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Measuring Australia's Economy

Edition 7

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PREFACE

Measuring Australia's Economy provides national statistics, definitions and references to further reading for over 50 major economic indicators used by analysts and the media today. Most importantly, to make this information available to all readers, particularly those without a background in economics, it is written in non-technical, simple English.

This seventh edition is the first to be provided free on the internet for easy access.

Measuring Australia's Economy includes the latest economic indicators measured by the Australian Bureau of Statistics along with indicators from other organisations and international comparisons.

Measuring Australia's Economy was developed in response to a need expressed by teachers, lecturers and other educators for a single, comprehensive source of economic indicator information. It has been designed as an information resource for students, analysts or anyone wishing to gain an understanding of economic indicators used to measure the performance of the Australian economy. It will enable the reader to understand exactly what an indicator is measuring, how this relates to economic activity, to look at data for an indicator over a period of time and to reference more detailed statistics or explanations if required.

I trust that these pages will assist the reader to understand the Australian economy and the changes going on within it.

Dennis Trewin
Australian Statistician

2003

RELEVANCE TO CURRICULUM FRAMEWORKS

Increasing media coverage of economic issues and events have placed a greater importance on understanding the impacts of economic change at individual, local, national and international levels. The study of economics, with its focus on decision-making at each of these levels, has in turn become an increasingly important area of study.

Students of economics develop an understanding of the inter-relationship between key economic factors and how those factors ultimately influence the well-being of Australians. Investigation of Australia's trade relations, balance of payments, and other connections between the domestic and international economies are also important. These curriculum outcomes are well supported by the content of **Measuring Australia's Economy**.

The ABS has a primary role in measuring the economic health of the nation and assisting governments to make informed decisions. Material presented in this book provides concise treatment of key Australian economic indicators and how they are used to measure economic activity.

Measuring Australia's Economy covers topics including national accounts, balance of payments, domestic consumption and investment, production, labour, and financial markets. Australia's relationship with the international economy is also analysed by presenting information on international accounts and trade comparisons between Australia and other overseas countries.

Statistical material is presented extensively and will promote analytical, numerical and statistical competency allowing students to compare the relationship between major economic trends using real data.

GENERAL INFORMATION

Introduction

Measuring Australia's Economy has been structured so that readers will gain a broad understanding of how economic activity can be measured and the state of the Australian economy at the beginning of the 21st century. Information on specific economic indicators is provided in sections which consider economic activity from different perspectives. The format of most entries presents commentary, a graph and table of data, explanatory notes and further reading. The final chapter brings together information on concepts, classifications, sources, methods and usage of the material provided in the book.

Chart and Table Contents

The statistics presented are the latest available at October 2002.

The statistics are generally presented in the charts as time series for the last 10 years of monthly or quarterly data.

The tables generally present the last three or six years of annual data. Provision of quarterly or monthly data varies depending on the series.

Data Sources

The tables contain mainly ABS data, although data from non-ABS sources are also included. For ABS data, the name of the source publication and its catalogue number are included in the footnotes of the charts and tables. If the data are from other sources, the source organisation's name is included in the footnotes.

Seasonally Adjusted and Trend Estimates

Data series in this publication include original, seasonally adjusted and trend series. Seasonally adjusted and trend series are clearly labelled. All other series are original series. Care should be taken in interpreting data for the most recent months and quarters. Some of the original and all of the seasonally adjusted and trend series are subject to revision.

It is not uncommon for movements in the original time series data to differ from those in seasonally adjusted and trend time series. Movements in a time series of original data may reflect several factors, including:

- longer-term changes in the item being measured (i.e. trend movements);
- short-term irregular changes;
- regular seasonal influences;
- normal 'trading', 'working' or 'pay' day patterns; and
- systematic holiday effects.

Seasonal adjustment and trend estimates help the user identify the effect of these influences on the time series. Seasonal adjustment removes the effect of the last three listed influences from the data, leaving only the trend and short-term irregular movements. Trend estimates are then obtained by removing the effects of the short-term irregularities. The ABS believes that trend series provide the best 'underlying' measures of economic activity for monthly or quarterly series.

Chain Volume Estimates

Chain volume estimates in this publication refer to estimates in 2000-01 dollar terms. Chain volume estimates remove the direct effect of price change from the current price values so that movements in the data between one period and another reflect changes in volume, often called 'changes in real terms'.

Explanatory Notes

ABS publications generally contain Explanatory Notes which describe the collection methodology and data items contained therein. Because **Measuring Australia's Economy** contains statistics from numerous sources, collection methodologies and data item descriptions have not been included. Readers are directed to the Explanatory Notes contained in the appropriate ABS publications for such descriptions. Explanatory notes in **Measuring Australia's Economy** describe each economic indicator and how it is used to measure economic activity.

Further Reading

Further reading references for each indicator are generally ABS publications. The ABS uses a catalogue numbering system to describe its publications and products. The catalogue number appears in brackets after each publication, for example, **Balance of Payments and International Investment Position, Australia** (5302.0). A description of the catalogue numbering system can be found in the **Catalogue of Publications and Products** (1101.0). The origins of publications not from the ABS are also indicated.

Access to FREE ABS information

This website contains a vast quantity of free current information on Australian economy and society. Most of this can be accessed using the "Statistics" button on the navigation bar. Of particular interest to the subject matter of Measuring Australia's Economy are the following links:

Key National Statistics details Australia's key economic and social indicators including the latest Consumer Price Index (CPI), Gross Domestic Product (GDP), employment and unemployment figures, retail trade figures and many more.

Statistical Concepts Library provides easy access to authoritative information about the concepts, sources, methods and classifications underlying Australian official statistics.

Information papers including special articles, working papers, research papers and other information.

The ABS Library Extension Program (LEP)

The LEP makes ABS publications freely accessible to the community via public, state, TAFE and university libraries either in hard copy, or electronically through our online services. Many school libraries also hold ABS publications. Please contact your library to establish its opening hours and to determine whether it has the ABS data you require. A full **list of participating libraries** is available on the ABS website.

Universities

University students and staff have access to **AusStats**, a web based information service providing the **ABS** full standard product range on-line. This includes the publications referenced in **Measuring Australia's Economy** and spreadsheets containing time series data for major economic series.

Symbols and Other Usages

In all tables the following symbols mean:

n.a.	not available
n.y.a.	not yet available
p	preliminary
..	not applicable
---	nil or rounded to zero (including null cells)

Yearly periods shown as, e.g. 1996-97, refer to the fiscal year ended 30 June. Where figures have been rounded, discrepancies may occur between totals and the sums of the component items.

Abbreviations

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
c.i.f.	cost insurance freight
CLI	Composite Leading Indicator
CPI	Consumer Price Index
f.o.b.	free on board
GDP	Gross Domestic Product
GNE	Gross National Expenditure
GOS	Gross Operating Surplus
ICLS	International Conference of Labour Statisticians
ILO	International Labour Organisation
IPD	Implicit Price Deflator
LEP	Library Extension Program
MFP	Multifactor Productivity
OECD	Organisation for Economic Co-operation and Development
HFCE	Household Final Consumption Expenditure
RBA	Reserve Bank of Australia
SNA	System of National Accounts
SNA(93)	System of National Accounts 1993
TWI	Trade-weighted Index

CHAPTER 1

MEASURING ECONOMIC ACTIVITY

Introduction

A large amount of the information published by the ABS relates to economic activity. For example, the ABS publishes measures of retail trade, the number of persons employed, and merchandise trade. These measures are known as **economic indicators**, which can be thought of as economic variables which change in a predictable way in relation to overall economic activity. Economic analysts use indicators along with other information to help explain what is happening in the economy and then use this knowledge to try to predict future events.

The economic information published by the ABS is obtained mainly from surveys conducted by the ABS or as a by-product of administrative activities. For example, information on retail turnover is collected from a survey of retail businesses, information on the number of people employed is collected from a household labour force survey, and information on merchandise trade is compiled from data provided to the ABS by the Australian Customs Service.

What the National Accounts measure

There is a wide range of data series available to anyone who wishes to analyse the performance of various components of the economy over time. For example, we could look at the number of houses being built, the number of cars produced, whether employment is rising or falling, the composition of exports and so on.

While these and the many other economic statistics produced by the ABS and other organisations are important in their own right, it is obvious that none of them in isolation can provide a complete picture of the state of the economy. The **national accounts** provide a framework within which data about particular aspects of the economy can be combined and presented to show the overall economic position of the nation.

In addition, the accounts provide details of the contributions of different types of economic activity to the economy as a whole. For example, we can see from the national accounts how much of our national income is derived from exports, or how much of the national production is contributed by the manufacturing sector.

The national accounts are organised in the form of a sequence of integrated accounts that show the essential elements of the Australian economy: production, income, consumption, the accumulation of assets (both financial and non-financial) and wealth.

Many of the key national accounts aggregates are affected by both changes in prices as well as by changes in underlying quantities. For these aggregates, analysts often prefer to see estimates that exclude the direct effects of changes in prices. The ABS provides such estimates - in its national accounts and other economic statistics - in the form of **chain volume measures**.

The national accounts provide vital information for a range of important purposes. The conventions which are followed in compiling them are fully articulated in internationally accepted standards. They have been developed and refined in the course of the past half-century by experts in the field of economic accounting.

Gross Domestic Product (GDP)

A key measure provided in the national accounts is **gross domestic product**, or GDP. GDP may be defined as the unduplicated value of production that occurs in Australia during a particular period. It is unduplicated in the sense that the value of goods and services used up in the production process is deducted from the value of output in the calculation of GDP. GDP can also be measured in terms of the income generated by production, or in terms of 'final' expenditures on outputs produced. The term **gross** in GDP indicates that no deduction has been made for the consumption of fixed capital (also known as depreciation); in other words, the gradual using up of fixed assets (e.g buildings, machinery and equipment) through wear and tear is not accounted for when measuring GDP.

GDP and Well-being

It is important to recognise that the 'performance' of the economy, as represented in national accounting measures such as GDP, is not an end in itself. While movements in GDP in chain volume terms are an important measure of economic growth, they do not provide a comprehensive measure of the well-being of a country's citizens. For example, changes in the levels of pollution and changes in social structures - both of which affect well-being - are not accounted for in GDP.

There are significant aspects of the 'quality of life' which cannot be comprehensively measured in a system of national accounts, and the national accounts were never designed to provide such measures. There are many questions that cannot be answered by any system that relies predominantly on using monetary values as its measuring yardstick. However, the system of national accounts provides a structure which can be, and has been, adapted and extended to facilitate the examination of linkages between various economic and social and environmental policy issues.

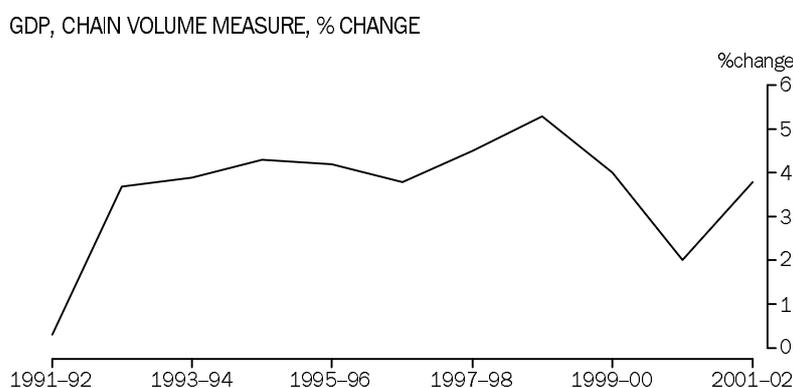
Readers who wish to gain an appreciation of statistics relating to the wider notion of well-being are referred to **Measuring Australia's Progress** (1370.0). This publication brings together social, environmental and economic indicators.

The Australian Economy

National Accounts

During 2001-02 the value of goods and services produced by the Australian economy (gross domestic product or GDP) was \$716b. This amount is equivalent to production of about \$36,700 per person.

In chain volume terms (i.e., after allowing for changes in prices) Australia's GDP increased by 3.8% in 2001-02 compared with 2000-01. This continued the strong growth rates since 1992-93, during which time the average annual growth rate was 4%. Growth rates have been above 3.5% for every year during this period, apart from 2000-01 when the growth rate fell to 2%



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Annual data.

The industry making the most significant contribution to production in 2001-02 was property and business services (11%), closely followed by manufacturing (11%). The next most significant industry was "ownership of dwellings" (9%), which is the industry that provides dwelling services. Most dwellings are owned by those occupying them, and the value of the production of the dwelling services they produce for themselves has to be imputed.

Australia's gross disposable income in 2001-02 was \$695b. (The difference between this amount and GDP mainly reflects net income and current transfers payable to non-residents.) Of this, \$560b was spent on final consumption expenditure. After allowing for consumption of fixed capital (depreciation) of \$112b, this left net saving of \$24b (or 3.5% of gross disposable income). During the last 10 years the proportion of gross disposable income saved ranged from a low of -0.2% in 1991-92 to a high of 3.8% in 1997-98, and 1999-2000.



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

Of the final consumption expenditures in 2001-02, 24% was incurred by governments, with the remaining 76% incurred by households. The most significant components of the latter were rent (18%), which includes the imputed rent paid by owner-occupiers to themselves, recreation and culture (12%), and food (11%)

During 2001-02 the value of new investment in fixed assets was \$156b, or 22% of GDP. As this amount exceeded the combined total of net saving and depreciation, this meant that Australia was a net borrower from the rest of the world. The net amount borrowed during 2001-02 was \$21b. Throughout the last 10 years, the proportion of GDP represented by new investment in fixed assets was generally in the range 22-24%.

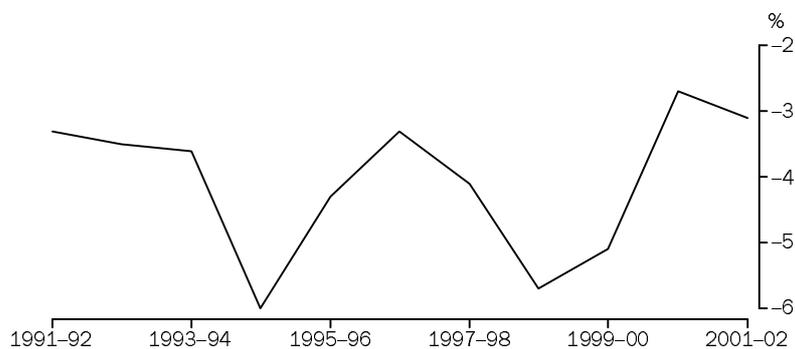
Australia's balance of payments records transactions between Australia and the rest of the world. The current account deficit during 2001-02 was \$22b, or 3.1% of GDP. This deficit is mostly due to an excess of \$2b in imports of goods and services over exports and net income payable to non-residents of \$20b. During the last 10 years the current account deficit as a percentage of GDP fluctuated, with a high of 6.0% in 1994-95 and a low of 2.7% in 2000-01. Both exports and imports became increasingly more important to the Australian economy during this period. When expressed as a percentage of GDP, exports rose from 17% in 1991-92 to 21% in 2001-02, while over the same period imports rose from 17% to 22%. Australia's terms of trade - which reflects changes in the prices of exports relative to those for imports - improved by 2.6% in 2001-02 which is the third consecutive year of improvement.

