriculture suffered the largest employment loss.

State Economic Growth
Queensland’s economic growth continued to accelerate, with gross state product rising 1.8% in the December quarter, following growth of 1.6% in the previous quarter. Private consumption and business investment continue as the main drivers of growth.

Consumption
Solid growth in household consumption continued in Queensland, rising 1.6% in both the December and September quarters, assisted by strong population and employment growth and low interest rates.

Housing Investment
Growth in dwelling investment in Queensland continued to be strong in December quarter 2002, increasing 7.2% in trend terms. Housing investment is expected to moderate in 2003.

Business Investment
Business investment in Queensland also remained strong in the December quarter, rising 7.2%. A number of new investment projects means business investment should remain firm in 2003.

Business Conditions
The latest surveys suggest a slight moderation in business conditions in Queensland in the March quarter, but an improvement in the June quarter.

Agricultural and Mining Trends
Drought has resulted in a sharp overall fall in agricultural production in Queensland, although sugar production has risen. The mining sector has shown mixed results, including a slight easing in coal production.

Overseas Merchandise Exports
The nominal value of Queensland’s overseas merchandise exports fell 6.7% over the year to March quarter 2003, affected by drought, a subdued global economy and an appreciation of the $A.

Commodity Prices
Prices of both agricultural and mining commodities fell in the March quarter, compounded by a rising $A, although beef, cotton, copper and nickel prices rose.

Tourism
The State’s tourism sector was solid in the December quarter, with Australians substituting domestic trips for overseas holidays due to international safety and health concerns. Visitor arrivals to Australia fell 3.6% in the March quarter.

Inflation
The Brisbane consumer price index rose 1.4% in March quarter 2003. The main contributors to this increase were food, transport and housing.

Wages
Ordinary time earnings in Queensland rose 1.0% for the second consecutive quarter in the December quarter, leaving wages growth well contained.

Population
Queensland’s population increased by 2.3% over the year to the September quarter due to strong rises in interstate and overseas migration.
International and National Economies

**International Economy**

Plagued by geopolitical uncertainties, the performance of the US economy continued to be lacklustre in March quarter 2003. US GDP grew at an annualised rate of 1.6% in the quarter, following 1.4% growth in December quarter 2002. Personal consumption expenditure, the driving force of aggregate demand in the US over the past year, moderated in the past two quarters. The consumer sentiment index fell in each of the three months to March 2003, before rebounding strongly in April. However, as employment conditions in the US are still weakening, consumer spending is likely to moderate further in coming months.

As the outcome of the war in Iraq became certain in late April, the geopolitical uncertainties restraining the economic recovery in the US have lessened somewhat. The so-called ‘war premiums’ on US corporate bond yields and oil prices have been significantly unwound since mid-April. The remaining factor likely to affect US economic growth in 2003 is the mounting current account deficit, exacerbated by a sharp deterioration in the US fiscal position. The substantial worsening of the US current account balance has caused the US$ to depreciate more than 16% against the euro and 5% against the yen since mid-October 2002. While depreciation of the US$ should be beneficial to the recovery of the US economy, the substantial appreciation of the euro will be detrimental to the already depressed European economies.

**Major Trading Partner Economic Growth**

<table>
<thead>
<tr>
<th>Source: Consensus Economics, Consensus Forecasts (April 2003); and Queensland Treasury</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
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<tr>
<td>5</td>
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<td>0</td>
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</tbody>
</table>

The outbreak of Severe Acute Respiratory Syndrome (SARS) in China, Hong Kong, Singapore and Taiwan has substantially disrupted economic activity in these economies. Some analysts consider the outbreak of SARS has had a more detrimental impact on Asian economies than the Asian financial crisis in 1997 or the burst of the IT bubble in 2000. On the other hand, while Japan has not reported a single case of SARS, its economy has been increasingly affected by deflation as Japanese consumers are becoming accustomed to continuing declines in consumer prices. The Bank of Japan further raised the target balance of current accounts held at the bank from 17–22 trillion yen to a massive 22–27 trillion yen on 30 April. However, the Japanese banking system, constricted by non-performing loans, has been unable to transmit the monetary stimulus to the corporate sector.

Led by a further deterioration in German economic activity, forecasts of economic growth in the euro zone for 2003 have been further downgraded from 1.4% in January 2003 to 1.0% in April. The European Central Bank (ECB) cut the official interest rate by another 25 basis points in March, following a reduction of 50 basis points in December 2002. But the monetary stimulus may not be enough to revive the German economy. With its fiscal deficit surpassing the 3% limit imposed by the European Union’s Stability and Growth Pact and the ECB’s reluctance to cut interest rates further, Germany may have to seek an alternative route to economic recovery. Chancellor Schröder delivered his structural reform proposal in March but political opposition is still mounting.

**National Economy**

Growth in the Australian economy continued to moderate in December quarter 2002, with trend GDP growing 0.7% in the quarter, slightly lower than the 0.8% growth recorded in the previous quarter. A slowing in exports combined with strong growth in imports caused net exports to detract a substantial 0.7% point from overall growth in the December quarter.

Growth in household consumption remained relatively robust, increasing 0.7% in the December quarter. While growth in dwelling investment moderated slightly in the quarter, it still recorded an increase of 4.8% and contributed 0.3% point to overall growth. Business investment continued to rise strongly, increasing 3.8% in the December quarter, following 4.6% growth in the previous quarter.

Employment conditions in Australia continued to be positive in March quarter 2003. Full-time and part-time positions increased 1.0% and 1.4% respectively in trend terms over the quarter, resulting in total employment rising 1.1%, the same rate as December quarter 2002. However, a surge in the trend labour participation rate (up 0.5% point to 64.4%) in the quarter prevented a further improvement in the country’s unemployment rate. However, a rate of 6.1% in March quarter 2003 was the same as the previous quarter and represents the lowest unemployment rate since March quarter 1990.
Exchange Rates

The Australia dollar appreciated rapidly over the three months to early May 2003, increasing more than 8%, to be trading at around US64¢, its highest level in over three years. The $A has appreciated almost 15% since the beginning of 2003, and by over 30% since its low of under US50¢ in 2001.

**Australian Dollar**
(weekly, TWI: May 1970 = 100)

The $A also achieved solid gains on a trade weighted basis in the three months to early May, increasing almost 7% against the currencies of Australia’s major trading partners. At 57.2, the trade weighted index (TWI) is also at its highest level in over three years.

The recent improvement in the US equity market has not been sufficient to prevent further weakening in the $US, a result of the increased focus on the stretched external position of the US. Given the sheer volume of capital inflow required to fund the US current account deficit, the $US is likely to be subject to further downward adjustment as doubt persists over US asset valuations.

Over the three months to early May, the $A appreciated just under 7% against the yen and by around 3% against the euro. Protracted weakness in economic activity has meant assets in the euro area and Japan are also not particularly attractive at present, and with the additional incentive of higher interest rates in Australia, Australian assets continue to represent a positive alternative for foreign capital investment, supporting the $A.

Monetary Policy

Australia’s official cash rate has remained unchanged at 4.75% since the Reserve Bank of Australia (RBA) last raised interest rates in June 2002.

Economic data have been mixed in recent months, although resilient strength in key indicators such as building approvals and retail trade has surprised markets. Meanwhile, headline inflation once again showed to be tracking above the RBA’s 2-3% target range in March quarter 2003. However, the bank is expected to continue to place limited importance on the range of temporary factors that are currently boosting the headline CPI.

Domestically, the bank’s main concern has been the prospect of an over-heated housing market. A combination of expansionary monetary and fiscal policy has resulted in a sharp increase in the price of residential property over the past 12 months and the RBA has indicated it will raise interest rates if that is what is required to prevent what appears to be an emerging asset price bubble in this sector of the economy. However, prevailing global economic and political uncertainty has caused the bank to keep rates on hold, but with the major conflict in Iraq now over, the RBA is expected to refocus on domestic factors.

While pockets of strength remain, the national housing sector is showing signs of an imminent downturn. Whether the RBA is convinced of this remains to be seen. However, the market has priced Australian bills for a 25 basis point easing in rates in the next six months, with no tightening priced in until late 2004.

Bond and Bill Yields

Australian bond and bill yields have remained broadly steady in recent months in response to no change in monetary policy settings and a number of offsetting risks in the economic environment. Increased demand for $A denominated bonds, in particular from Japan, has also kept yields low in recent months.

The Australian 10-year bond yield rose 24 basis points over the three months to early May 2003, coming off pre-Iraq war lows in early February. Meanwhile, 90-day bank bill yields were virtually unchanged over the same period, to be 4.77% in early May.

### Domestic Interest Rates
(%, daily)

<table>
<thead>
<tr>
<th>10-Year Bonds</th>
<th>90-Day Bills</th>
<th>Official Cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>5.5</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
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<tr>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Source: Reuters
The Queensland economy performed exceptionally well in 2002. Unlike the moderation in economic growth experienced in other states in the December quarter, growth accelerated in Queensland. Forward indicators of consumer and business confidence and housing suggest a slight moderation in the State's economic growth in March quarter 2003.

The positive outlook is despite several downside risks in recent months, including the uncertainty about the length of any conflict in Iraq and the continuation of the drought and its negative effect on the State’s export performance. Nevertheless, partial indicators of consumption – retail trade and wages – have performed well over recent quarters. Similarly, housing investment remains healthy and business investment growth remains close to record levels.

Household and business confidence in Queensland has relied on two key factors: rapid employment growth exceeding all other states, and maintenance of low interest rates. The outlook remains positive and any easing in overseas interest rates combined with the continued restraint of inflation should limit the risk in upward interest rate movements. At this time, expectations are for slightly slower growth in profitability, sales and employment rather than a reversal of previous strong growth.

The international environment remains the main risk to Queensland’s economic performance. The combination of lower commodity prices, continuing weakness in key markets, a rapid appreciation of the Australian dollar, and drought is expected to further weaken the State’s trade performance. A further risk is the uncertainty of the full impact of SARS, with its adverse effects on tourism expected to deepen over the rest of 2002-03.

Employment

Rapid jobs growth continued in Queensland during March quarter 2003, with trend employment rising 1.2% over the quarter and 3.9% over the year.

The continued strong employment growth partially reflects the State’s increased population and economic growth in recent quarters, in particular the lagged employment effects of growth in the housing sector and retail trade over the second half of 2002.

However, the ABS has advised that the strong employment and labour force growth recorded throughout Australia in recent months may also have been influenced by the introduction of the new labour force survey sample, based on 2001 Census data. In particular, the new part of the sample introduced in January showed ‘considerably higher employment levels than the part of the sample it replaced’.

Employment Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Queensland</th>
<th>Rest of Australia</th>
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<tbody>
<tr>
<td>Mar-03</td>
<td>4.5%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Mar-02</td>
<td>3.6%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Mar-01</td>
<td>2.7%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Mar-00</td>
<td>1.9%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Mar-99</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Mar-98</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

Despite this anomaly, employment growth in Queensland remained higher than in the rest of Australia (1.1% in the quarter and 2.9% over the year). Jobs growth during the quarter was primarily driven by an increase in full-time employment, which rose by 13,800, compared with part-time employment growth of 7,500.

Employment in Queensland increased by 67,200 jobs over the year to the March quarter, the highest annual increase in the number of persons employed in Queensland since June quarter 1995. The growth in part-time employment (7.1%) was stronger than the growth in full-time jobs (2.6%), although the contribution to the total increase in employment was similar, with 32,500 full-time and 34,800 part-time jobs created over the year.

Unemployment

Despite strong employment growth (1.2%) in Queensland during March quarter 2003, stronger labour force growth (1.3%) resulted in a marginal increase in the State’s trend unemployment rate to 7.1%, compared with 7.0% in December quarter 2002.

The slight increase in the unemployment rate in the quarter resulted in the number of people unemployed in Queensland increasing by 3,500 over the quarter. This followed six consecutive quarterly falls in the State’s unemployment rate. The March quarter rate remained 0.7% point below that recorded in the previous March quarter, while the number of persons unemployed fell by 9,800 over the year.
The trend unemployment rate in the rest of Australia fell slightly in the March quarter to 5.8%, down from 5.9% in the previous quarter and 0.5% point below the rate recorded a year earlier. The improvement in the unemployment rate in the rest of Australia during the quarter reflected the fact that employment growth (1.1%) exceeded labour force growth (1.0%).

Queensland’s higher labour force growth in the March quarter was due to a surge in population growth and a further increase in the State’s participation rate. Civilian population growth, fuelled by strong net interstate migration and increasing net overseas migration, accelerated to 0.8% in the quarter, the strongest quarterly growth since December quarter 1989. Meanwhile, the State’s participation rate rose 0.4% point to 65.5%, matching the historical peak recorded in June quarter 1995. In comparison, civilian population growth in the rest of Australia during the quarter was 0.3%, while the participation rate increased by 0.5% point to 64.1%.

Job Vacancies

The trend number of job vacancies in Queensland fell in March quarter 2003. The ANZ Job Advertisement Series index fell by 2.4% in the quarter, after remaining unchanged in December quarter 2002. Similarly, the DEWR Skilled Vacancy Survey index for Queensland fell by 7.3% in the March quarter, following a smaller decline of 2.8% in the previous quarter. This fall in the number of job vacancies in recent quarters was reflected nationally, with both indices falling by 3.0% in the March quarter.

The fall in job vacancies in the quarter may in part reflect the greater uncertainty associated with the war in Iraq, with greater volatility in both oil prices and the sharemarket possibly causing some employers to delay hiring intentions. However, vacancies still remain at high levels, with the fall in recent quarters following strong growth from September quarter 2001 to September quarter 2002. As a result, the ANZ and DEWR indices in the State were 8.3% and 11.7% higher respectively in March quarter 2003 than a year earlier.

Employment by Industry

Queensland employment increased by 67,400 jobs in original terms over the year to March quarter 2003. Job gains in service industries (up 102,000 jobs) continued to underpin Queensland’s changing employment structure. In contrast, employment declined in the primary and secondary sectors (down 34,600 jobs) over the year.

Employment by Industry, Queensland

(*'000, annual change, March quarter 2003, original)

The impact of strong housing activity on labour demand was apparent in several industries that generated strong employment growth over the year. Construction (up 27,000 jobs), along with property and business services (up 19,000 jobs), recorded the highest job gains over the year to the March quarter.

Job losses were concentrated in the agriculture, forestry and fishing industry (down 21,900 jobs or 20.8%), with the effect of the drought on employment becoming evident in the March quarter. However, New South Wales (down 29,600 jobs or 24.2%) and Victoria (down 28,200 jobs or 28.4%) recorded larger job losses in agriculture, forestry and fishing over the year, indicating that the impact of the drought has been even greater in these States.
State Economic Growth

Economic growth in Queensland continued to gain pace in December quarter 2002. Continuing the pattern of the past several quarters, strong growth in private investment and solid growth in household consumption offset a detraction from growth from net exports.

The December quarter Queensland State Accounts show that gross state product (GSP) rose 1.8% in trend terms, up from 1.6% in the previous quarter. In annual terms, the State recorded GSP growth of 5.6%, up from 5.3% in the September quarter. Economic growth was substantially higher than that recorded in the rest of Australia in the December quarter (0.4% in the quarter and 2.7% over the year). In annual terms, the differential between Queensland’s economic growth and that in the rest of Australia reached its highest since September quarter 2000.

Household consumption increased 1.6% in the December quarter, after similar growth in the September quarter. Retail trade data indicate that, while sales of household goods moderated in the December quarter, retail trade growth overall remained robust, supported by strong labour market conditions and low interest rates.

Private investment continued to surge in December quarter 2002, rising 6.0% in the quarter and 26.1% over the year. Despite leading indicators suggesting that dwelling construction activity may have peaked, dwelling investment rose 7.2% in the quarter and 32.1% over the year. Business investment continued to surge in the December quarter. Business investment rose 7.2% over the quarter and 29.9% over the year.

Public final demand declined by 0.9% in the December quarter, but rose modestly (up 0.5%) over the year.

Total exports from Queensland rose a modest 0.3% in the December quarter. Despite difficult economic conditions in the State’s major trading partner economies, exports of goods and services overseas rose 1.3%, while exports interstate declined 1.5%. The level of imports remained relatively unchanged (up 0.2%) in the December quarter, after strong growth over the previous several quarters.