EXPORTS AND IMPORTS OF GOODS AND SERVICES AS A PERCENTAGE OF GDP



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Annual data.

CURRENT ACCOUNT AS A PERCENTAGE OF GDP



Source: Balance of Payments and International Investment Position (5302.0), Annual data.

There was a small surplus (\$1b) on Australia's balance of payments capital account for 2001-02. Overall, for 2001-02 the balance on current and capital accounts was a deficit of \$21b, which is equivalent to Australia's net borrowing requirement mentioned previously.

At 30 June 2002, Australia's net worth (assets less liabilities) was \$2,934b, an increase of \$199b on the position one year earlier. Of the increase, \$24b was attributable to net saving, with the remainder due mainly to the revaluation of assets and liabilities to take account of price changes. As the value of Australia's net worth at 30 June 2002 was less than the value of its non-financial assets (\$3,325b), this meant that Australia had net liabilities to non-residents (\$391b). Australia's net foreign debt, which is a component of its net liabilities to non-residents, was \$318b at 30 June 2002, an increase of \$20b during the year.

The Consumer Price Index

The consumer price index (CPI), a measure of inflation, increased by 2.9% in 2001-02 compared with 2000-01. Over the same period, the GDP chain price index - which provides a broader measure of inflation than the CPI - increased by 2.5%. In 2000-01, the CPI was directly affected by the introduction of a goods and services tax, which replaced wholesale sales tax and some state and territory taxes. Hence the annual growth rate of 6.0% in 2000-01. From 1991-92 to 2001-02 the average annual rate of change in the CPI was 2.4%.

YEAR ON YEAR CHANGE IN CONSUMER PRICE INDEX



Source: Consumer Price Index, Australia (6401.0), Annual data.

Labour force

In annual average terms, growth in employment during 2001-2002 was 1.9%, compared with 1.0% in the previous year and 2.9% in 1999-2000. Recent employment growth is well below that in 1994-95, when employment rose by 4.8%. The average unemployment rate for 2001-2002 was 6.6%, 0.2 percentage points higher than the rate for the previous year. During the 1990s, the unemployment rate peaked at 10.7% in 1992-93, and after this it generally declined. Average weekly ordinary time earnings for full-time adults during 2001-2002 was \$853.60, an increase of 5.5% on the comparable figure for the previous year. Movements in average weekly earnings can be affected by both changes in the level of earnings per employee and changes in the composition of the labour force. On the other hand, the wage cost index measures changes in the "price" of a fixed basket of jobs, priced to constant quality. The price of labour, as measured by the wage cost index, increased by 3.1% during 2001-02.

UNEMPLOYMENT RATE, PERSONS, ANNUAL AVERAGE



Source: Australian Economic Indicators (1350.0), Annual data.

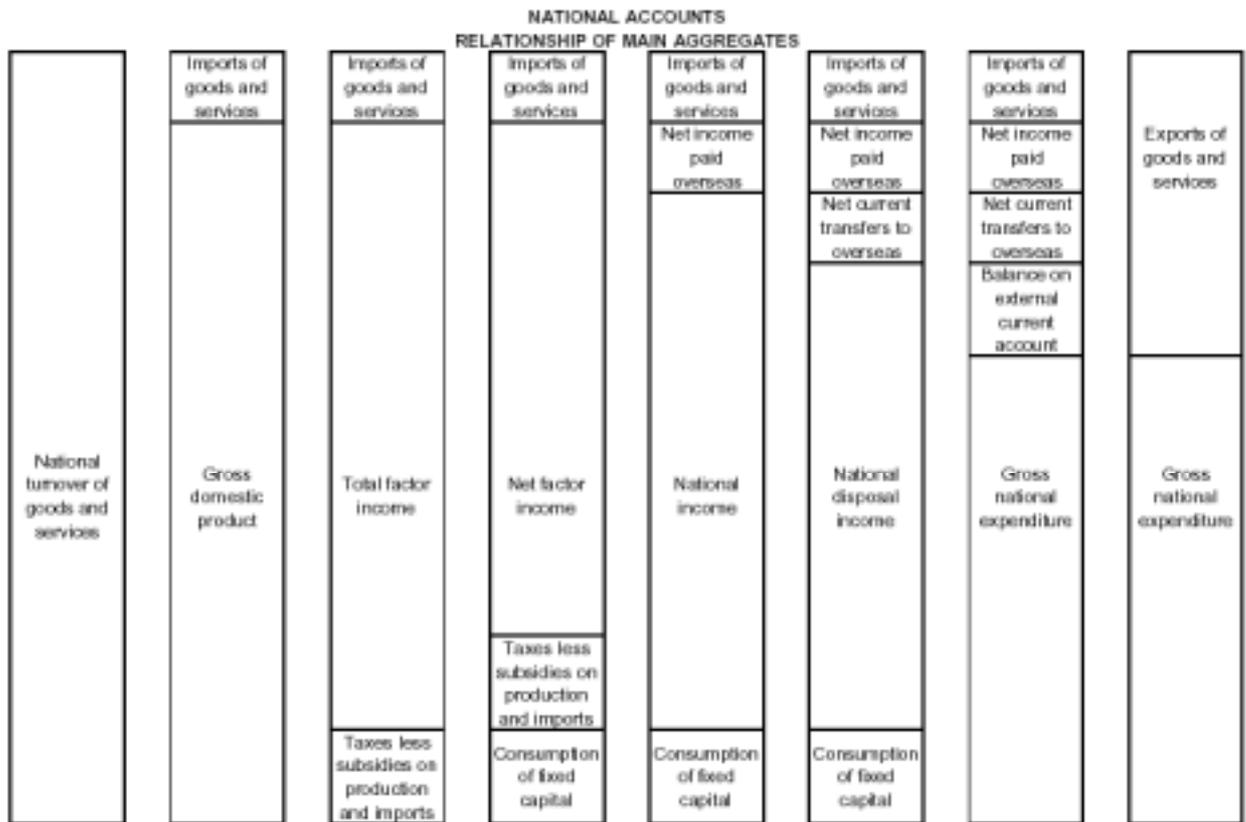
The average 'all ordinaries' stock market index for June 2002 was 3,241.5, a decrease of 3.3% on the average for the same month a year earlier. At 30 June 2002 the Australian dollar was worth 0.5648 United States dollars, an increase of 11% on a year earlier. The trade weighted index increased from 49.8 to 53.4 during 2001-02.

CHAPTER 2

SUMMARY MEASURES OF ECONOMIC ACTIVITY

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National Accounts



Explanatory Notes

The essential function of the national accounts is to provide a systematic summary of national economic activity. The structure of the accounts provides an economically meaningful aggregation of the wide range of diverse transactions occurring in the economy.

The basic structure of the national accounts is determined by the classification of transactors into institutional sectors and the classification of transactions, firstly by economic type, and secondly, grouped to form accounts. The four domestic institutional sectors are: non-financial corporations; financial corporations; households and general government.

The main accounts in the Australian national accounts are:

- gross domestic product (GDP) account, which records the value of production (GDP), the income from production and the final expenditures on goods and services produced;
- income accounts, which show primary and secondary income transactions, final consumption expenditures and consumption of fixed capital. Net saving is the balancing item for these accounts;
- capital accounts, which record the net accumulation, as the result of transactions, of non-financial assets; and the financing, by way of saving and capital transfers, of the accumulation. Net lending/borrowing is the balancing item for these accounts;
- financial accounts, which show the net acquisition of financial assets and the net incurrence of liabilities. The balance on these accounts is the net change in financial position, which is conceptually equivalent to the net lending/borrowing balance in the capital accounts; and

- balance sheets, which record the stock of assets, both financial and non-financial, and liabilities at a particular point in time. Net worth is the balance from the balance sheets.

The figure on the facing page shows how some of the main national accounting aggregates are related to each other. It starts with national turnover, which can be viewed as the **total supply of goods and services** available in Australia to final buyers in a given period. This is conceptually equivalent to the sum of all **final expenditures** on goods and services in the same given period. These final expenditures are defined to include changes in inventories and exports, which are considered to be final expenditures from the point of view of the domestic economy. Deduction of imports of goods and services from national turnover leaves GDP.

Australia's national accounts are essentially compiled according to the recommendations of the latest international standard - the **System of National Accounts, 1993** (SNA93). SNA93 is a joint publication of the United Nations, IMF, OECD, World Bank and Commission of the European Communities (Eurostat).

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

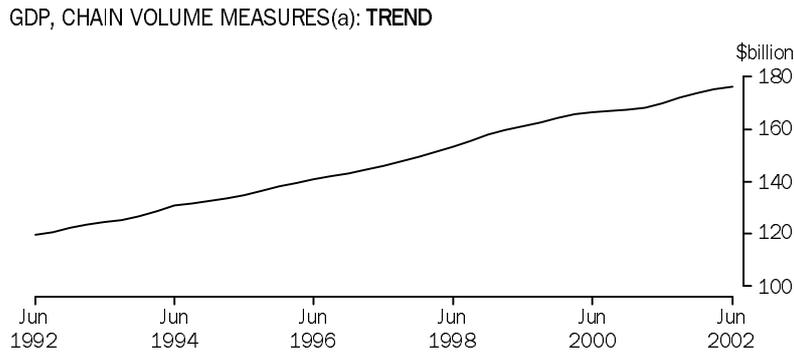
Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

System of National Accounts, 1993

Contains international standards issued by the United Nations, International Monetary Fund, World Bank, Organisation for Economic Co-operation and Development and the Commission of the European Communities (Eurostat) for the compilation of national accounts statistics. Included on the ABS CD-ROM product **Statistical Concepts Library** (1361.0.30.001).

Gross Domestic Product

The Australian economy, as measured by the chain volume estimates of GDP, grew during the late 1980s. This was followed by a sustained decline in economic activity (a recession) from September quarter 1990 to September quarter 1991 with 5 quarterly decreases in the trend chain volume estimates of GDP. In the eleven years since the recession in 1990-91 GDP grew in every year. Although growth in 1991-92 was relatively low (0.3%), by 1994-95 it had accelerated to 4.3%. It has subsequently been above 3.5%, except for 2000-01 when it was 2%. GDP growth in 2001-02 was 3.8%.



(a) Reference year for chain volume measures is 1998-99.

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Quarterly data.

GROSS DOMESTIC PRODUCT, Chain Volume Measures(a)

	GDP \$m
ANNUAL	
1996-97	575,950
1997-98	601,614
1998-99	633,723
1999-2000	659,002
2000-01	672,232
2001-02	697,607
QUARTERLY (TREND)	
2000-01	
December	167,314
March	168,143
June	169,888
2001-02	
September	172,010
December	173,773
March	175,238
June	176,438

(a) Reference year for chain volume measures is 2000-01

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

Explanatory Notes

Gross domestic product (GDP) is an aggregate measure of the value of economic production in Australia in a given period.

There are three ways of measuring GDP: the value of goods and services produced by an industry less the costs of production (production approach); the sum of incomes generated by production (income approach); and the sum of final expenditure on goods and services produced, plus exports minus imports (expenditure approach). An average of the three approaches is calculated and referred to as GDP.

From 1994-95 the Australian national accounts have been benchmarked to annual supply and use tables, thereby eliminating statistical discrepancies between the various measures of GDP. However, as no supply and use tables are available for the latest financial year and for years prior to 1994-95, discrepancies are recorded between the average measure of GDP and the income, expenditure and production based measures for those years. Furthermore, there are discrepancies for all quarters.

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

Australian National Accounts: National Income, Expenditure and Product (5206.0)

Provides a detailed presentation of quarterly national accounts at both current prices and chain volume measures in original, seasonally adjusted and trend terms.

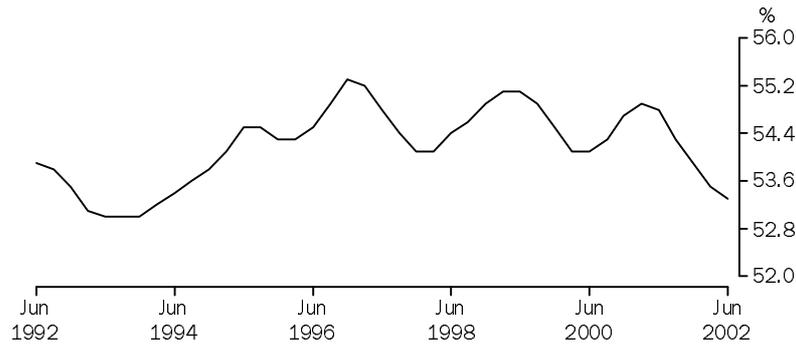
Australian System of National Accounts (5204.0)

Contains a comprehensive range of annual national accounts data.

National Accounts - Gross Domestic Product Account

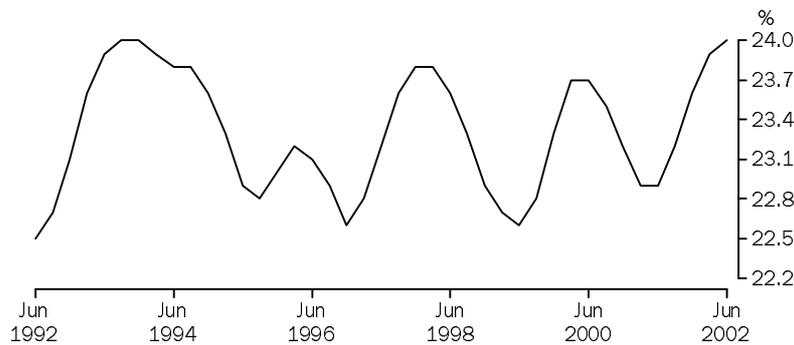
The trend ratio of compensation of employees to total factor income (the wages share) was at its lowest point in the last 10 years in the June quarter 1993, when it stood at 53.0%. By December quarter 1996 the ratio had risen to reach 55.3%, its highest level for the 1990s. The ratio in June quarter 2002 was 53.3%. Movements in the trend ratio of gross operating surplus for financial and non-financial corporations to total factor income (the profits share) tend to be inverse to the movements in the wages share as wages and corporate profits are the two major components of total factor income. The profits share recorded its highest value during the last 10 years of 24% in the September and December quarters 1993, and in the June quarter 2002.