Contribution to Growth (quarterly % point, CVM, trend)

Household consumption expenditure growth remained steady in trend terms in December quarter 2002, matching the 1.6% rise recorded in the September quarter. This compares with growth of 0.7% and 0.6% in the rest of Australia in the September and December quarters respectively. Strong population growth and low interest rates continued to support growth in consumption in Queensland over the second half of 2002. Positive labour market conditions have also encouraged consumers. Annual growth in household consumption expenditure in Queensland was 5.8% in the December quarter, compared with 3.7% in the rest of Australia.

Retail trade, which accounts for over 40% of total household consumption in Queensland, continued to grow strongly during the December quarter. In real trend terms, real retail trade rose 1.8% in the December quarter, after growth of 2.1% in the September quarter. Over 2002, real retail trade increased by 7.8%. In comparison, real retail trade in the rest of Australia grew by 0.9% in the December quarter, following 1.2% growth in the September quarter, to be 5.2% higher over the year.
Continued strong population growth, driven mainly by interstate migration, should support the level of consumption in Queensland in coming quarters. Although the long-term economic outlook remains positive, a slowing in the State’s housing sector and potentially higher interest rates on personal lending represent risks to household consumption growth in the medium term.

**Housing Investment**

Dwelling investment in Queensland rose for the eighth consecutive quarter in December quarter 2002. In trend terms, dwelling investment rose 7.2% in the December quarter, following 8.4% growth in the September quarter. In the rest of Australia, dwelling investment also continued to increase, albeit at a slower pace than in Queensland. The level of dwelling investment grew by 4.1% in the December quarter, following 4.4% growth in the September quarter.

Over the past year, growth in dwelling investment in Queensland has outperformed that in the rest of Australia. Dwelling investment in Queensland increased 31.7% over the year to December quarter 2002, compared with a rise of 23.4% in the rest of Australia.

Forward indicators suggest that housing investment may moderate in 2003. Dwelling approvals, a leading indicator of housing investment, declined for the fifth consecutive month in February 2003. The number of housing finance commitments for the construction of new dwellings has also fallen, by 31.2% in the three months to February compared with a year earlier. However, strong interstate migration, and alterations and additions activity, may partially offset a decline in the level of new housing investment in Queensland over coming quarters.

**Business Investment**

Business investment in Queensland rose strongly in December quarter 2002, increasing by 7.2% in trend terms compared with 3.0% growth in the rest of Australia. The December quarter result in Queensland was a slight moderation from growth in the September quarter of 8.6%. Business investment was a major driver of economic activity in Queensland in 2002. Over the year to the December quarter, business investment increased 29.9% in Queensland (up 16.6% in the rest of Australia). This is the largest annual growth in business investment since June quarter 1995.

Both components of business investment grew strongly in Queensland in December quarter 2002. Machinery and equipment investment grew 7.7%, while other buildings and structures investment increased 6.5% in the quarter. Similarly, in the rest of Australia, growth of 2.1% and 4.8% was recorded in machinery and equipment and other buildings and structures respectively.

Although recent business surveys indicate that business conditions in Queensland have moderated somewhat, business investment may continue to record strong growth. The appreciation of the $A, combined with improving profitability, will continue to underpin investment in machinery and equipment, in particular.
Business Conditions

Business conditions moderated slightly in Queensland in the March quarter but are expected to improve in the June quarter, according to the latest business surveys.

The Commerce Queensland Pulse Survey indicates that general business conditions in the State moderated slightly in March quarter 2003. The pulse business index (formerly called the barometer index) fell 1.95 points to 58.40 in the quarter. This result was slightly higher than the 57.85 expectation recorded in the previous quarter and remains at a satisfactory level. The outlook for business conditions in the June quarter is positive, with strong expectations for sales/revenue and profitability.

The latest National Australia Bank Quarterly Business Survey found that business conditions eased nationwide in the March quarter, with the Queensland business conditions index falling 7% points to 14%. However, business conditions in Queensland remain strong relative to other states, with only Tasmania (24%) reporting a higher index. All three components of Queensland’s business conditions index fell in the March quarter. The index measuring profitability declined 10% points to 7%, while the trading performance and employment indices fell 9% points (to 19%) and 1% point (to 17%) respectively over the period. Respondents to the survey expect business conditions in Queensland will improve during the June quarter. In line with the Pulse Survey, a strong rise in profitability is expected.

Agricultural and Mining Trends

Owing to very dry conditions during the growing season, Queensland’s total winter crop production (including wheat, barley, canola and oats) is estimated by the Australian Bureau of Agricultural and Resource Economics (ABARE) to be 0.72 million tonnes in 2002-03, down 39% on last season. This is the third consecutive year poor seasonal conditions have led to low winter crop harvests.

Low rainfall has meant a reduction in the area sown to summer crops (sorghum, sunflowers, cotton and maize). Despite reasonable rainfall in some parts during February and March, ABARE expects summer crop production in Queensland to decline 58% to 0.77 million tonnes in 2002-03, due to expectations of exceptionally low yields from the short cropping season.

Despite good rain in February in some parts of the State, cattle producers have continued to reduce stock numbers in response to a lack of pasture and water, and the high cost of purchasing feed. As a result of the higher numbers brought to slaughter and poor condition of stock, ABARE expects average Australian saleyard prices for cattle to fall by around 22.5% to $2.37/kg in 2002-03. The sheep industry faces similar conditions.

Despite sugar cane production in some southern regions being affected by drought, an improved cane crop has been harvested in Queensland in 2002-03. Australian sugar production (of which Queensland accounts for around 95%) is estimated by ABARE to increase by 0.4 million tonnes to 5.4 million tonnes in 2002-03. However, the 2002-03 average pool return is forecast to be lower than the previous year’s figure.

In the mining and metals sector, MIM’s Ernest Henry mine has continued to record strong increases in copper concentrate production as a result of higher head grades at the mine. This is in contrast to the company’s refined copper output, which has been affected by operating difficulties at the Mount Isa anode smelter. In terms of lead and zinc production, lower grades have reduced throughput for MIM at Mount Isa, while BHP-Billiton’s Cannington mine has lifted output after weaker production in late 2002.

Alumina output at Comalco’s QAL refinery has recovered in recent months following declines during 2002, while aluminium output has steadied at the company’s Boyne Island aluminium smelter. Refined nickel production has increased as a result of improved efficiencies at BHP-Billiton’s Yabulu nickel refinery near Townsville.

Coal production has eased slightly in recent months. An extended longwall panel change at MIM’s Oaky Creek North mine has reduced output, which was partially offset by marginal improvements at the company’s Oaky Creek Opencut and No. 1 mines. Output has also declined at Pacific Coal’s Kestrel operations following strong increases in late 2002.

Overseas Merchandise Exports

Measured in annual terms, the nominal value of Queensland’s overseas merchandise exports recorded a fourth consecutive decline in March quarter 2003. Although the rate of decline moderated, the nominal value of all export categories fell in year-on-year terms over the quarter. Exports of rural goods, crude minerals, processed minerals and metals, and other manufactures fell by 7.6%, 11.2%, 26.4% and 8.0% respectively in year-on-year terms for the quarter.

Drought conditions have continued to affect agricultural production, and are the major factor behind the decline in the value of rural exports. The overall fall in rural export earnings was largely driven by decreases in the value of cereals and textile fibres.
exports of 69.3% and 12.3% respectively for the quarter compared with a year earlier. These declines were partly offset by an increase in the value of meat exports of 11.8% over the year to March quarter 2003, although weaker export prices were more than offset by increased volumes.

**Overseas Merchandise Exports, Queensland**

<table>
<thead>
<tr>
<th>(nominal)</th>
<th>March quarter 2002</th>
<th>March quarter 2003</th>
<th>Change</th>
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</thead>
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<tr>
<td>Rural (a)</td>
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<td></td>
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<tr>
<td>Meat</td>
<td>469.5</td>
<td>525.1</td>
<td>11.8</td>
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<tr>
<td>Cereals</td>
<td>94.4</td>
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<tr>
<td>Textile fibres</td>
<td>116.6</td>
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<td>Sugar (a)</td>
<td>32.2</td>
<td>14.5</td>
<td>-55.0</td>
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<tr>
<td>Other rural</td>
<td>180.2</td>
<td>166.5</td>
<td>-7.6</td>
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<tr>
<td>Total rural</td>
<td>1,000.4</td>
<td>924.6</td>
<td>-7.6</td>
</tr>
<tr>
<td>Crude minerals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coal (b)</td>
<td>1,996.2</td>
<td>1,694.7</td>
<td>-15.1</td>
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<tr>
<td>Other crude minerals</td>
<td>441.1</td>
<td>469.7</td>
<td>6.5</td>
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<tr>
<td>Total crude minerals</td>
<td>2,437.3</td>
<td>2,164.4</td>
<td>-11.2</td>
</tr>
<tr>
<td>Manufactures</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Processed minerals and metals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-ferrous metals</td>
<td>638.5</td>
<td>460.8</td>
<td>-27.8</td>
</tr>
<tr>
<td>Other processed minerals and metals</td>
<td>56.7</td>
<td>51.0</td>
<td>-10.1</td>
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<tr>
<td>Total</td>
<td>695.2</td>
<td>511.8</td>
<td>-26.4</td>
</tr>
<tr>
<td>Other manufactures</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Chemicals</td>
<td>103.5</td>
<td>76.6</td>
<td>-26.0</td>
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<td>Leather, rubber, etc.</td>
<td>39.7</td>
<td>45.3</td>
<td>14.2</td>
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<tr>
<td>Machinery</td>
<td>188.7</td>
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<td>Transport equipment</td>
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<td>Miscellaneous manufactures</td>
<td>54.0</td>
<td>55.4</td>
<td>2.6</td>
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<tr>
<td>Other manufactures-other</td>
<td>3.2</td>
<td>4.8</td>
<td>52.2</td>
</tr>
<tr>
<td>Total</td>
<td>454.1</td>
<td>417.8</td>
<td>-8.0</td>
</tr>
<tr>
<td>Total manufactures</td>
<td>1,149.3</td>
<td>929.6</td>
<td>-19.1</td>
</tr>
<tr>
<td>Confidential and special (a,b)</td>
<td>667.1</td>
<td>883.2</td>
<td>32.4</td>
</tr>
<tr>
<td>Total</td>
<td>5,254.2</td>
<td>4,901.8</td>
<td>-6.7</td>
</tr>
</tbody>
</table>

(a) Most of the value of sugar exports, a major revenue earner for Queensland, is included in the confidential and special category.
(b) Part of the decline in the value of coal exports over the year to March quarter 2003 was due to some shipments being reclassified as confidential.

An appreciation of the US/$A exchange rate over the March quarter has adversely affected the nominal value of processed mineral and metals exports. Along with generally lower production, this decline in currency returns outweighed modest increases in US$ denominated world prices during the period. Weak international coal prices, an easing in production levels and exchange rate movements have resulted in a decline in export earnings for coal.

The nominal value of exports of other manufactures has reversed its recent upward trend to record an 8.0% decline (in annual terms) in the March quarter. This partly reflects the pressure on export earnings resulting from the recent appreciation of the $A. Declines in the value of exports of machinery and chemicals were responsible for the overall decline, with falls of 17.4% and 26.0% respectively in the March quarter compared with a year earlier.

The nominal value of Queensland’s merchandise exports to most major destinations fell in March quarter 2003 compared with the same period in 2002. The value of exports to Japan fell by 8.5% in year-on-year terms in the March quarter, while exports to Europe and the UK, North America and non-Japan East Asia fell by 15.2%, 15.4% and 2.5% respectively over the same period.

**Commodity Prices**

The Queensland Commodity Price Index fell 3.7% in $A terms in March quarter 2003. This decline was mainly driven by a weakening in international prices for Queensland’s major commodities, compounded by the effects of an appreciating Australian dollar. Measured in Special Drawing Rights (SDR) terms, the Queensland Commodity Price Index recorded a decline of 0.5% over the period.

The agricultural index fell by 3.7% in $A terms and 0.5% in SDR terms in March quarter 2003, with declines in the price of sugar (down 1.3%), wool (down 2.4%) and wheat (down 15.2%). Offsetting these falls, beef and cotton prices continued to strengthen during the quarter, with gains of 3.8% and 12.1% respectively.

In the mineral commodities sector, technical factors associated with anticipated growth in world industrial production drove prices in base metals markets moderately higher during the March quarter. Average US$ prices for copper (up 6.8%) and nickel (up 16.0%) recorded the strongest gains over the period. Meanwhile, weaker international coal prices and an appreciation of the $A against the US$ contributed to a 5.7% decline in the weighted average export price for Queensland coal in the quarter. As a consequence, the mineral index fell 3.8% in $A terms and 0.6% in SDR terms over the period.
Tourism

Short-term visitor arrivals to Australia fell 3.6% in trend terms in March quarter 2003. This follows four quarters of modest growth, associated with a recovery from 11 September 2001. As a result of the March quarter fall, short-term visitor arrivals are only marginally higher (up 0.4%) than a year earlier. The war in Iraq and more recently the spread of SARS are expected to be the primary reasons for the downturn. This trend is expected to continue to cloud the outlook for overseas visitor arrivals to Australia over the next several quarters while travellers remain concerned about their health and safety.

The ABS Survey of Tourist Accommodation for December quarter 2002 shows a significant increase in tourism activity. The number of guest nights in all establishments in Queensland rose by 4.1% over the year to the December quarter. In the rest of Australia, the total number of guest nights rose 6.4% over the same period. The increase is not surprising given that more Australians are increasingly substituting overseas holidays for Australian destinations in the face of the current international security and health concerns.

The stock of guest rooms in Queensland declined over the year to December quarter 2002 (down 1.7%). However, room occupancy rates rose 1.8% points to average 61.4% in the quarter. Room occupancy rates in Queensland are now at their highest level in five years.

Inflation

The Brisbane Consumer Price Index (CPI) rose 1.4% in March quarter 2003, to be 3.4% higher over the year. Nationally, consumer prices rose 1.3% over the quarter, to also be 3.4% higher over the year.

In Brisbane, the main contributors to CPI growth in the March quarter were food (0.59% point), driven by higher vegetable prices associated with drought conditions; transport (0.33% point), due to increased automotive fuel prices on the back of higher world oil prices; and housing (0.19% point), reflecting further increases in the cost of purchasing and renting houses.

Nationally, the main influences on consumer prices in the March quarter were similar to Brisbane. The largest contributors to the quarterly growth in the national CPI were transport (0.35% point), food (0.34% point) and housing (0.28% point). The less volatile market sector goods and services prices index rose more modestly in the quarter, increasing 0.5%, to be 2.1% higher over the year.

The nation’s annual headline inflation rose at a faster pace in March quarter 2003 (3.4%) than in December quarter 2002 (3.0%). However, the underlying rate of inflation over the year to the March quarter, at 2.1%, remains well within the Reserve Bank’s 2-3% inflation target range. As a result, the RBA is likely to continue to place limited importance on the range of temporary factors that appear to be boosting the headline inflation rate in recent quarters in assessing monetary policy.

Wages

Note: At time of printing, no further wages data are available since the previous issue of QER. This section has been replicated from QER 2003/1 for the sake of completeness.

Average Weekly Ordinary Time Earnings (AWOTE) for full-time adult workers in Queensland rose 1.0% for the second consecutive quarter in December quarter 2002. As a result, annual growth in AWOTE moderated to 3.9%, following growth of 4.1% in the September quarter. The moderation in wage growth over recent quarters follows a peak in annual wage growth of 6.5% in December quarter 2000 after the introduction of the GST in July 2000. In comparison, AWOTE for full-time adult workers nationally rose 1.1% in the December quarter and 4.7% over the year.

The Wage Cost Index (WCI), the preferred measure of wages and salaries as it is unaffected by changes in...
quality or quantity of work performed, rose 0.9% in terms of the total hourly rate (excluding bonuses) in Queensland during December quarter 2002. Annual growth in the WCI for the total hourly rate (excluding bonuses) rose slightly in the December quarter, up 3.1%, following a 2.9% increase in the September quarter. Nationally, the WCI rose 0.8% in the December quarter to be 3.4% higher over the year. This followed growth of 3.3% in the year to the September quarter.