WAGES SHARE OF TOTAL FACTOR INCOME:TREND



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Quarterly data.

PROFITS SHARE OF TOTAL FACTOR INCOME: TREND



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Quarterly data.

Chapter 2 - Summary Measures of Economic Activity

GROSS DOMESTIC PRODUCT, Current Prices - Annual

	1996-97 \$m	1997-98 \$m	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m
Final consumption expenditure	410,738	436,433	463,164	492,750	527,787	559,494
Gross fixed capital formation						
Private	95,038	108,724	112,828	123,899	115,875	128,503
Public	22,551	20,748	24,876	25,154	25,825	27,982
Domestic final demand	528,326	565,905	600,868	641,803	669,487	715,979
Changes in inventories	-10	62	5,152	1,760	1,873	1,320
Gross national expenditure	528,316	565,967	606,020	643,563	671,360	717,299
Exports of goods and services	105,160	113,744	112,025	125,972	153,511	152,219
less Imports of goods and services	103,590	118,482	126,453	140,323	152,636	154,194
Statistical discrepancy (E)	0	0	0	0	0	649
Gross domestic product	529,886	561,229	591,592	629,212	672,232	715,973
Compensation of employees	257,968	268,912	287,086	302,312	322,049	337,381
Gross operating surplus	161,658	176,833	181,186	196,137	206,021	221,446
Gross mixed income	48,500	50,929	53,590	57,666	61,156	68,345
Total factor income	468,126	496,674	521,862	556,115	589,226	627,172
Taxes less subsidies on production and imports	61,760	64,555	69,730	73,094	83,005	88,193
Statistical discrepancy (I)	—	—	—	—	—	608
Gross domestic product	529,886	561,229	591,592	629,212	672,232	715,973
MEMORANDUM ITEM						
Average compensation per employee (14)	36,422	37,435	38,909	40,068	41,572	43,069

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

Explanatory Notes

The gross domestic product account is a consolidated summary account of all the production activity which takes place in Australia. It records the incomes generated in the production process and the value of final goods and services produced.

On the expenditure side the gross domestic product account records sales of goods and services (including goods produced for own use) to final domestic consumers, gross fixed capital formation, changes in inventories and exports minus imports.

The income side of the gross domestic product account shows compensation of employees (wages and salaries paid to employees for producing goods and services), gross operating surplus (the income of corporations, general government and dwellings owned by persons from production), gross mixed income (the income of unincorporated enterprises from production) and taxes less subsidies on production and imports paid to general government.

The gross domestic product account is analogous to accounts used in business accounting and is, in effect, a consolidation of the trading accounts of individual enterprises from all sectors.

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

Australian National Accounts: National Income, Expenditure and Product (5206.0)

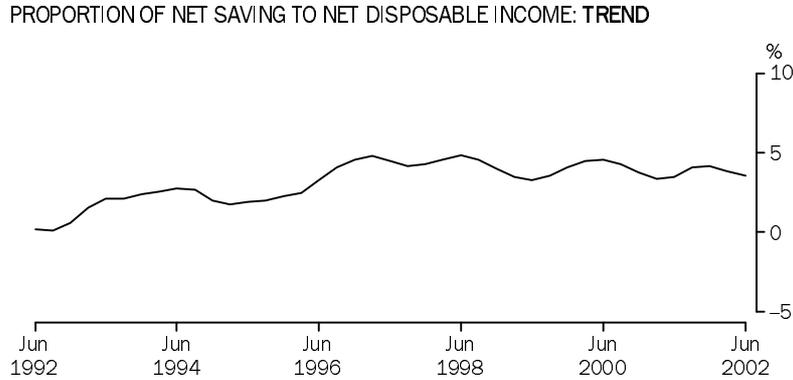
Provides a detailed presentation of quarterly national accounts for both current prices and chain volume measures in original, seasonally adjusted and trend terms.

Australian System of National Accounts (5204.0)

Contains a comprehensive range of annual national accounts data.

National Accounts - National Income Account

The ratio of national net saving to national net disposable income in quarterly trend terms is shown in the following graph. The ratio was particularly low during the recession in the early 1990s. In recent years it has been around 4%, and in the June quarter 2002 the ratio was 3.6%.



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Quarterly data.

NATIONAL INCOME ACCOUNT, Current Prices

	1996-97 \$m	1997-98 \$m	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m
Income						
Compensation of employees	257,968	268,912	287,086	302,312	322,049	337,381
Gross operating surplus	161,658	176,833	181,186	196,137	206,021	221,446
Gross mixed income	48,500	50,929	53,590	57,666	61,156	68,345
Taxes less subsidies on production and imports	61,760	64,555	69,730	73,094	83,005	88,193
Net primary income from non-residents	-19,151	-18,091	-18,430	-18,150	-19,077	-20,220
Gross national income	510,735	543,138	573,162	611,059	653,154	695,145
Net secondary income from non-residents						
Current taxes on income, wealth, etc	892	940	997	1,135	1,100	1,002
Other current transfers	-913	-918	-1,746	-917	-1,068	-1,019
Gross disposable income	510,714	543,160	572,413	611,277	653,186	695,128
Use of gross disposable income						
Final consumption expenditure						
General government	96,173	101,332	108,213	118,037	125,172	132,043
Households	314,565	335,101	354,951	374,713	402,615	427,451
Net saving (a)	19,599	20,567	17,933	20,865	21,107	24,078
Consumption of fixed capital	80,376	86,160	91,316	97,663	104,292	111,556
Total use of gross disposable income	510,714	543,160	572,413	611,277	653,186	695,128

(a) Net saving is derived as a balancing item

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

Explanatory Notes

The national income account shows the sources and distribution of incomes in the economy, and how much of the national income is spent on final consumption. The part of income which is not spent on final consumption is saving.

The national income account records compensation of employees, gross operating surplus, gross mixed income and taxes less subsidies on production and imports. Net payments of income and current transfers to overseas are deducted to give an estimate of gross disposable income.

Gross disposable income is used for final consumption expenditure, with the balance being the nation's gross saving - a source of finance for gross capital formation. Gross saving less consumption of fixed capital gives an estimate of net saving.

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

Australian National Accounts: National Income, Expenditure and Product (5206.0)

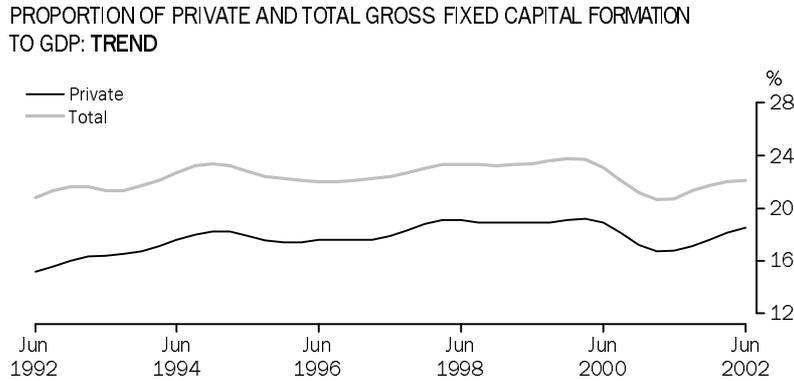
Contains quarterly data for the national income account as well as quarterly income accounts for the households and general government sectors.

Australian System of National Accounts (5204.0)

Contains annual data for the national income account as well as income accounts for each sector.

National Accounts - National Capital Account

Over the last ten years the proportion of private gross fixed capital formation (investment) to GDP in quarterly trend terms rose from 15.2% in June quarter 1992 to a high of 19.2% in March quarter 2000, and was 18.5% in the June quarter 2002. Changes in the proportion of total gross fixed capital formation to GDP largely reflect movements in private sector investment.



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Quarterly data.

NATIONAL CAPITAL ACCOUNT, Current Prices

	1996-97 \$m	1997-98 \$m	1998-99 \$m	1999-00 \$m	2000-01 \$m	2001-02 \$m
Net saving	19,599	20,567	17,933	20,865	21,107	24,078
Consumption of fixed capital	80,376	86,160	91,316	97,663	104,292	111,556
Capital transfers						
Receivable from non-residents	2,200	2,068	2,197	2,335	2,442	2,513
less Payable to non-residents	877	971	1,011	1,199	1,260	1,393
Gross saving and capital transfers	101,298	107,824	110,435	119,664	126,581	136,754
Gross fixed capital formation						
Private	95,038	108,724	112,828	123,899	115,875	128,503
Public corporations	9,525	8,014	11,468	9,276	9,418	11,862
General government	13,026	12,734	13,408	15,878	16,407	16,120
Total gross fixed capital formation	117,588	129,472	137,704	149,053	141,700	156,485
Changes in inventories						
Private non-farm (a)	2,402	-418	5,165	1,837	2,438	730
Farm	-55	176	-193	59	204	515
Public authorities	-2,357	304	180	-135	-768	75
Total changes in inventories	-10	62	5,152	1,760	1,873	1,320
Acquisitions less disposals of non-produced non-financial assets	6	-30	19	83	73	82
Statistical discrepancy (b)	—	—	—	—	—	41
Net lending to non-residents	-16,285	-21,680	-32,440	-31,230	-17,061	-21,174
Total capital accumulation and net lending	101,298	107,824	110,435	119,664	126,581	136,754

(a) Includes for all periods the privatised marketing authorities

(b) Statistical discrepancy (E) less statistical discrepancy (I).

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

Explanatory Notes

The national capital account records the saving and investment flows taking place in the economy. It shows how saving, consumption of fixed capital and capital transfers are used to finance the gross accumulation of capital formation.

If, as is typically the case in Australia, the nation's saving and consumption of fixed capital formation are not sufficient to pay for all its capital formation, the shortfall must be borrowed from overseas. The amount borrowed from overseas is shown in the national capital account as a negative entry for **net lending to non-residents**.

The national capital account shows, on the receipts side, consumption of fixed capital and net saving (transferred from the national income account) and capital transfers receivable less capital transfers payable to non-residents (transferred from the external account).

Shown on the payments side are new investment in fixed assets (such as equipment and buildings), changes in inventories, acquisitions less disposals of non-produced non-financial assets (such as mineral deposits and other sub-soil assets), a balance described as net lending to non-residents and a statistical discrepancy for years in which supply and use tables are not available.

In principle, the sum of net lending for all domestic sectors is equal to the nation's net lending to non-residents. However, in practice, net lending for each sector is derived as a balancing item and therefore includes each sector's share of the statistical discrepancy.

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

Australian National Accounts: National Income, Expenditure and Product (5206.0)

Contains quarterly data for the national capital account.

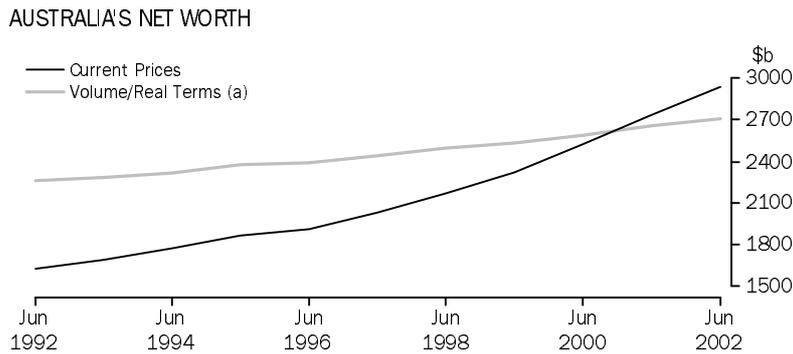
Australian System of National Accounts (5204.0)

Contains annual data for the national capital account as well as capital accounts for each sector.

National Accounts Balance Sheet

Except for the year ending June 1992, positive growth rates in Australia's net worth have been recorded in each year over the last decade. As at June 2002, net worth totalled \$2,934b. The average growth rate during the last 10 years was 6.1%. The graph below illustrates the rise of Australia's net worth from 1992 to 2002.

Australia's real net worth (i.e. after removing changes in prices) increased by 1.7% over the year ended 30 June 2002. The average annual growth of real net worth over the period 30 June 1992 to 30 June 2002 was 1.8%. In the latest year the real value of non-financial assets grew by 2.1% and the real value of liabilities fell by 0.3%, offset by a fall in the real value of financial assets (down 4.7%).



(a) Reference year for volume/real estimates is 2000-01

Source: Australian National Accounts: National Balance Sheet (5204.0), Annual data.

NATIONAL BALANCE SHEET, Current Prices: as at 30 June

	2000 \$b	2001 \$b	2002 \$b
Total assets	3,276.6	3,579.8	3,797.0
Non-financial assets	2,850.5	3,096.3	3,324.7
Produced assets	1,775.7	1,896.2	1,961.9
Fixed assets	1,669.0	1,787.2	1,853.1
Tangible fixed assets	1,648.9	1,764.0	1,828.5
Dwellings	590.7	677.7	713.3
Other buildings and structures	728.2	749.4	765.3
Machinery and equipment	315.9	321.9	335.0
Livestock - fixed assets	14.1	14.9	14.8
Intangible fixed assets	20.2	23.1	24.7
Computer software	19.6	22.5	24.0
Entertainment, literary or artistic originals	0.6	0.6	0.6
Inventories	106.7	109.0	108.8
Non-produced assets	1,074.8	1,200.1	1,362.8
Tangible non-produced assets	1,073.4	1,197.5	1,360.3
Land	906.5	991.4	1,107.8
Subsoil assets	162.7	199.7	245.7
Native standing timber	2.5	2.9	3.1
Spectrum	1.7	3.5	3.7
Intangible non-produced assets	1.4	2.7	2.5
Spectrum licences	1.4	2.7	2.5
Financial assets with the rest of the world	426.0	483.6	472.3
Liabilities to the rest of the world	752.5	844.6	862.8
Net worth	2,524.0	2,735.3	2,934.2

Source: Australian System of National Accounts (5204.0)

Chapter 2 - Summary Measures of Economic Activity

NATIONAL BALANCE SHEET, Volume/Real (a): as at 30 June

	2000	2001	2002
	\$b	\$b	\$b
Total assets	3,358	3,498	3,540
Non-financial assets	2,924	3,019	3,083
Produced assets	1,800	1,886	1,930
Fixed assets	1,693	1,775	1,820
Tangible fixed assets	1,673	1,752	1,793
Dwellings	655	672	694
Other buildings and structures	737	745	755
Machinery and equipment	310	320	331
Livestock - fixed assets	17	15	13
Intangible fixed assets	20	24	27
Computer software	19	23	26
Entertainment, literary or artistic originals	1	1	1
Inventories	108	111	110
Non-produced assets	1,123	1,133	1,153
Tangible non-produced assets	1,123	1,130	1,151
Land	944	941	954
Subsoil assets (b)	176	183	190
Native standing timber (b)	3	3	3
Spectrum	2	3	4
Intangible non-produced assets	1	3	3
Spectrum licences	1	3	3
Financial assets with the rest of the world	435	479	456
Liabilities to the rest of the world	768	836	834
Net worth	2,591	2,661	2,706

(a) The values for non-financial assets are derived as chain volume estimates, while the values for the remaining assets and liabilities are derived as real estimates. The reference year for all values is 2000–01.

(d) Experimental.

Source: Australian System of National Accounts (5204.0)

Explanatory Notes

Net worth is defined as the difference between total assets and total liabilities. It measures the economic wealth of a nation or of an institutional sector. The national balance sheet measures net worth as at 30 June each year and contains estimates of Australia's financial and non-financial assets as well as its liabilities to the rest of the world.

Net worth is calculated by subtracting liabilities from total assets. Changes in net worth are mainly due to saving or changes in the prices of assets. Non-financial assets include natural (non-produced) assets that are under the control of an economic agent, such as land, sub-soil assets and certain natural forests. Closely linked to the balance sheet are the accumulation and revaluation accounts which record the change in the value of assets and liabilities during an accounting period. They explain the changes in the balance sheet from one accounting period to the next.

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

Australian System of National Accounts (5204.0)

Contains the national balance sheet as well as balance sheets for each sector.

Government Financial Statistics

In 2000-01, the Government Financial Statistics (GFS) Net Operating Balance for the consolidated public sector for all Australian governments combined was \$10,983m and GFS Net Lending was \$6,496m.

The total public sector surplus for all Australian governments combined was \$10,132m. The main contributors to this result were net cash inflows from operating activities of \$31,774m being partly offset by net cash outflows from investments in non-financial assets of \$20,410m.

GFS net worth reflects the contribution of governments to the wealth of Australia. The consolidated net worth for all Australian governments combined, as at 30 June 2001, was \$331,784m.

Key GFS aggregates for the public sector for 2000-01 are provided in the following table:

Particulars	GOVERNMENT FINANCE STATISTICS				
	Commonwealth \$m	Multi-jurisdictional(a) \$m	State \$m	Local \$m	All Australian governments(b) \$m
OPERATING STATEMENT					
GFS Revenue	209,998	9,683	130,879	16,930	310,671
GFS Expenses	203,002	9,330	127,757	15,724	299,688
GFS Net Operating Balance	6,996	353	3,122	1,206	10,983
Net Acquisition of non-Financial Assets	-143	326	3,247	1,026	4,487
GFS Net Lending(+)/Borrowing(-)	7,140	27	-125	180	6,496
CASH FLOW STATEMENT					
Net cash flows from operating activities	10,807	1,001	15,840	3,970	31,774
Net cash flows from investments in non-financial assets	-3,322	-965	-12,301	-3,832	-20,410
Net cash flows from investments in financial assets for policy purposes	5,839	-2	2,004	16	7,311
Net cash flows from investments in financial assets for liquidity purposes	-12,447	-16	-4,643	-88	-17,537
Net cash flows from financing activities	-3,137	48	-3,796	-107	-6,283
Net Increase(+)/Decrease(-) in Cash Held	-2,260	66	-2,895	-42	-5,145
Surplus(+)/Deficit(-)(c)	6,269	34	3,532	131	10,132
BALANCE SHEET					
Assets	207,628	25,059	437,400	156,686	813,876
Liabilities	264,409	5,133	179,379	9,088	445,159
Shares and other contributed capital	36,940	-	-	40	36,932
GFS Net Worth	-93,722	19,926	258,022	147,558	331,784
Net debt(d)	37,972	-4,048	16,117	-903	49,137

(a) The multi-jurisdictional sector contains units where jurisdiction is shared between two or more governments, or classification of a unit to a jurisdiction is otherwise unclear. The main type of units currently falling into this category are the public universities.

(b) The sums of individual levels of government may not agree with total figures for all Australian governments due to transfers between levels of government.

(c) Equals Net cash flows from operating activities and investments in non-financial assets less Distributions paid less Acquisitions of assets under finance leases and similar arrangements.

(d) Equals deposits held, advances received, Reserve Bank notes on issue and borrowing less cash and deposits, advances paid, and investments, loans and placements.

Source: Government Finance Statistics, Australia, 2000-01 (5512.0).

Explanatory Notes

The system of GFS is designed to provide statistical information on public sector entities in Australia classified in a uniform and systematic way. GFS enables policy makers and other users to analyse the financial operations and the financial position of the public sector at either the level of a specific government, sector, or a particular set of transactions. The system is based on international standards set out in the System of National Accounts 1993 (SNA93) and the International Monetary Fund's A Manual of Government Finance Statistics.

The GFS conceptual framework is divided into a number of separate statements, each of which is designed to draw out analytical aggregates or balances of particular economic significance and which, taken together, provide for a thorough understanding of the financial positions of jurisdictions individually and collectively. These published statements are the Operating Statement, the Cash Flow Statement, and the Balance Sheet.

The **Operating Statement** presents details of transactions in GFS revenues, GFS expenses and the net acquisition of non-financial assets for an accounting period. GFS revenues are broadly defined as transactions that increase net worth and GFS expenses as transactions that decrease net worth. Net acquisition of non-financial assets equals gross fixed capital formation, less depreciation, plus changes in inventories and plus other transactions in non-financial assets. Two key GFS analytical balances in the operating statement are GFS Net Operating Balance (NOB) and GFS Net Lending(+)/Borrowing(-).

GFS NOB is the difference between GFS revenues and GFS expenses and a positive balance means that revenue exceeds expenses. It reflects the sustainability of government operations. GFS Net Lending(+)/Borrowing(-) represents the government's call on the financial sector and reflects the economic impact of government operations. It is equal to NOB minus the total net acquisition of non-financial assets. A positive result reflects a net lending position while a negative result reflects a net borrowing position.

The **Cash Flow Statement** identifies how cash is generated and applied in a single accounting period. 'Cash' means cash on hand (notes and coins held and deposits held at call with a bank or other financial institution) and cash equivalents (highly liquid investments which are readily convertible to cash on hand at the investor's option and overdrafts considered integral to the cash management function).

The Cash Flow Statement reflects a cash basis of recording (the other statements are on an accruals accounting basis) where the information has been derived indirectly from underlying accrued transactions and movements in balances. This, in effect, means that transactions are captured when cash is received or when cash payments are made. Cash transactions are specially identified because they allow the compilation of the cash-based Surplus(+)/Deficit(-) measure and because the management of cash is often considered an integral function of accrual accounting.

The Surplus(+)/Deficit(-) is a broad indicator of a sector's cash flow requirements. When it is positive (i.e. in surplus), it reflects the extent to which cash is available to government to either increase its financial assets or decrease its liabilities (assuming that no revaluations and other changes occur). When it is negative (i.e. in deficit), it is a measure of the extent to which government requires cash, either by running down its financial assets or by drawing on the cash reserves of the domestic economy, or from overseas borrowing.

The **Balance Sheet** is the statement of an entity's financial position at a specific point in time. It shows the entity's stock of assets, liabilities and GFS Net Worth. GFS Net Worth is an economic measure of 'wealth' calculated as assets less liabilities for the general government sector and as assets less liabilities less shares and other contributed capital for the public non-financial corporations and public financial corporations sectors.

Further Reading

Information Paper: Accruals-based Government Finance Statistics (5517.0)

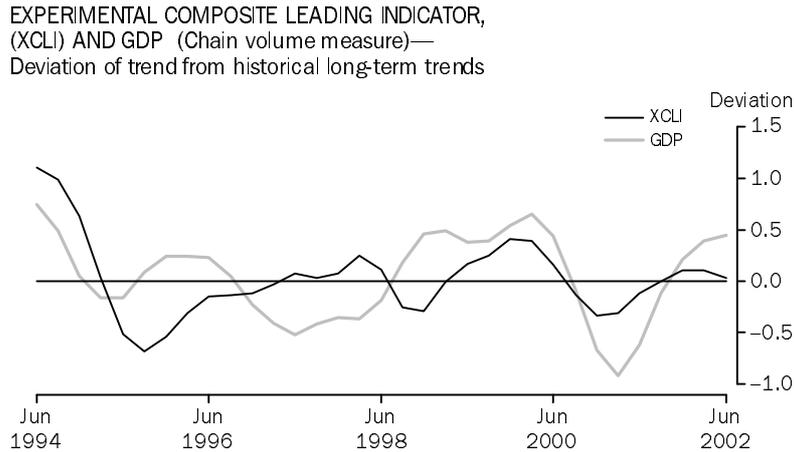
This ABS paper outlines the GFS conceptual framework (including the analytical balances), the format for GFS tables, and the relationship between GFS, accrual accounting and Australian System of National Accounts reports.

Government Finance Statistics, Australia (5512.0)

Contains final annual data on the financial transactions for the general government, public non-financial corporations, financial corporations and total public sectors of each level of government and consolidated statistics for total State, total State and local, and all Australian governments.

Experimental Composite Leading Indicator

The graph below shows the experimental composite leading indicator (XCLI) and GDP (chain volume measure) expressed as deviations from their historical long term trend. The XCLI recorded a trough in the December quarter 2000. The GDP business cycle recorded a trough in the March quarter 2001, one quarter after the trough in the XCLI . The XCLI rose by 0.10 in both the December quarter 2001 and the March quarter 2002 and declined 0.03 in the June quarter 2002, a turnaround of 0.07 from the previous quarter. This indicates a provisional peak in the XCLI in the December quarter 2001.



XCLI AND GDP CHAIN VOLUME MEASURE (REFERENCE YEAR - 2000-01)

	XCLI deviation from long term trend	XCLI change from previous quarter	GDP deviation from long term trend %	GDP change from previous quarter %
2000-2001				
September	-0.13	-0.29	-0.09	0.24
December	-0.34	-0.21	-0.67	0.17
March	-0.31	0.02	-0.92	0.50
June	-0.12	0.19	-0.62	1.04
2001-2002				
September	0.00	0.12	-0.11	1.25
December	0.10	0.10	0.21	1.02
March	0.10	0.00	0.39	0.84
June	0.03	-0.07	0.45	0.68

Source: Australian Economic Indicators (1350.0).

Explanatory Notes

The ABS Experimental Composite Leading Indicator (XCLI) is a single time series designed to provide early signals of turning points in the Australian business cycle. It does not predict the level of GDP or signal recessions or recoveries. Past performance of the XCLI shows it led turning points in the business cycle of GDP by around two quarters, but the lead time for the peaks and troughs can vary considerably.

The XCLI is a single time series produced by aggregating the business cycles in eight economic indicators, which had typically shown turning points ahead of the business cycle in GDP from the early 1970s to the early 1990s. These components provide a balanced coverage of several aspects of economic activity, which include monetary policy (real interest rate), an early measure of terms of trade (trade factor which is defined as the ratio of commodity prices to import prices), external demand (US real GDP), pressures on production capacity (job vacancies), internal demand (housing finance commitments), market confidence (the All Industrials Index), and entrepreneurs' expectations on business prospects and future production.

The expansion and contraction phases identified in a business cycle are periods of rise and fall in economic activity relative to the historical long-term trend. The reference or target series for the XCLI is the chain volume measure of the GDP business cycle used by most decision makers in Australia.

Further Reading

Australian Economic Indicators (1350.0)

The Experimental Composite Leading Indicator is released every quarter and is published in Australian Economic Indicators. It is also released electronically under catalogue number. 1350.0.65.001.

Information Paper: An Experimental Composite Leading Indicator of the Australian Economic Activity (1347.0)

This information paper describes the nature and construction of the experimental composite leading indicator of Australian economic activity.

Input-Output Tables

Input-output tables describe the supply and disposition of the products of an entire economic system for a particular period. Tables may be compiled for industries or commodities. The ABS publishes industry by industry tables. A *row* in the table shows the disposition of the **output** of an industry and a **column** shows the origin of the **inputs** into an industry. Since the output of an industry must be equal to the sum of its inputs (including gross operating surplus and gross mixed income), the row total for an industry must be equal to the corresponding column total. They are two sides of an accounting statement. This is illustrated in the table and the diagram below, which show the flows of goods and services in respect of 1996-97.

The links between the table and the diagram are explained by working through the following formulae:

Total intermediate use (\$482,483m) in the diagram is derived by summing from column 8 of the table: Intermediate use (\$412,134m); Taxes on products, net (\$13,378m); competing imports (\$56,890m); and complementary imports (\$81m).

Domestic final use (\$530,600m) in the diagram is derived from the table by subtracting total exports (\$105,160m) column 12, from total final uses (\$635,760m), column 13.

Imports (\$103,590m) is derived by summing from column 14 of the table: competing imports (\$103,257m); and complementary imports (\$333m). In the diagram it is dissected into imports for intermediate uses (\$56,971m); and imports for final uses (\$46,619m).

Exports (\$105,160m) in the diagram is total exports, column 12 in the table.

Total use (\$1,118,243m) which equals total supply, is the sum of domestic final use (\$530,600m); total intermediate use (\$482,483m); and exports (\$105,160m).

Gross value added (\$493,377m) in the diagram is derived by summing from column 14 of the table: compensation of employees (\$257,193m); gross operating surplus and mixed income (\$213,534m); and other taxes on production (net) (\$22,650m).

Gross Domestic Product (income measure) (\$532,170m) in the diagram is derived by summing from column 14 of the table: compensation of employees (\$257,193m); gross operating surplus and mixed income (\$213,534m); taxes on products (net) (\$38,793m); and other taxes on production (net) (\$22,650m).

Gross domestic product (Expenditure measure) (\$532,170m) in the diagram is derived by summing domestic final use (\$530,600m); and exports (\$105,160m); and subtracting imports (\$103,590m).