According to the WCI, Western Australia and New South Wales were the only States not to record a slight increase in annual wage growth in the December quarter compared with the September quarter. Stronger annual wage growth was recorded in South Australia (4.0%), Victoria (3.8%), Tasmania (3.7%) and Queensland (3.1%). Annual wage growth in the December quarter was steady in New South Wales (3.2%) and fell slightly in Western Australia (3.7%).

Population

Queensland experienced another period of particularly strong population growth in September quarter 2002, with the State’s estimated resident population increasing to 3,729,000 persons. This represented an increase of 0.6% (21,900 persons) compared with the previous quarter and 2.3% (82,800 persons) compared with a year earlier. This is the highest annual population growth in Queensland, in percentage terms, since June quarter 1996, while, in terms of the numbers of persons, this was the largest annual increase since December quarter 1989.

In comparison, the population in the rest of Australia grew by 0.3% in the September quarter, to be 1.1% higher over the year. Queensland accounted for 32.8% of the national population increase over the year to September.

Queensland’s population increased 33,300 persons from net interstate migration and 29,500 persons from net overseas migration.

The recent surge in interstate migration to Queensland saw an increase in arrivals from every other state and territory in the year to September compared with a year earlier. The numbers of arrivals from New South Wales and Victoria were the highest since 1989 and 1996 respectively, while the number of arrivals from Western Australia was the largest recorded since the ABS began interstate migration estimates in the mid 1980s.

The increased number of arrivals from New South Wales and Victoria may partially reflect the impact of the recent housing boom in Sydney and Melbourne, with substantially higher asset prices increasing the relative cost of living in those states. However, the increased number of arrivals from all other states and territories indicates that interstate migration to Queensland continues to be underpinned by more ‘traditional’ factors. These include the perception of better employment prospects and a generally lower cost of living in Queensland, as well as other socio-economic factors including lifestyle and climate.
The Coal Industry in Queensland

Introduction

The coal industry is of critical importance to the Queensland economy, as it is one of the State’s largest industries by value. In 2001-02, the value of production of saleable coal in Queensland was approximately $10.1 billion, or just over 8% as a proportion of Queensland’s gross state product (GSP) for that year. Furthermore, the value of Queensland’s coal exports totalled about $8.8 billion in 2001-02, or around 37% of the value of the State’s total overseas merchandise exports. Full-time equivalent employment in Queensland’s coal industry is approximately 8,500, while a further 3,000 people are employed in the provision of export services to the industry (Department of Natural Resources and Mines 2002).

Activities undertaken in the coal industry involve the extraction, processing and marketing of lignite, sub-bituminous, bituminous and anthracite mineral types. Collectively, sub-bituminous, bituminous and anthracite are known as black coal (or hard coal), while lignite is commonly known as brown coal. Black coals are of a higher practical quality than brown coal, as they exhibit more desirable physical characteristics such as higher proportions of coal matter (fixed carbon and volatile matter) relative to non-coal matter (moisture and ash). As a result, black coal dominates total world production and generally constitutes the majority of coal traded worldwide. Queensland coal deposits are exclusively black coal. Therefore, this paper focuses on black coal production and trade.

World Coal Production and Exports

Coal is a bulk commodity, with world production and exports of black coal in 2001 totalling 3,834 million tonnes and 622 million tonnes respectively (ABARE 2003a). Coal has essentially two functions: coking coal is predominantly used to produce the coke required for steel making, and thermal coal (or steaming coal) is mainly used for combustion purposes in electricity generation, although smaller quantities are also used in cement manufactures and general industry.

Coal contributes about 26% of global primary energy supply, second only to oil, and is used to produce 37% of the world’s electricity. Approximately 16% of total global coal production is used to produce over 70% of the world’s crude steel (Australian Coal Association 2003b).

Australia is a major producer of coal, accounting for almost 7% of the world’s total black coal production in 2001, behind China (34%), the United States (25%) and India (8%). In terms of exports, Australia (31%) has been the world’s largest coal exporter since the mid-1980s and is presently ranked first by a considerable margin to China (15%), South Africa (12%) and Indonesia (11%) (see Figure 1).

Around 90% of Australia’s total measured black coal resources are located in Queensland (48%) and New South Wales (42%). In 2001, Queensland’s share of domestic coal production was 54%, while New South Wales’ share was 43%. Queensland currently produces a higher proportion of coking coal (60%) than thermal coal (40%), in contrast to New South Wales where thermal coal represents over 75% of coal production (Mimuroto and Koizumi 2003).

1 This article was prepared by Mick Peel of Economic Policy Branch, Queensland Treasury (email: michael.peel@treasury.qld.gov.au).
2 Based on average price and production data from the Department of Natural Resources and Mines and GSP estimates from the Queensland State Accounts.
3 These classifications are based on the physical characteristics of coal under the American Society for Testing and Minerals (ASTM) standards. The system classifies coals by ‘rank’, which is determined by the proportions of fixed carbon, volatile matter, moisture and ash contained within the coal.
4 Western Australia, South Australia and Tasmania had production shares of 2.5%, 1.2% and 0.1% respectively.
Australian Coal Production and Exports

Coal is produced from two distinct types of mines: open cut (surface) and underground. In general, coal deposits more than 70-80 metres below the earth’s surface are mined using underground methods, while deposits closer to the surface are mined using cheaper and more productive open cut techniques. Australian coal production is currently undertaken using both underground and open cut methods, with open cut mining being the principal method employed in Queensland.

In terms of volumes, production from open cut mines in Australia is far greater than that produced from underground mines. In 2001, Queensland produced 111.5 million tonnes (Mt) of coal from open cut mines and 31.3 Mt of coal from underground operations. In the same year, New South Wales produced 66.4 Mt and 46.7 Mt of coal from open cut and underground coal mines respectively (Mimuroto and Koizumi 2003). In contrast to Australia, most coal produced overseas is mined using underground techniques, apart from the United States where around 60% of production is from open cut mines (Productivity Commission 1998).

The Australian coal industry is highly export oriented. Coal is Australia’s single largest commodity export by value, with export earnings of around $13.3 billion in 2001-02. Each year, around 75% of total black coal production in Australia is exported, with the remainder used for domestic electricity generation, steel making and other industrial applications. Japan is Australia’s largest coal export market, representing around 45% of Australia’s total coal exports by volume in 2001-02. Korea and Taiwan are the next largest export destinations for Australian coal, with shares of total Australian coal exports of 13% and 9% respectively by volume (see Figure 2). Each of these countries is highly dependent on coal for use in steel production and coal-fired electricity generation.

Queensland’s contribution to total Australian coal export volumes was 61% in 2001, with New South Wales contributing the remaining 39%. Queensland’s significantly higher proportion of coking coal production compared with thermal coal is indicative of the strong export focus of the industry. In 2001-02, around 83% of the State’s total coal production was exported, with market shares roughly proportionate to those indicated in Figure 2. In 2001-02, Queensland accounted for 71% of Australia’s coking coal exports and 38% of Australia’s thermal coal exports to Japan. Queensland’s coal industry is highly dependent on the Japanese market, with 37% of coking coal exports and 55% of thermal coal exports destined for Japan in 2001 (Mimuroto and Koizumi 2003).

Figure 2: Australian coal exports, 2001-02

Queensland’s Coal Industry

Queensland’s coal industry operations are predominantly located around the significant coal reserves situated inland from the central coast between Bowen and Gladstone (the Bowen Basin). Other significant operations within the State are situated west of Ipswich in the Moreton Basin, south of Kingaroy in the Tarong Basin, south-west of Gladstone in the Callide Basin, and north-west of Toowoomba in the Surat Basin. Figure 3 shows the locations of Queensland’s coal deposits and operations. In total, there are 41 operating coal mines in Queensland, comprising 31 open cut and 10 underground operations. Almost all of Queensland’s production for export markets (both coking and thermal coals) comes from operations in the Bowen Basin. Most of the other operations are smaller in scale and produce thermal coal for domestic electricity generation.