Chapter 2 - Summary Measures of Economic Activity

29.21 INDUSTRY BY INDUSTRY FLOW TABLE, Basic values - 1996-97

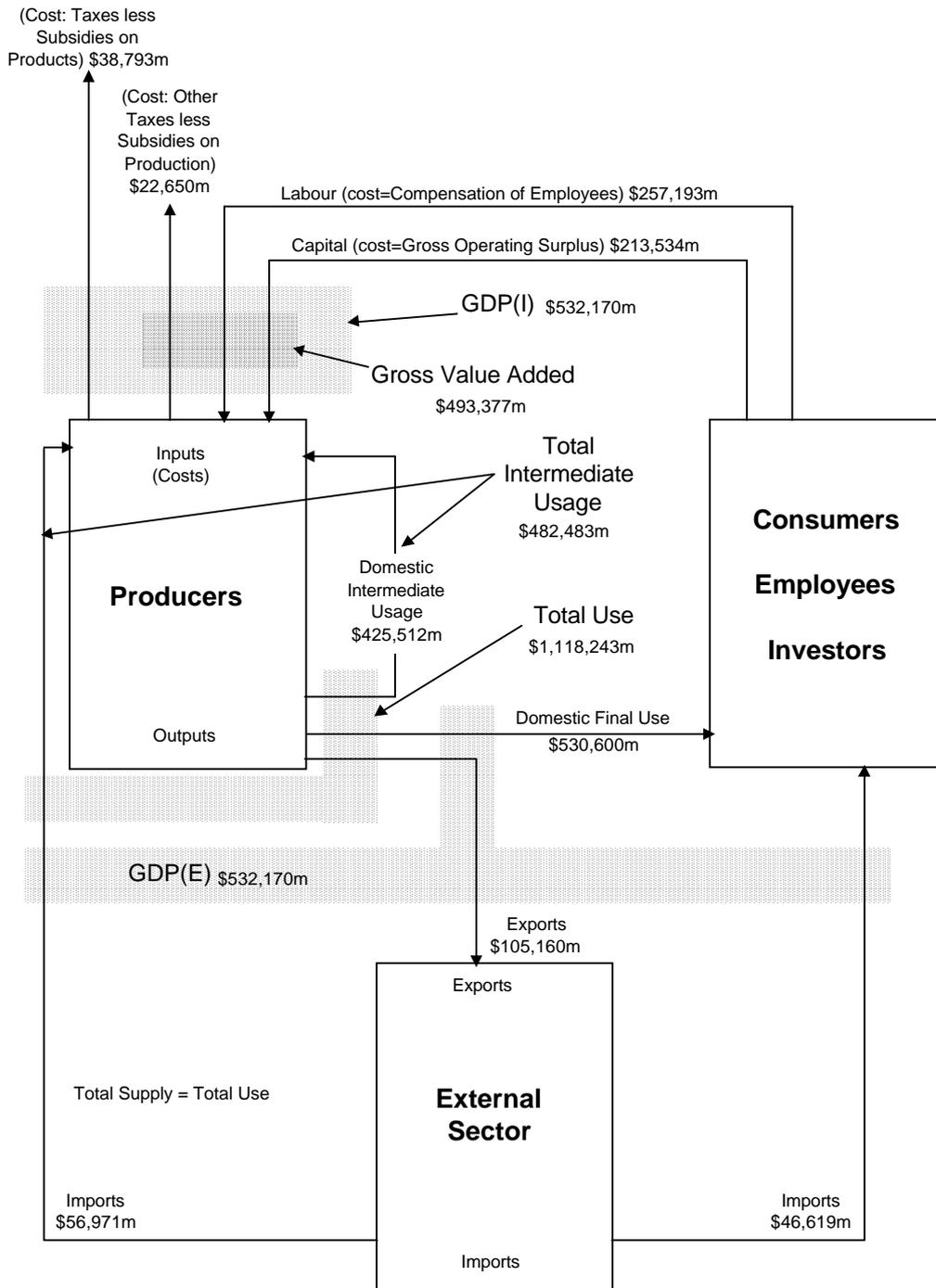
	1	2	3	4	5	6	7
	Agriculture	Mining	Manufacturing	Construction	Trade and transport	Service industries	Government admin. and defence
Supply	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Agriculture	4,071	16	13,710	123	283	1,304	52
Mining	42	3,851	9,719	651	238	2,897	96
Manufacturing	4,369	4,043	49,326	16,658	16,182	20,627	3,497
Construction	177	224	48	70	439	1,948	675
Trade and transportation	2,819	3,020	21,356	4,084	18,559	15,873	1,818
Service industries	3,192	4,991	22,429	7,994	45,697	91,487	7,637
Government admin. and defence	53	226	578	120	1,260	1,100	2,505
Intermediate use	14,722	16,371	117,166	29,699	82,658	135,237	16,280
Compensation of employees	3,967	5,887	36,147	13,812	51,263	127,132	18,985
Gross operating surplus and gross mixed income	12,699	16,788	27,262	15,351	19,715	118,860	2,859
Taxes on products (net)	464	207	1,752	715	4,347	5,643	250
Other taxes on production (net)	588	499	2,505	700	4,053	11,054	29
Competing imports	1,641	2,015	28,646	3,406	5,793	13,548	1,842
Complementary imports	-	-	81	-	-	-	-
Australian production	34,081	41,767	213,558	63,683	167,829	411,474	40,245

	8	9	10	11	12	13	14
	Intermediate usage = Sum (1 to 7) \$m	Final consumption expenditure \$m	Gross fixed capital formation \$m	Changes in inventories \$m	Exports \$m	Final uses = Sum (9 to 12) \$m	Total supply = Sum (8+13) \$m
Agriculture	19,560	4,719	1,024	369	8,409	14,522	34,081
Mining	17,493	598	2,268	-2,428	23,835	24,274	41,767
Manufacturing	114,702	47,087	14,046	-495	38,219	98,856	213,558
Construction	3,581	2,964	57,048	-5	96	60,102	63,683
Trade and transportation	67,530	70,463	11,901	40	17,896	100,299	167,829
Service industries	183,427	207,096	9,399	67	11,484	228,047	411,474
Government admin. and defence	5,842	33,847	405	-	151	34,403	40,245
Intermediate use	412,134	366,774	96,091	-2,452	100,090	560,503	972,637
Compensation of employees	257,193	-	-	-	-	-	257,193
Gross operating surplus and gross mixed income	213,534	-	-	-	-	-	213,534
Taxes on products (net)	13,378	20,262	3,352	158	1,643	25,415	38,793
Other taxes on production (net)	19,428	-	3,222	-	-	3,222	22,650
Competing imports	56,890	24,314	17,303	1,323	3,427	46,367	103,257
Complementary imports	81	111	151	-9	-	252	333

Australian production	972,637	411,461	120,119	-980	105,160	635,760	1,608,397
Gross value added	490,155	-	3,222	-	-	3,222	493,377
Gross domestic product	532,170

Source: Derived from Australian National Accounts: Input-Output Tables, 1996-97 (5209.0).

29.22 THE AUSTRALIAN ECONOMY, Flow of goods and services - 1996-97



Explanatory Notes

Input-output tables show the structure of a country's entire production system for a particular period, usually one year. They show which goods and services are produced by each industry and how they are used (e.g. some goods, such as cars, are sold to final consumers while others, such as steel, are used as inputs by other industries in producing more goods and services). The tables are based on the principle that the value of the output of each industry can be expressed as the sum of the values of all the inputs to that industry plus any profits made from production plus any taxes on production paid less any subsidies received. All the goods and services produced in a period are identified as being used as inputs by industries in their production process, being sold to final users of the goods and services (either in Australia, or overseas as exports), or contributing to the changes in inventories (an increase in inventories if more goods are produced than purchased or a run-down in inventories if purchases exceed production). For the production system as a whole, the sum of all outputs must equal the sum of all inputs and, for the economy as a whole, total supply must equal total use (inventories provide the mechanism which balances supply and use).

Input-output tables are directly related to the gross domestic product account. The income side of the gross domestic product account shows the amount of income generated in the economy accruing to labour (in the form of compensation of employees) and to capital (as profits, or in national accounting terms, gross operating surplus and gross mixed income - the latter including some return to owners of businesses for their labour). The expenditure side shows the value of goods and services entering into the various categories of final uses.

The I-O tables provide a much more detailed disaggregation of the gross domestic product account than is available in the national income, expenditure and product accounts. The latter only shows details of the end results of economic activity, whereas the input-output tables show the flows of goods and services through the production process. The extra detail provided by the input-output tables is essential for many analyses.

A form of input-output tables called **supply and use** tables are used to benchmark the gross domestic product account in the national accounts. They have been produced by the ABS since 1994-95, but are not published separately.

Input-output tables are used by analysts who require a detailed understanding of the economy and/or an understanding of the relationships between the various parts of the economy. They are used extensively in economic modelling.

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

Australian National Accounts: Input-Output Tables (5209.0)

Contains detailed input-output statistics, including industry by industry flow matrices, requirement coefficient matrices, and multipliers.

Australian National Accounts: Input-Output Tables (Product Details) (5215.0)

Shows the value of Australian production, imports and exports for over 1,000 commodities classified to the industry from which each originates, such as agriculture, manufacturing, business services and personal services.

Information Paper: Australian National Accounts: Introduction to Input-Output Multipliers (5246.0)

Contains information about the compilation and interpretation of input-output multipliers.

Environmental Accounts

Environmental accounts depict physical and/or financial information on natural resources that can then be linked to economic data like Australia's National Accounts. The advantage of environmental accounting is the capacity to link physical and monetary data in a consistent framework. Environmental accounts can be used to measure the impact on the environment of different sectors of the economy, as well as the environment and resource implications of structural changes in the economy. Australia's environmental accounts have been compiled according to the guidelines in the United Nation's **System of Integrated Environmental and Economic Accounting**, which is a complement to the SNA93.

The core components of a physical environmental account are the stock and flow tables. Ideally a stock table will present estimates of the total stock of a resource available for extraction or harvest. The flow accounts comprise physical input-output tables (or supply and use tables), which show the flow of products in physical terms through the economy. The supply table shows the total amount of product (domestic production plus imports), in quantity terms, available for use by industry or final demand. The use table presents estimates of the distribution of supply across industries, as intermediate consumption or for export and final consumption. Physical input-output tables can be explicitly linked to the monetary input-output tables (see chapter 2.9 for more information on input-output tables).

As part of its environmental accounting program the ABS has produced a number of physical accounts, including energy, greenhouse gases, minerals, fish and water, as well as a series of publications presenting information on financial transactions relating to environmental management - **Environment Protection Expenditure, Australia** (4603.0). In addition, the National Balance Sheet includes details of four environmental assets, namely: subsoil assets (e.g. minerals, oil, and gas); native standing timber, plantation timber and land. The environmental assets on the National Balance Sheet, Energy and Greenhouse Gas Emission Accounts and the Water Account are looked at in more detail below.

Environmental Assets on the National Balance Sheet

The total value of environmental assets was over one thousand billion dollars at 30 June 2001 (see table below). Around 86% or \$908 b was the value of land. It is important to note that the value of these assets is based on calculations that only attempt to estimate the economic value of these assets. No attempt is made to estimate economic value of environmental assets in terms of their aesthetic appeal, heritage or existence values. This is because these values fall outside of the scope of the SNA93 asset boundaries. In addition, there is no agreed standard for estimating these values and the methods that do exist are largely experimental.

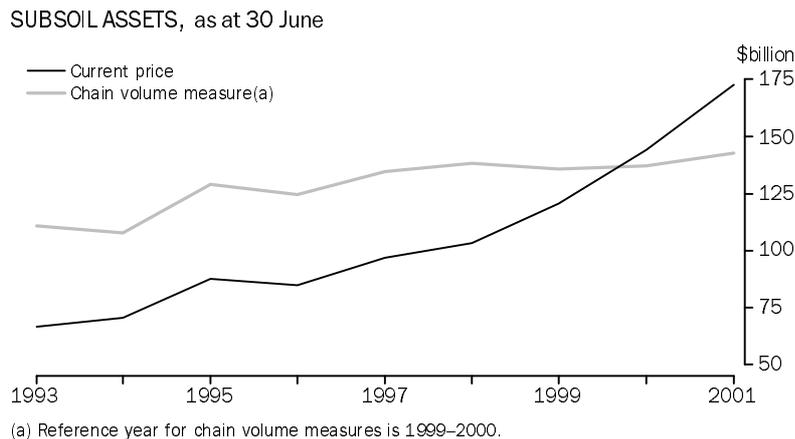
AUSTRALIA'S ENVIRONMENTAL ASSETS, Chain volume measures(a) - As at 30 June

	1993	1994	1995	1996	1997	1998	1999	2000	2001
	\$b	\$b	\$b						
Land	781	805	824	805	824	839	860	886	908
Subsoil assets	110	108	129	124	135	139	136	137	143
Native standing timber	3	3	3	3	3	3	2	2	2
Plantation standing timber	6	7	7	7	7	8	8	8	8
Total assets	900	922	963	939	969	988	1,006	1,034	1,061

(a) Reference year for chain volume measures is 1999-2000.

Source: National Income, Expenditure and Product, Australian National Accounts (5206.0), June 2002.

The National Balance Sheet also includes more detail on these environmental assets (see **Australian National Accounts, National Balance Sheet 5241.0.40.001**). For example, the value of land is presented for each state and territory, with residential, commercial and rural land separately valued. At 30 June 2000, rural land accounted for around 12% of total land values. Detail on the volume and value of subsoil stocks and production is also presented. This enables estimates of resource life to be calculated. That is, given the current stock and annual production of subsoil assets, how long will it be before we run out of particular resources. What is particularly interesting about minerals is that while they are a finite resource, over the past 8 years the amount of minerals found has exceeded the rate at which minerals have been mined. This is seen in the figure below which shows a steadily increasing volume of subsoil assets.



More information can be found in the June 2002 edition of **National Income, Expenditure and Production** (5206.0) which contained a feature article titled "Accounting for the Environment in the National Accounts".

Energy and Greenhouse Emissions Accounts

Energy is a vital input to all sectors of the economy. Many industries are highly dependent on the supply and use of energy in its various forms to operate effectively. Society, in general, is afforded an increased standard of living with the utilisation of energy resources. Energy production and consumption is also a major source of human-generated greenhouse gases, with fossil fuel production and use responsible for about three-quarters of man-made (that is, anthropogenic) carbon dioxide emissions (the main greenhouse gas). Emissions related to energy use can also contribute to local and regional atmospheric pollution problems.