Industry Competitiveness and Key Drivers

The coal industry is subject to a high degree of global competition, and despite differentiation in the physical and chemical properties of coals across countries and regions, the advent of coal blending and pulverised coal injection (PCI) technologies over the past decade has further increased competitive pressures in global coal markets. Nevertheless, Queensland has significant natural and engineering advantages in the extraction and export of coal, based on the type and location of reserves and capital equipment and infrastructure supporting the industry. These advantages directly

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5 A more detailed description of coal mining techniques can be found in the Productivity Commission’s 1998 report, The Australian Black Coal Industry.
6 As at 30 June 2002.
7 Coal blending involves mixing coals of differing rank and quality either to gain higher productivity from desirable properties in the different components, or to substitute more expensive premium coal with proportions of cheaper coal, or a combination of both. PCI coal, which is classified as thermal coal, is used as a supplementary fuel injection in modern blast furnaces to increase the productivity of the coke used in the furnace. Use of PCI coal in the traditional steel-making process results in a reduction in the volume required for metallurgical coke. Approximately one tonne of cheaper, lower rank PCI coal replaces about 1.4 tonnes of higher quality coke in the production process.
Figure 3: Location of Queensland’s coal industry operations and infrastructure

translate into relatively low costs of producing and exporting coal in Queensland. Figure 4 presents a breakdown of indicative costs in exporting thermal coal from a number of regions to Queensland’s largest export destination, Japan.

**Figure 4: Indicative export costs for thermal coal exports to Japan, 2000**

($US/t)

Source: ABARE (2003b)

![Cost breakdown diagram](source)

Making direct comparisons between mine operating costs across different countries and regions is difficult due to quality factors and specific industry arrangements. However, Queensland’s mining costs are largely competitive with other major coal exporting countries based on comparisons of indicative costs for open cut mines (see Table 1). Furthermore, Queensland’s greater proportion of large-scale open cut mines relative to generally higher-cost underground mines means that average operating costs for the industry as a whole are likely to be among the lowest in the world.

**Table 1: Indicative mine operating costs (a) in thermal coal exporting countries, 2000**

Source: ABARE (2003b)

<table>
<thead>
<tr>
<th>Country or region</th>
<th>Cost ($US/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queensland</td>
<td>8.90–21.90</td>
</tr>
<tr>
<td>New South Wales</td>
<td>16.20–24.30</td>
</tr>
<tr>
<td>China</td>
<td>6.00–14.50</td>
</tr>
<tr>
<td>Indonesia (Kalimantan)</td>
<td>14.90–29.80</td>
</tr>
<tr>
<td>South Africa (Transvaal)</td>
<td>11.70–17.20</td>
</tr>
<tr>
<td>Canada (western Canada)</td>
<td>14.80–15.10</td>
</tr>
<tr>
<td>United States (southern Appalachia)</td>
<td>22.70–31.00</td>
</tr>
<tr>
<td>United States (Powder River Basin)</td>
<td>3.10–12.40</td>
</tr>
</tbody>
</table>

(a) Estimates are for open cut operations in each country or region.

It should be noted that effective costs in China’s coal industry are influenced by a range of financial assistance measures from the Chinese government. ABARE estimates that the value of direct and indirect assistance to state coal producers in China, was around $US1.7 billion in 2001, or around $US2.75 for every tonne of coal produced. This assistance has provided incentives to maintain supply at levels that exceeded domestic demand, as well as enabling Chinese coal exporters to lower the price at which they supply coal to international markets (ABARE 2003b). In other coal producing countries, such as Japan, the United States and the European Union, varying levels of government support exist, which provide incentives for coal producers to maintain output above levels that would otherwise be supplied to the market. This situation is in contrast to arrangements in Australia, where minimal levels of financial assistance are provided to domestic producers.

**Industry Outlook**

According to ABARE, it is projected that demand for Queensland’s thermal coal will be driven by significant investment in new coal-fired electricity generation capacity in Japan and other Asian countries, and lower levels of government support to the coal industries in Japan and the European Union. This growth is expected to be supported by competition reforms in the energy sectors in some of these countries, reforms that are likely to enhance the role of coal in the fuel mix for electricity generation. Growth in demand for coking coal is expected to be driven by modest increases in world steel production, although this will be moderated by increased efficiency in blast furnace operations, and by an increasing share of electric arc furnaces in total steel production. 8 ABARE predicts that the majority of forecast growth in overall coal consumption of an annual average 1.9% to 2010 will be for thermal coal mainly in the Asian economies. The growth in global consumption of coking coal is expected to be weaker, at 1.1% a year (ABARE 2002). Despite the outlook, improvements in productivity and production by competitors are likely to expose Queensland’s coal exports to increased competition over the period to 2010 (from emerging coal suppliers).

In the domestic energy sector, ABARE forecasts that electricity generation in Australia will grow by 2.3% a year on average through to 2019-20. In particular, the further integration of the National Electricity Market (NEM) over the coming years is expected to facilitate growth in Queensland’s share of electricity generation nationally, from 21% in 1998-99 to 26% by 2019-20 (ABARE 2001a). However, growth in the use of natural gas and renewables is expected to increase the relative

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8 The electric arc furnace is an alternative steel-making technology that does not require the use of coke in the reduction of iron.
shares of these fuels, albeit from a low base, at the expense of black coal (ABARE 2001a). For example, initiatives such as the 13% Gas Scheme, Renewable Energy Diesel Replacement Scheme and Solar Hot Water Rebate are supporting these trends.

A specific set of factors that is likely to impact on the outlook for global coal markets and the industry in Queensland are environmental issues relating to the use of coal. Consumers of exported coal, such as power utilities and steel-making mills in East Asia and the European Union, are increasingly facing higher costs associated with the capture and disposal of emissions and waste from coal combustion in power plants and coking operations at steel-making mills. As a result, consumers are seeking to use coal that contains less inherent quantities of sulphur, ash, heavy minerals and other non-coal matter, in combination with advanced technologies in the use of these coals.

The phrase ‘clean coal technologies’ or CCTs has been used recently to describe different processes and technologies that are designed to enhance both the efficiency and the environmental acceptability of coal extraction, preparation and use. The development and commercial operation of new technologies in this area is expected to be driven by the implementation of regulations and penalties related to carbon and other emissions under future climate change agreements.

Despite a number of environmental challenges facing producers and consumers of coal in the medium to longer term, coal is projected to remain a major fuel source for global energy consumption due to the economic advantages of its low cost supply base and reliability as a fuel for electricity generation. Queensland is likely to maintain its position as a major supplier of thermal coal to key overseas markets, particularly in East Asia, due to projected competitiveness of industry costs, quality of low-sulphur, low-ash resources and the established trading relationships within key markets. Queensland is also expected to continue to dominate global coking coal supply, mainly as a result of the State maintaining its position as the world’s leading producer of high-grade premium coal for blast furnace coke production.

References


9 For detailed descriptions of new and potential coal-fired energy technologies and other CCT initiatives, consult the World Coal Institute (http://www.wci-coal.com)
Summary Outlook

The Commonwealth Government’s forecasts indicate that the Australian economy has largely withstood the overseas economic downturn, the effects of the war in Iraq and one of Australia’s worst ever droughts, with gross domestic product expected to grow 3% in 2002-03 (see Table 1).

The outlook for the coming financial year is slightly more positive, with gross domestic product forecast to grow by 3 1/4% in 2003-04. While private demand, in particular dwelling investment and business investment, contributed strongly to growth in 2002-03, business investment is forecast to be the main driver of growth over the coming year.

Household Consumption

Following strong growth in 2002-03, household consumption is forecast to moderate slightly in 2003-04, growing by 3 1/4%. Low interest rates, continuing solid labour market conditions and rising real wealth are all forecast to continue to drive household consumption expenditure over the coming year.

Dwelling Investment

Housing construction activity in 2002-03 was driven by historically low interest rates, the residual effects of the Commonwealth Government’s additional First Home Owners Grant and expectations of capital gain increases, with dwelling investment expected to increase 18% over the year. An oversupply of dwellings in some markets and a reduction in expectations of capital gains is forecast to offset the benefits of ongoing low interest rates. Continued growth in alterations and additions is expected to partially offset the decline in new housing investment, resulting in a forecast decline of 5% in total dwelling investment in 2003-04.

Business Investment

Following growth of 15% in 2002-03, business investment is forecast to grow by 7% in 2003-04. The moderate growth in business investment reflects the continued positive impact of low interest rates, relatively stable business confidence, and sound profitability and cash flows. The largest risk to business investment remains overseas economic conditions, where a worsening of conditions may delay or reduce the scale of investment in Australia.