Australia, as a nation, is highly dependent on energy resources. Australia's energy production and use are a reflection of the abundance of the nation's fossil fuel and mineral energy resources. Measurements of the supply and use of energy in Australia need to account for the processes that convert primary energy sources (eg coal) into secondary energy products (eg electricity), so as to avoid double-counting the amount of converted primary energy. In addition the conversion process themselves result in energy losses. For example, of the 4,824 petajoules (PJ) available for domestic consumption in 1996-97, about 30% (1,442 PJ) of this was lost in the conversion of primary energy products to secondary energy products. The bulk of this loss was due to the generation of electricity from coal.

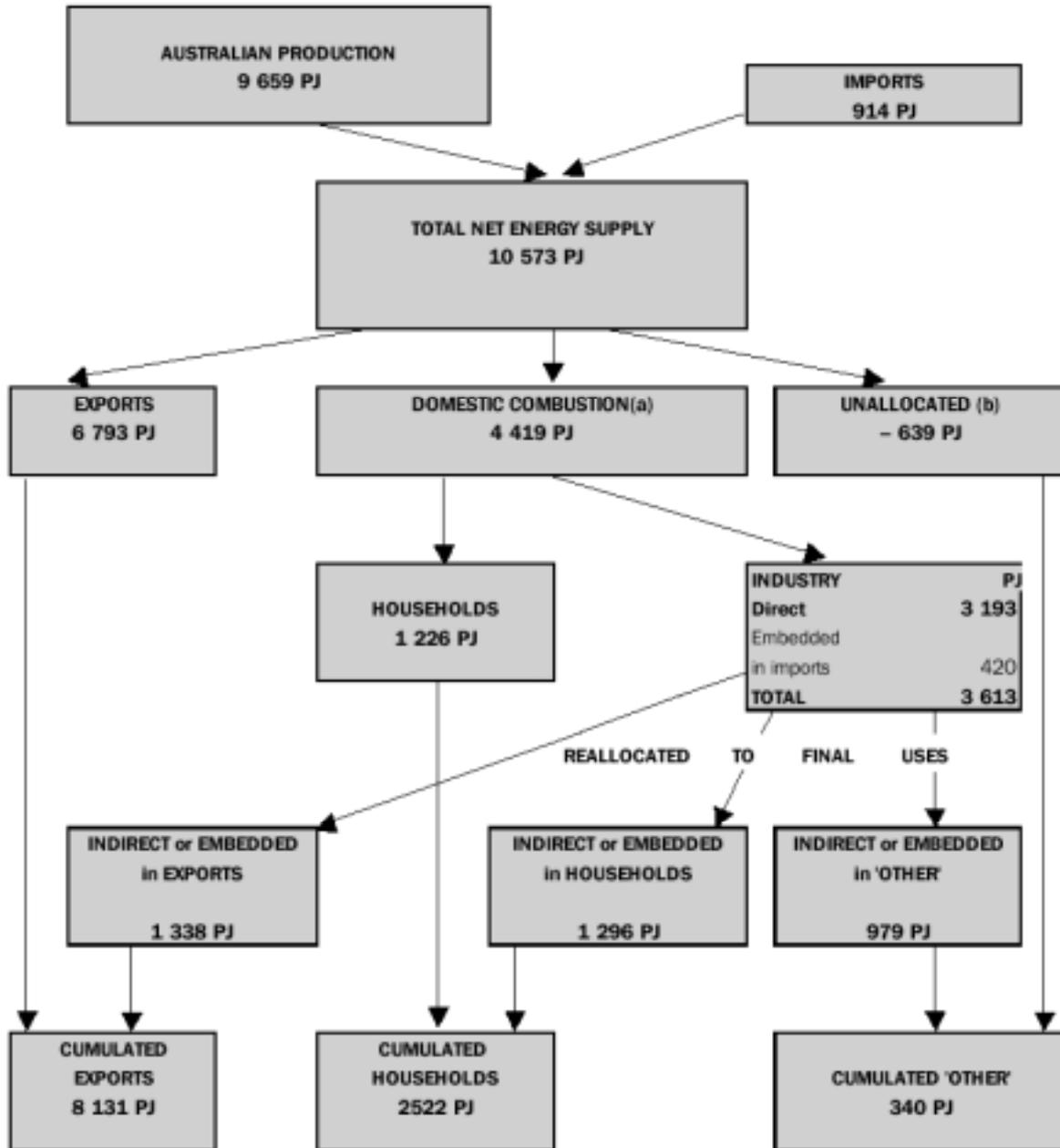
In 1997-98, Australia's coal, oil, gas and uranium reserves totalled over 2 million PJ, worth around \$76 billion. Most of Australia's total energy supply is exported (8,853 PJ or more than 66% in 1997-98), the bulk of which is unrefined materials in the form of coal and uranium concentrates. These make up around 85% of total energy exports, and contributed to over \$13b, or around 15%, to total exports in 1997-98.

Chapter 2 - Summary Measures of Economic Activity

In 1996-97 total available energy (the amount of energy available after conversion losses and exports) was 3,382 PJ. The manufacturing industry used about 35% or 1,191 PJ of this and direct household consumption was 27% or 918 PJ. For household consumption, automotive petrol and electricity were the major forms of energy used. The transport industry, which excludes road transport activity of households and other industries, used a further 13%, with mining, construction and all other service industries combined consuming the remaining 25%. Overwhelmingly, domestic fuel use is dominated by the fossil fuels coal, oil and gas, and their derivatives. Renewable energy, comprising bagasse (sugar cane trash), firewood, solar energy and hydro-electricity, accounted for about 6% of the domestically available energy.

While the manufacturing and other industries directly used a total of 2464 PJ or 72% of total available energy, much of this energy use was induced by household consumption. That is, the goods and services produced by these industries were ultimately used by households. For example, the manufacturing industry uses energy to produce cars, which are purchased by households. Attributing energy use to final users, such as households, rather than direct users of energy is another use of environmental accounts. Modelling by the ABS was used to allocate energy use to final users for the year 1994-95. The diagram below looks at the amount of energy used directly and indirectly by the final users of the goods and services.

TOTAL ENERGY SUPPLY AND USE, Allocated to Final Users - - 1994-95



(a) Use by industry and households.

(b) Changes in stocks and statistical discrepancies.

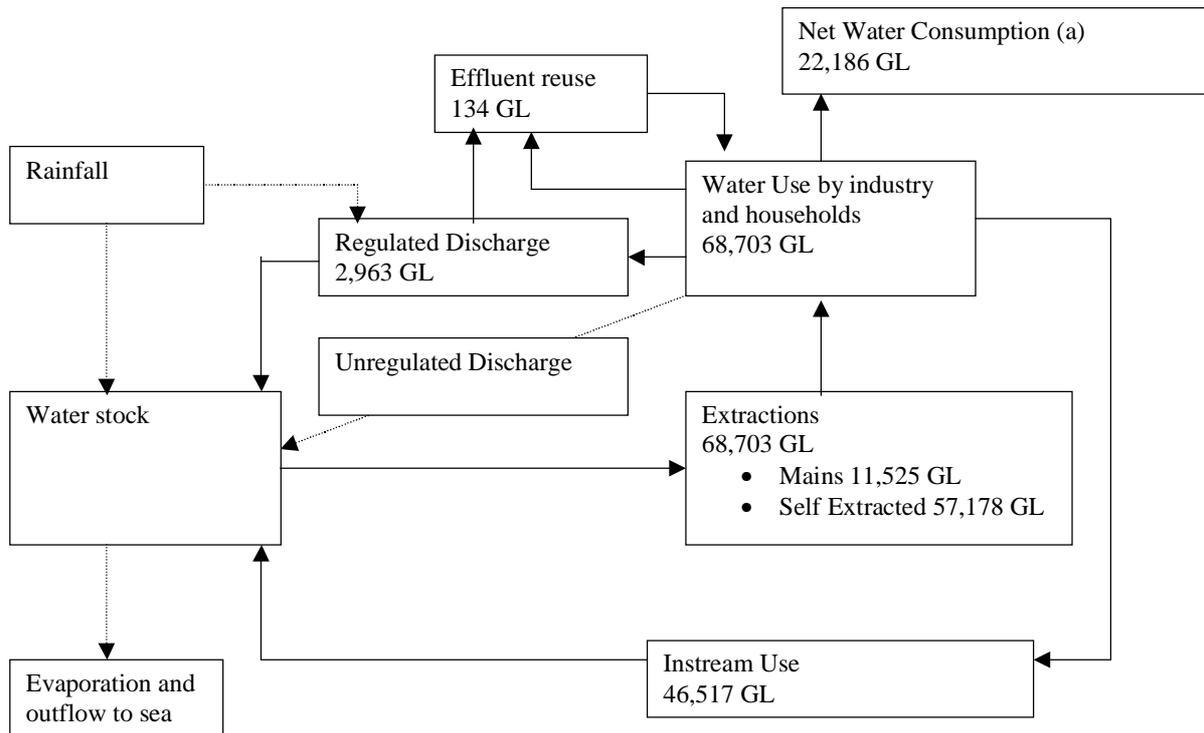
Note: Conversion losses have been allocated to the using sector.

In 1994-95 the domestic combustion of energy (or total available energy) was 4,419 PJ. Households directly used 1,226 PJ of energy but indirectly used 1,296 PJ in the consumption of goods and services. The direct and indirect uses of energy by households together accounted for over half of the total energy used domestically (53%) in 1994-95. Goods and services produced for export made up a further 29%; gross capital formation induced 11% (e.g. energy embodied in buildings, road, rail, pipeline infrastructure etc.); and government final consumption (mainly government administration and the provision of services such as education, health and community services) directly and indirectly used the remaining 7% of domestic energy. These figures include energy lost in the conversion process.

Water Account

The figure below shows the passage of water through the economy. In Australia in 1996-97 an estimated 68,703 gigitalitres (GL) of surface and groundwater was extracted from the environment, of which 11,525 GL was distributed via the mains water supply network (including irrigation). The remainder (57,178 GL) was extracted directly from the environment by private diverters/users. Most of this amount was used in-stream - primarily by hydro-electric power stations (46,517 GL). Net water consumption, which is equal to extractions less the instream use of water by hydro-electric power stations, was estimated at 22,186 GL.

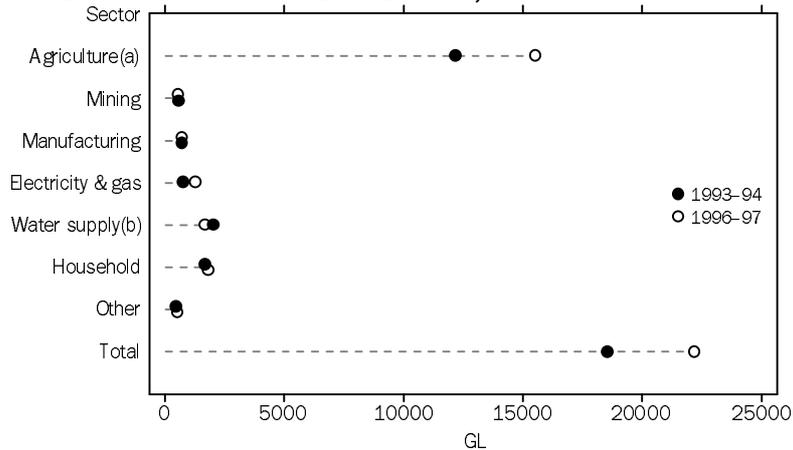
WATER SUPPLY AND CONSUMPTION (Gigitalitres GL), Australia - 1996-97



Activity

Water is consumed by a range of industries and households. Net water consumption for the years 1993-94 and 1996-97 is shown in the figure below. Households consumed the second largest amount of water: 1,829 GL or 8% of water in 1996-97, with little change from 1993-94. The largest consumer of water was the agricultural sector, totalling 15,502 GL and 70% of net water use in Australia in 1996-97. This represented a significant increase of 3,434 GL or 28% from 1993-94. This is partly due to an increase in the area of irrigated land, but it is important to note that variations in weather also plays a large part. Water use by the agriculture sector is influenced by rainfall which varies between years. In general less water is consumed during wetter years. For example, 1993-94 was a wet year with record levels of rainfall in south-east Australia during September and October 1993, while 1996-97 was a drier year (although not a drought year), with a strong El Nino influence from March 1997.

NET WATER CONSUMPTION BY SECTOR, 1993-96 and 1996-97



Source: Water Account for Australia (4610.0).

Further Reading

Water Account for Australia (4610.0).

Provides detailed statistics on the volume of surface and ground water assets (stocks), the supply and use of water by various industries and sectors, water re-use and discharge. Monetary data linked to the use of water resources and a compilation of water supply and use sustainability indicators are also provided.

Energy and Greenhouse Gas Accounts, Australia (4604.0)

Provides information on stocks, supply, production and consumption of energy in Australia, as well as associated greenhouse gas emissions. Experimental estimates integrating physical and monetary input-output tables are presented in the most recent edition.

Environment Protection Expenditure, Australia (4603.0)

Presents estimates of expenditure on environment protection by Australian governments, businesses and households.

Australian System of National Accounts (5204.0) and Australian National Accounts, National Balance Sheet (5241.0.40.001)

Provides information on the stocks of economic environmental assets, including land, sub-soil and timber assets.

National Income, Expenditure and Production (5206.0) June 2002 edition

The June 2002 edition of this publication contains a feature article titled "Accounting for the Environment in the National Accounts" which provides information on the value of land, native standing timber, plantation timber and subsoil assets.