Net Exports

While net exports have been adversely affected by the weak economic conditions in Australia’s major trading partners in 2002-03, a rebound in rural exports, following the expected recovery from drought conditions and a slight strengthening in overseas demand, is forecast to result in exports growing strongly in 2003-04. With imports forecast to grow at a slower rate in 2003-04 in line with the slowing in domestic demand, net exports are forecast to detract only 1 1/4% point from overall growth in 2003-04, following a 2 3/4% point detraction in 2002-03.

Employment

Employment conditions are expected to moderate in 2003-04, with employment forecast to grow by 1 1/4% and the year average unemployment rate forecast to remain steady at 6%. The moderation in employment conditions follows very strong employment growth in 2002-03, with the greatest impact forecast to be felt in the labour intensive retail and construction sectors, which both experienced very strong growth in 2002-03.

Inflation

Following a higher than expected increase in the CPI in 2002-03, underlying domestic pressure on prices is expected to be more subdued in 2003-04, resulting in inflation around the middle of the target band by the end of 2003-04. The higher than expected inflation rate in 2002-03 was largely the result of several temporary and seasonal factors, including a large increase in fruit and vegetable prices due to the continued effects of the drought, higher global oil prices associated with the war in Iraq and the continued strength of the housing market.

Risk Factors to Growth

Commonwealth Treasury highlights uncertainty about the pace of world economic recovery as the key risk to economic growth in Australia in 2003-04. Domestically, the greater risks come from the pace of the moderation in dwelling investment, and possible wariness of business investment if world growth is slower than expected. Some risk is associated with the net exports forecast, which is based on the exchange rate averaging just over US60c in 2003-04. Should the exchange rate remain closer to current levels (US65c), net exports may detract more than forecast from economic growth in 2003-04.
### Table 1: Commonwealth Government Economic Forecasts (a)

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<th>Estimates 2002-03</th>
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<td>Household consumption</td>
<td>3.4</td>
<td>$3\frac{3}{4}$</td>
<td>3$\frac{1}{4}$</td>
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<tr>
<td>Private investment</td>
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</tr>
<tr>
<td>Dwellings</td>
<td>19.5</td>
<td>18</td>
<td>-5</td>
</tr>
<tr>
<td>Total business investment(c)</td>
<td>4.6</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>Private final demand(c)</td>
<td>4.9</td>
<td>6$\frac{1}{4}$</td>
<td>3</td>
</tr>
<tr>
<td>Public final demand(c)</td>
<td>4.3</td>
<td>3$\frac{3}{4}$</td>
<td>3$\frac{1}{4}$</td>
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<tr>
<td>Gross national expenditure</td>
<td>4.8</td>
<td>5$\frac{4}{4}$</td>
<td>3$\frac{1}{2}$</td>
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<td>Exports of goods and services</td>
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<td>Unemployment rate</td>
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(a) % change on a year earlier unless otherwise stated.
(b) Chain volume measure. Reference year is 2000-2001.
(c) Excluding second hand asset sales from the public sector to the private sector.
(d) % point contribution to growth in GDP.
(e) Average non-farm compensation of employees (national accounts basis).
This article presents summary results from the November 2002 Queensland Household Survey conducted by the Office of Economic and Statistical Research. The Office conducts surveys every six months for participating government departments and agencies to assist them in their planning and policy decisions. The surveys are conducted by computer assisted telephone interviewing (CATI) and are targeted at people aged 18 years and over who are usual residents of private dwellings with telephones in Queensland. Each survey comprises more than 3,000 completed interviews obtained from residents across the State.

**Awareness of Consumer Warnings**

An estimated 83.6% of people had heard or read consumer advice, communications or warnings from the Queensland Office of Fair Trading in the six months to November 2002. This compares with 78.8% in the six months to May 2002 and 73.5% in the six months to November 2001.

Product safety recalls (58.2%) had the highest awareness, followed by scams and fake lotteries (55.7%) and buying and selling real estate (50.4%) (see Figure 1). Largest percentage point increases since May 2002 were for buying and selling real estate (13.7% points), buying and selling used cars (9.2% points) and door to door sales (9.0% points).

![Figure 1: Heard or read consumer warnings](image)

The largest proportion of people heard/read these warnings in newspaper stories (54.7%), television shows (48.5%) and television news (45.9%) (see Figure 2). There were increases across all media compared with May 2002.

![Figure 2: Main sources of hearing/reading warnings](image)

**Contacting People for Information**

Respondents were asked if they knew someone in various organisation types who they would feel comfortable contacting if they needed information or advice. Among public sector organisations, the survey found that 42.6% of people knew someone they were happy to contact in a local government agency, 37.8% knew a Member of Parliament and 30.4% knew someone in a Queensland Government department or agency (see Figure 3).

![Figure 3: Knew someone in public sector organisations to contact for information or advice](image)

About half the population knew someone they felt comfortable contacting for information or advice in a volunteer organisation or service club (52.4%), the legal system (48.8%), a church group (48.4%) and a school related group (46.3%) (see Figure 4).

![Figure 4: Knew someone in other organisations to contact for information or advice](image)

---

1 This article was prepared by Chris Pearce of the Office of Economic and Statistical Research, Queensland Treasury.
In general, older people, those with tertiary qualifications and higher incomes, and people living in regional areas of the State were more likely to know someone in public sector and other organisations who they would feel comfortable contacting.

Managing the Environment

About two-thirds (66.3%) of the population felt that Queensland’s environmental issues were being managed very well or fairly well, about the same as in November 2001 (see Figure 5).

Figure 5: Management of environmental issues

Of respondents who correctly named the Environmental Protection Agency as the organisation mainly responsible for managing environmental issues in Queensland, about two-thirds (68.1%) were very satisfied or fairly satisfied with its performance.

All respondents were asked how concerned they were about environmental problems and issues in Queensland. Nearly 9 in 10 persons (88.2%) were very concerned or fairly concerned, similar to the proportion in November 2001 (88.9%).

Fire Ants

People in the Brisbane and Northern regions were asked about fire ants. Nearly everyone (96.3%) was aware of Queensland’s fire ant problem.

About three-quarters (77.8%) of people said they were aware of the appearance of fire ants. However, when these people were asked to describe their colour, 37.3% said they were red, 22.2% said red and brown and 38.0% said other colours.

A high proportion (88.2%) of respondents thought fire ants were dangerous to humans, while 80.7% and 88.1% thought they were dangerous to animals and the environment respectively.

An estimated 69.1% of people in the Brisbane and Northern regions had checked their own yard for fire ants in the previous 12 months. The most common reason for not checking was that people said they were not in a fire ant area.

Respondents were asked their opinion on how fire ants could be spread. About half (52.2%) mentioned through movement of infested soils, while 24.1% mentioned movement of infested plants and 16.5% said movement of infested potting mix (see Figure 6). About a quarter (22.8%) mentioned motor vehicles.

Figure 6: Main ways fire ants could be spread

About half (50.9%) the population in these regions correctly identified the Department of Primary Industries as the lead agency running the fire ant eradication program in Queensland.

When asked what they thought the Queensland Government was doing to control fire ants, 35.3% of respondents mentioned checking/inspecting, 27.0% mentioned marketing/awareness campaign and 20.8% said baiting (see Figure 7).

Figure 7: Main things the State Government is doing to control fire ants

Some two-thirds (68.0%) of people thought the eradication program would be very likely or likely to succeed.

If the Queensland environment was threatened by an environmental pest, 37.7% of respondents said they would contribute time to eradicate the pest, 27.2% said they would just abide by government pest regulations and 20.4% would educate themselves about controlling the pest.
**Fire and Rescue Services**

Nearly all Queenslanders believe it is very important or important to take steps to avoid traffic fines/exceeding the speed limit (90.1%), a house fire (98.2%), a house break-in (95.9%) and property damage from a storm (90.3%), with females generally being more likely than males to regard these issues as very important.

An estimated 83.1% of respondents had a safety switch or circuit breaker in their homes, while 79.3% had a smoke alarm or detector and 73.8% had removed external fuel sources (see Figure 8). This compares with 76.2%, 75.5% and 60.0% respectively in November 2001.

**Figure 8: Fire safety measures and procedures at home**

- Safety switch or circuit breaker
- Smoke alarm or detector
- Removed external fuel sources
- External sprinkler system
- Home fire evacuation plan
- Fire extinguisher

About two-thirds (66.1%) of people had tested their smoke alarm in the previous 12 months, while 54.6% had replaced their smoke alarm battery and 34.5% had cleaned their smoke alarm (see Figure 9).

**Figure 9: Fire safety procedures followed at home**

- Tested smoke alarm
- Replaced smoke alarm battery
- Cleaned smoke alarm
- Practised fire evacuation plan
- Replaced smoke alarm unit
- None

Use was made of the Queensland Fire and Rescue Service in the past 12 months by 6.0% of the population. Of these people, 96.1% were very satisfied or satisfied with the service provided.

**Emergency Services**

The survey found that 15.1% of Queenslanders used the ambulance service in the previous 12 months. Of these people, 94.3% were very satisfied or satisfied with the service provided. Overall, 85.3% of the population were very satisfied or satisfied with the services provided.

More than half (55.8%) of respondents had participated in some form of first aid training, with about half this group having completed first aid training within the past three years. Similarly, 54.1% of people had completed cardio-pulmonary resuscitation (CPR) training, including about half in the previous three years.

About a third (31.9%) of people had done unpaid voluntary work in the past 12 months, similar to November 2001 (32.2%).

**More information about the survey**

Government departments and agencies can purchase questions in the Queensland Household Survey to obtain both statewide and regional data on issues of specific interest to them. For more information, please contact:

Dr Nancy Spencer  
Assistant Government Statistician (Social Statistics)  
Office of Economic and Statistical Research  
Phone: (07) 3224 8953  
Fax: (07) 3227 7437  
Email: nancy.spencer@treasury.qld.com.au
Commodity Price Charts

Note: All charts show quarterly average data.

Sugar Prices
(US cents/lb, quarterly)
Source: New York Commodities Exchange

Wheat Prices
($US/t, quarterly)
Source: Australian Wheat Board

Export Coal Prices*
($A/t, weighted export price, quarterly, Queensland)
* Recent movements in coal prices may not be accurately reflected, due to delays in receiving coal price data.
Source: Department of Mines and Energy, Queensland Treasury

Beef Prices
(index base 2001-02 = 100, $US, quarterly)
Source: Livestock and Meat Authority - Weighted Export Price Index

Wool Prices
($A/kg, quarterly)
Source: Australian Wool Corporation - Wool Market Indicator

Gold Prices
($US/oz, quarterly)
Source: New York Mercantile Exchange

Aluminium and Copper Prices
($US/t, quarterly)
Source: London Metals Exchange

Nickel and Lead Prices
($US/t, quarterly)
Source: London Metals Exchange

Note: All charts show quarterly average data.
### Major Economic Indicators by State

<table>
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<tr>
<th>Indicator</th>
<th>ABS Cat. no.</th>
<th>Data Period</th>
<th>Growth Qtd as % of Aus</th>
<th>QLD</th>
<th>NSW</th>
<th>VIC</th>
<th>SA</th>
<th>WA</th>
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Note: All data are in trend terms unless otherwise indicated. Annual growth rate is the percentage change between the latest quarter and the same quarter a year earlier. Quarterly growth rates represent growth on the previous quarter.

(a) The Queensland State Accounts are the source of all Queensland data. The Australian data and other states data are sourced from ABS, *Australian National Accounts*, Cat. no. 5206.0.40.001.

(b) Commonwealth Department of Employment and Workplace Relations.

$cvm$ - chain volume measure

$l$ - level or rate, i.e. not rate of change

$q$ - quarterly data

$v$ - value

$na$ - not available
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**ABARE**
Australian Bureau of Agricultural and Resource Economics

**ABS**
Australian Bureau of Statistics

**annual change, monthly**
percentage change between one month and the same month a year earlier

**annual change, quarterly**
percentage change between one quarter and the same quarter a year earlier

**AWE**
average weekly total earnings for all employees. Includes overtime earnings and part-time workers’ earnings, in addition to full-time workers’ ordinary time earnings.

**AWOTE**
average weekly ordinary time earnings for full-time adults. Includes award wages and overtime (or ‘drift’) payments.

**chain volume measures (cvm)**
conversion of prices (by means of an index) in order to abstract from the effects of inflation. Designed to reflect changes in quantity, rather than price, they are often referred to as ‘real’ terms. Chain volume measures are compiled by linking together (compounding) movements in volumes, calculated using the average prices of the previous financial year, and applying the compounded movements to the current price estimates of the reference year.

**constant prices**
conversion of prices (by means of an index) to those prevailing in a base period, thus abstracting from the effects of inflation. Designed to reflect quantity, rather than price, changes only. Often referred to as ‘real’ terms.

**CPI**
Consumer Price Index

**current prices**
the total value in today’s dollars. Movements reflect both quantity and price changes. Often referred to as ‘nominal’ terms.

**DEWR**
Department of Employment and Workplace Relations (formerly DEWRI, DEETYA, DEET)

**EMU**
European Monetary Union – launched on 1 January 1999. Comprises Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain.

**EU**
European Union – comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and United Kingdom

**GDP**
Gross Domestic Product – the total value of final output produced in the nation in a given period of time

**GNE**
Gross National Expenditure – the total value of final household and general government consumption spending, gross private and public investment and change in inventories by the nation in a given period of time

**GSE**
Gross State Expenditure – the total value of household final consumption spending, gross private investment and government spending in a given period of time

**GSP**
Gross State Product – the total value of final output produced in the State in a given period of time

**IMF**
International Monetary Fund

**leading indicators**
statistics or data which provide an early indication of a likely change in the pattern of economic activity

**moving average**
average value of a series of data calculated over a set period such that, as new data become available, the earliest dated observation is removed from the calculation of the average and the most recent observation added in its place

**natural increase**
the excess of births over deaths

**net exports**
exports minus imports. For Queensland, includes interstate as well as overseas trade.

**net interstate migration**
the excess of interstate migrant arrivals over departures

**net overseas migration**
the excess of overseas migrant arrivals over departures

**OECD**
Organisation for Economic Cooperation and Development

**original data**
raw or unadjusted survey based data

**seasonally adjusted data (sa)**
original data are adjusted to remove the effect of identifiable movements due to regular seasonal factors, e.g. Christmas, Easter, etc.

**SDR**
Special Drawing Rights. Calculated by the International Monetary Fund, based on a weighted average of five key world currencies – the US$, German mark, French franc, Japanese yen and Pound sterling.

**State Final Demand**
the total value of final household and general government consumption spending, and gross private and public investment, in a given period of time

**tourism**
interstate (overseas) tourism exports refers to interstate (overseas) residents holidaying in Queensland. Imports are Queensland residents holidaying interstate (overseas).

**trend data**
seasonally adjusted statistical data are smoothed to reduce the impact of irregular factors and allow analysis of the underlying behaviour of the series over time

**TWI**
Trade Weighted Index

**year average growth**
percentage change between the average over one year and the average over the previous year

**yield curve**
plots market yields against the term to maturity for a range of securities. If the yield on longer-term securities is higher (lower) than short-term securities the yield curve is said to be positively (negatively) sloped
Office of Economic and Statistical Research

Background

The Office of Economic and Statistical Research (OESR) was established as a centre of excellence for independent social, economic and statistical information, advice and research.

The main office is located in Brisbane, with regional offices in Townsville, Rockhampton and Cairns that service the State’s north, central and far north regions.

Core Business

The Office provides the following services:

- Intelligence in the form of current economic and social conditions in the State and its regions
- Advice on economic and statistical methodology
- Data from household and business surveys and administrative systems
- Coordination of information access and whole of government policy information
- Research and development into economic and statistical methodologies, and social issues.

Products and Services

Examples of the products and services produced by the Office are:

- Economic information, econometric modelling and statistical information
- Major surveys on social issues such as crime victimisation, internal migration, women, youth, and lifestyle related issues
- Publications and reports on a range of economic and statistical issues important to the growth and development of the State and its regions
- The Queensland State Accounts and state and regional input-output tables
- Data collection, information management, statistical reviews, and economic and statistical analysis.

For more information

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