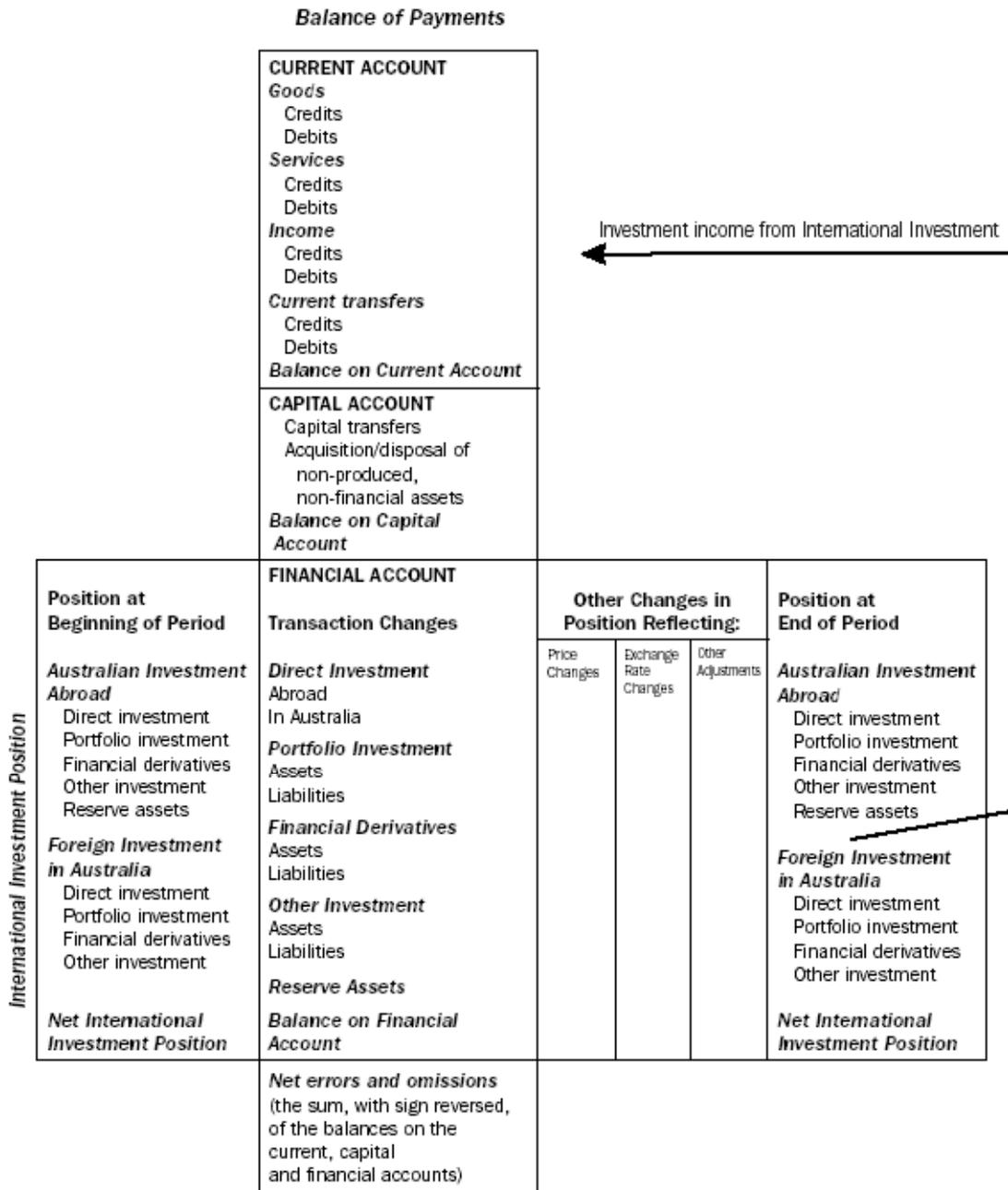
CHAPTER 3

INTERNATIONAL ACCOUNTS AND TRADE

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Balance of Payments and International Investment Position

RELATIONSHIP BETWEEN THE BALANCE OF PAYMENTS AND INTERNATIONAL INVESTMENT POSITION STATEMENTS



Source: Balance of Payments and International Investment Position, Australia, Concepts, Sources and Methods (5331.0)

Explanatory Notes

Australia's international accounts cover the closely related and integrated balance of payments and international investment position statistics. They are compiled in accordance with the fifth edition of the International Monetary Fund's **Balance of Payments Manual**.

Australia's balance of payments provides a statistical statement that systematically summarises the economic transactions between residents of Australia and residents of other countries.

Transactions cover the provision (changes in ownership) of goods, services, income, and financial claims on, and liabilities to, the rest of the world. Most transactions are exchanges where tangible resources are provided in exchange for financial claims. For example, wheat is exchanged for foreign currency. The system reflects the double entry of these offsetting transactions. However, not all transactions are exchanges, so the system also includes offset entries which are classified as transfers, such as gifts. Transfer entries offset the provision of real and financial resources when nothing is provided in exchange.

Australia's international investment position provides statistics showing the stock of foreign financial assets and liabilities of Australian residents. Changes in the balance sheet positions can occur as a result of transactions as recorded in the financial account of the balance of payments, and non-transaction changes such as price changes and exchange rate variations.

Further Reading

Balance of Payments and International Investment Position, Australia: Concepts, Sources and Methods (5331.0)

Provides a comprehensive description of the concepts, sources and methods for Australia's balance of payments and international investment position statistics.

A Guide to Australian Balance of Payments and International Investment Position Statistics (5362.0.55.001)

Provides a simple summary of the concepts behind the statistics, and briefly describes the source data used in the compilation of the accounts.

International Merchandise Trade, Australia: Concepts, Sources and Methods (5489.0)

Describes how the data, sourced from the Australian Customs Service, are used to compile detailed information by commodity on Australia's trade in goods with other countries.

Balance of Payments Manual, 5th edition, 1993.

This contains the international standards issued by the International Monetary Fund for the compilation of balance of payments and international investment position statistics.

Balance of Payments and International Investment Position, Australia (5302.0)

Presents detailed information on balance of payments and international investment, as well as detailed quarterly data on imports and exports of goods and services in original and seasonally adjusted terms at current price estimates and chain volume measures.

International Merchandise Imports, Australia (5439.0)

Provides total imports (merchandise trade basis) for the reference month only, together with commodity aggregates at the one digit level of the Standard International Trade Classification (Revision 3).

International Merchandise Trade, Australia (5422.0)

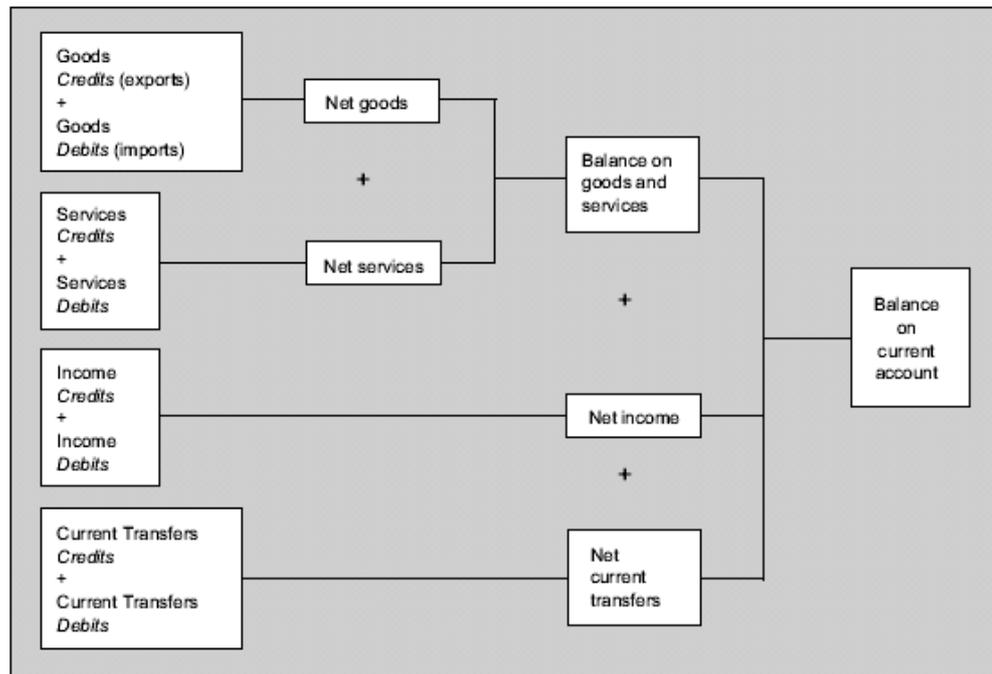
Provides quarterly information on the value of imports and exports of goods with selected countries and country groups. Details of imports and exports by commodity, state, industry and Broad Economic Categories are included. Historical data for the latest 12 years are also shown.

International Trade in Goods and Services, Australia (5368.0)

Provides monthly major aggregates for, and the balance on, international trade in goods and services in original, seasonally adjusted and trend estimates terms.

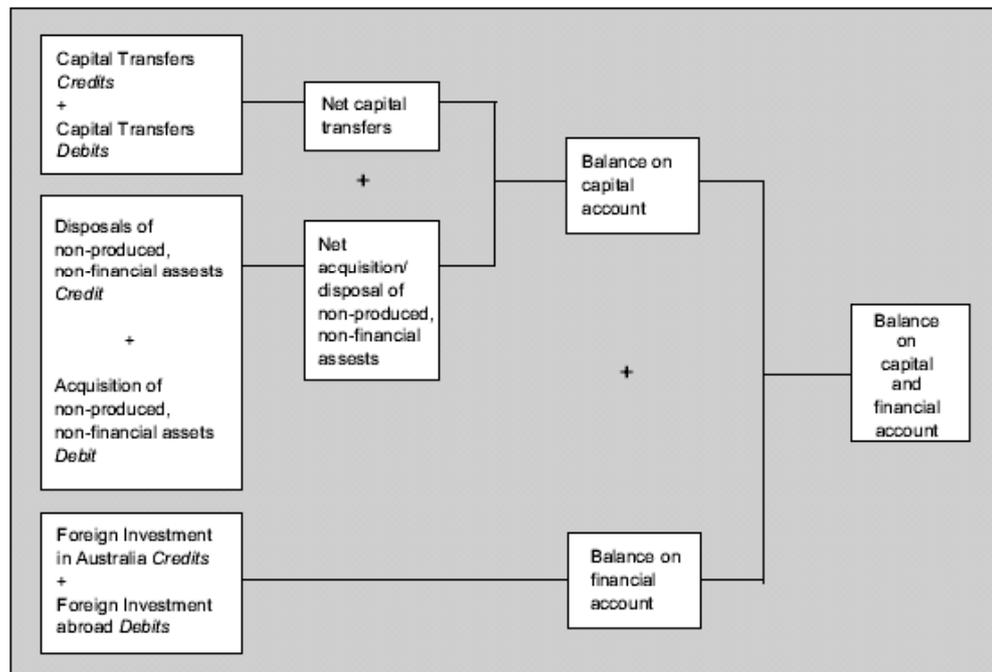
Balance of Payments

CURRENT ACCOUNT



Note: Debit entries are shown with a minus sign.

CAPITAL AND FINANCIAL ACCOUNT



Note: Debit entries are shown with a minus sign.

Explanatory Notes

Australia's economic transactions with the rest of the world are entered in a set of double entry accounts which make up the balance of payments. It is the use of the double entry system that enables **balances** to be derived, but the balance of payments cannot be summarised in just a single balance.

The **current account** measures exports and imports of **goods and services**, Australia's **income** earned by and from the rest of the world and **current transfers** (counterpart in the double entry system for one-sided transactions that are of a non-capital nature).

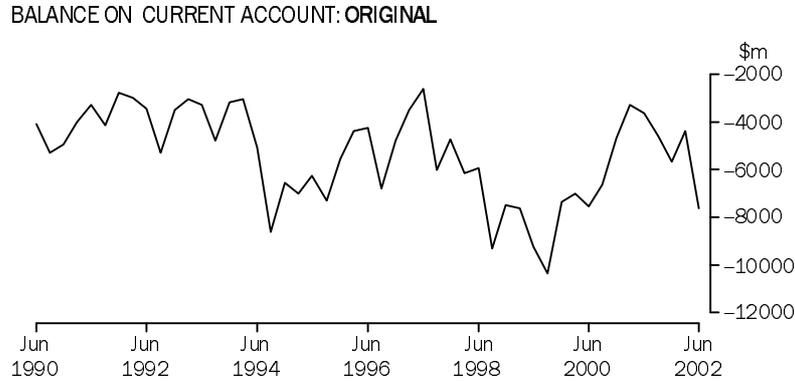
The **capital account** records **capital transfers** (such as migrants' transfers and debt forgiveness) and the **acquisition/disposal of non-produced, non-financial assets** (such as sales of embassy land or copyrights) between residents and non-residents.

The **financial account** records transactions in **financial assets and liabilities** (such as shares, bonds and loans) between residents and non-residents.

In principle, the deficit (or surplus) on the current account should be matched by a surplus (or deficit) on the capital and financial account. In practice, this is not the case. The balances on the capital and financial account and the current account are reconciled by the item **net errors and omissions**. This is the sum of net errors (transactions not measured accurately) and omissions (transactions not measured at all).

Balance of Payments - Current Account

Australia's **balance on current account**, recorded a deficit of \$7,594m (original terms) in the June quarter 2002. For the period since the June quarter 1990, the highest deficit recorded was in the September quarter 1999, \$10,371m. The current account deficit for 2001-02 was \$22,212m.



Source: *Balance of Payments and International Investment Position, Australia (5302.0)*, Quarterly data.

BALANCE OF PAYMENTS, CURRENT ACCOUNT

Period	Balance on current account \$m
ANNUAL	
1996-1997	-17,602
1997-1998	-22,807
1998-1999	-33,607
1999-2000	-32,283
2000-2001	-18,170
2001-2002	-22,212
QUARTERLY	
2000-2001	
March	-3,273
June	-3,613
2001-2002	
September	-4,581
December	-5,659
March	-4,378
June	-7,594

Source: *Balance of Payments and International Investment Position, Australia (5302.0)*.

Australia has had a current account deficit in most years. This indicates that the nation as a whole has been investing more overseas than is available from its saving. To fund this shortfall, Australia has had to acquire finance and other capital from non-residents. These capital and financial inflows are measured in the **capital and financial account** of the balance of payments. The balance on the capital and financial account in a period is, in principle, equal and offsetting to the deficit on the current account of the balance of payments in that period.

The continued financial account surpluses have contributed to increases in Australia's net foreign equity liabilities and net foreign debt liabilities. Interest accruing on the net debt is the major cause of Australia's large net income deficits, which represent a substantial component of Australia's current account deficits.

Explanatory Notes

The balance on current account is the sum of the balances on goods trade, services trade, income and current transfers. The balances are derived by summing credit entries, which are shown without sign, and debit entries, which have a negative sign. If the sum of the balances is negative, a nation has a current account deficit, otherwise a nation has a current account surplus.

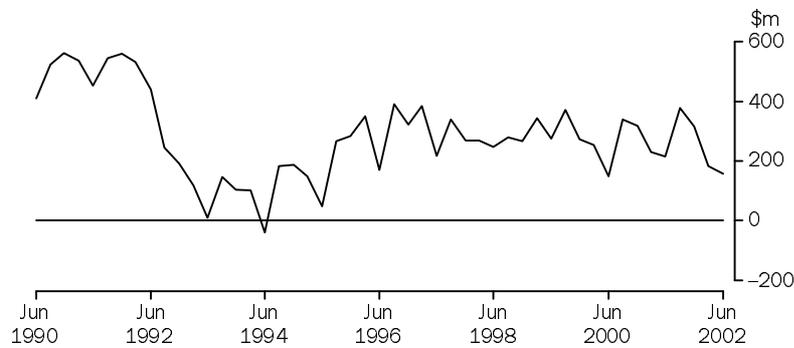
The balance on current account consists of:

- **Balance on goods and services:** the difference between the total credit (export) value and the total debit (import) value of goods and services. Within the balance on goods and services there is a net services balance and a net goods balance;
- **Net income:** the difference between the value of income, such as dividends and interest, earned by residents from non-residents (credits) and that earned by non-residents from residents (debits); and
- **Net current transfers:** the difference between current transfer credits and debits. A current transfer is recorded when real or financial resources of a non-capital nature are provided without something of economic value being received in return. For example, Australia's foreign aid abroad supplies the rest of the world with goods or cash and requires an offsetting debit transfer entry while pensions received by residents from foreign governments provides Australia with cash and requires a credit entry transfer.

Balance of Payments - Capital Account

The **balance on capital account**, in original terms, usually records a surplus, largely the result of Australia's net migration. During the period 1996-97 to 2001-2002, the annual surpluses were in the range \$1,038m to \$1,317m. In 2001-2002 the capital account surplus decreased slightly to \$1,038m.

BALANCE OF PAYMENTS, CAPITAL ACCOUNT: ORIGINAL



Source: *Balance of Payments and International Investment Position, Australia (5302.0), Quarterly data.*

BALANCE OF PAYMENTS, CAPITAL ACCOUNT

Period	Balance on capital account
	\$m
ANNUAL	
1996-1997	1,317
1997-1998	1,127
1998-1999	1,167
1999-2000	1,053
2000-2001	1,109
2001-2002	1,038
QUARTERLY	
2000-2001	
March	231
June	217
2001-2002	
September	378
December	318
March	183
June	159

Source: *Balance of Payments and International Investment Position, Australia (5302.0).*

Explanatory Notes

The balance on capital account is the sum of **net capital transfers** and **net acquisition/disposal of non-produced, non-financial assets**.

Capital transfers include migrants' transfers, debt forgiveness and the provision of cash when linked to a change of ownership of fixed assets or the transfer in kind of ownership of a fixed asset without a quid-pro-quo.

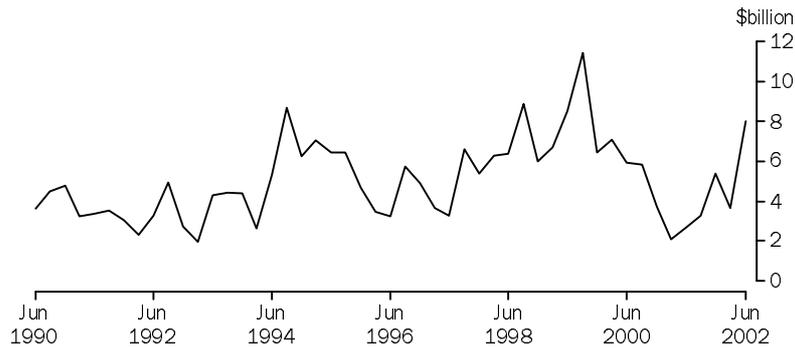
The acquisition (less disposal) of non-produced, non-financial assets relates to the sale (or purchase) of intangible assets such as patents, copyrights, trademarks and franchises, as well as certain transactions in embassy land (tangible assets).

Balance of Payments - Financial Account

The **balance on the financial account**, in original terms, changes markedly from quarter to quarter. This volatility reflects, in part, the huge gross flows which underlie the balance on financial account and the difficulties associated with recording them in the correct time period. This in turn, is reflected in the volatility and size of the net errors and omissions item. As Australia usually has a current account deficit, the balance on the financial account usually records a surplus (or net inflow).

The highest ever quarterly net inflow was recorded in the September quarter 1999 (\$11,445m). The June 2002 quarter recorded a financial account balance net inflow of \$8,008m.

BALANCE ON FINANCIAL ACCOUNT: ORIGINAL



Source: *Balance of Payments and International Investment Position, Australia (5302.0), Quarterly data.*

BALANCE OF PAYMENTS, FINANCIAL ACCOUNT

Period	Balance on financial account
	\$m
ANNUAL	
1996–1997	17,553
1997–1998	24,642
1998–1999	30,114
1999–2000	30,920
2000–2001	14,335
2001–2002	20,286
QUARTERLY	
2000–2001	
March	2,097
June	2,680
2001–2002	
September	3,270
December	5,382
March	3,626
June	8,008

Source: *Balance of Payments and International Investment Position, Australia (5302.0).*

Explanatory Notes

The financial account provides information on transactions in **Australia's foreign financial assets and liabilities**, such as equity investments, bonds and other debt securities, and loans and other liabilities such as trade credit.

Credit entries in the financial account are net inflows, resulting from a reduction in Australian investment abroad and/or an increase in foreign investment in Australia. Debit entries are net outflows. As in the current and capital accounts, credit entries are shown without sign while debit entries have a negative sign.

A positive financial account balance (a net inflow) occurs when the increase in Australia's liabilities to foreign countries (or the reduction in claims on foreign countries) in a period exceeds the increase in Australia's claims on foreign countries (or the reduction in liabilities to foreign countries). A net financial inflow occurs when a country has a deficit on its combined current and capital accounts. In other words, to finance the current account deficit it draws on savings from the rest of the world.

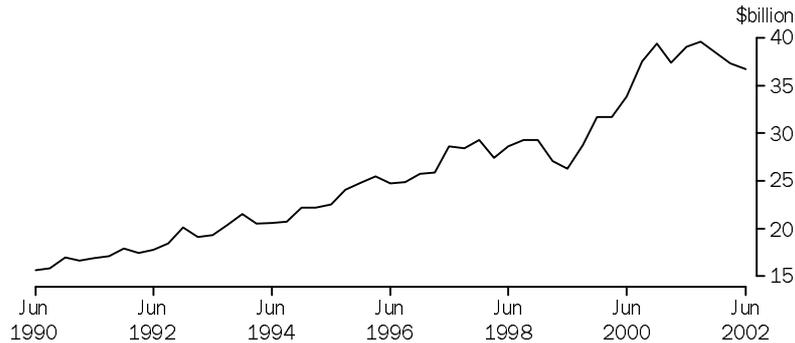
A negative financial account balance (a net outflow) occurs when the increase in Australia's claims on foreign countries (or the reduction in liabilities to foreign countries) in a period exceeds the increase in its liabilities to foreign countries (or the reduction in claims on foreign countries). In principle, such a net financial outflow occurs when a country has a surplus on its combined current and capital accounts. In other words, the net outflow for countries with such a surplus represents the extent to which they provide their domestic savings to finance deficits in the rest of the world.

Goods and Services Credits

In trend terms, Australia's **total goods and services credits (exports)** increased throughout the 1990s. The major commodities contributing to this increase were travel services, metal ores and minerals, coal, coke and briquettes and other manufactured goods.

Three quarters of successive falls in total goods and services credits were recorded up to the June quarter 1999 following the Asian economic crises. Afterwards, exports returned to an upward trend, but have been declining again from December quarter 2001.

GOODS AND SERVICES CREDITS AT CURRENT PRICES: ORIGINAL



Source: *Balance of Payments and International Investment Position, Australia (5302.0), Quarterly data.*

GOODS AND SERVICES CREDITS AT CURRENT PRICES

Period	Goods credits	Services credits	Total
	\$m	\$m	\$m
ANNUAL			
1996–1997	80,934	24,226	105,160
1997–1998	88,538	25,206	113,744
1998–1999	85,783	26,242	112,025
1999–2000	97,655	28,317	125,972
2000–2001	120,307	33,204	153,511
2001–2002	121,180	31,039	152,219
QUARTERLY			
2000–2001			
March	28,603	8,777	37,380
June	31,693	7,375	39,068
2001–2002			
September	31,756	7,912	39,668
December	31,109	7,360	38,469
March	28,713	8,625	37,338
June	29,602	7,142	36,744

Source: Balance of Payments and International Investment Position, Australia (5302.0).

Explanatory Notes

Goods and services credits (exports) are real resources that are provided to foreign residents. In the balance of payments they appear as credit items.

Goods credits refers to all movable goods which change ownership from residents to non-residents. These transactions are valued in f.o.b. (free on board) terms which means that transportation and insurance costs beyond Australia are excluded. In ABS balance of payments publications, goods credits are categorised into general merchandise and other goods. **General merchandise** is classified into rural and non-rural goods, with each of these classifications further broken down so that the trading performance of different commodity groups can be monitored. **Other goods** includes goods for processing and repair, goods procured in ports by carriers (mainly fuel) and non-monetary gold.

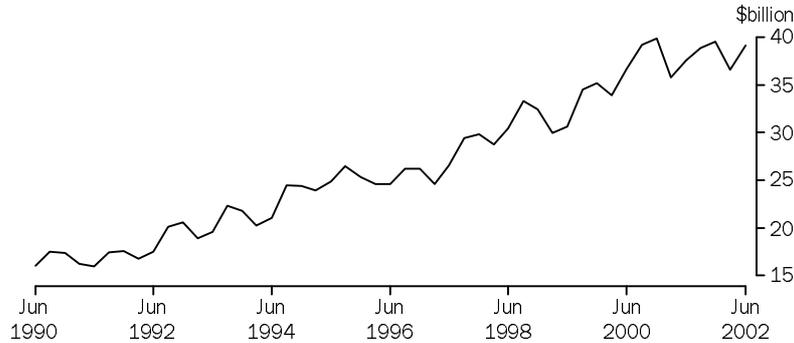
Services credits are transactions in services provided by Australian residents to non-residents. These are categorised into groups such as transportation, travel, communication, construction, insurance, financial, computer and information, royalties and licence fees, other business, personal, cultural and recreational, and government services not elsewhere included. More detailed breakdowns are provided under many of these categories.

The export of goods and services provides domestic producers with a wider market and allows the economy, as a whole, to share in the gains from trade. Export levels are affected not only by supply constraints but also by the demand for Australian products and services in the world market. Export demand is influenced by the prices charged and also the exchange rate of the Australian dollar. If the Australian dollar depreciates (falls in value), Australian exports will generally become cheaper for foreign residents and consequently they may demand more Australian goods and services. Export demand is also influenced by the level of economic activity in countries that purchase Australian exports.

Goods and Services Debits

In trend terms, **total goods and services debits** have generally risen since June quarter 1990. Goods imports more than doubled in the decade to June quarter 2002 while services imports rose by 73%. In value terms, the import commodities showing the largest rises were passenger cars and fuels.

GOODS AND SERVICES DEBITS AT CURRENT PRICES: ORIGINAL



Source: Balance of Payments and International Investment Position, Australia (5302.0), Quarterly data.

GOODS AND SERVICES DEBITS AT CURRENT PRICES

Period	Goods debits	Services debits	Total
	\$m	\$m	\$m
ANNUAL			
1996–1997	-79,438	-24,152	-103,590
1997–1998	-92,084	-26,398	-118,482
1998–1997	-98,427	-28,026	-126,453
1999–2000	-110,610	-29,713	-140,323
2000-2001	-120,337	-32,299	-152,636
2001-2002	-121,937	-32,257	-154,194
QUARTERLY (TREND)			
2000-2001			
March	-27,968	-7,879	-35,847
June	-29,565	-8,045	-37,610
2001-2002			
September	-30,405	-8,511	-38,916
December	-31,594	-7,987	-39,581
March	-29,033	-7,541	-36,574
June	-30,905	-8,218	-39,123

Source: Balance of Payments and International Investment Position, Australia (5302.0).

Explanatory Notes

Goods and services debits (imports) are real resources acquired from foreign residents.

Goods debits include all movable goods that change ownership from non-residents to residents. These imports are valued in f.o.b. (free on board) terms at the frontier of the exporting country, which excludes the transportation and insurance costs (considered to be services) of bringing the goods from the exporting countries to Australia. Goods debits are categorised into general merchandise and other goods. General merchandise imports are classified into three end-use categories: **consumption goods; capital goods; and intermediate and other goods**. Each of these categories is in turn broken down into broad commodity groups such as food, chemicals, textiles, metals and metal manufactures, machinery, transport equipment, other manufactures and other imports. Other goods includes goods for processing and repair, goods procured in ports by carriers (mostly fuels) and non-monetary gold.

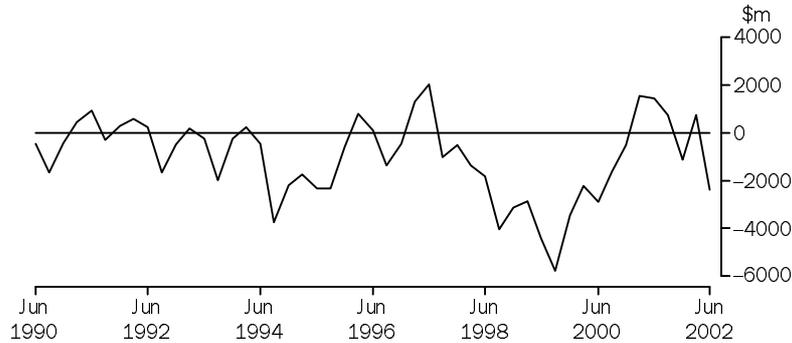
Services debits are transactions in services provided by non-residents to Australian residents. These are categorised into groups such as transportation, travel, communication, construction, insurance, financial, computer and information, royalties and licence fees, other business, personal, cultural and recreational, and government not elsewhere included. More detailed breakdowns are provided under many of these categories.

The imports of goods and services enables domestic consumers to have access to a wider range of goods and services than can be produced domestically. They also enable Australian producers to specialise in activities in which they have a comparative advantage. Demand for imports is influenced by both the foreign currency price of the imports and the exchange rate. If the Australian dollar depreciates (falls in value) imports become more expensive and consequently there may be a reduction in the demand by Australians for foreign-produced goods and services. Demand for imports is also influenced by the level of economic activity in Australia.

Balance on Goods and Services

Australia's **balance on goods and services**, in original terms, recorded its highest surplus of \$2,050m in June quarter 1997. In June quarter 2002 the **balance on goods and services** was a deficit of \$2,379m. The highest deficit ever recorded was \$5,282m in September quarter 1999. The **balance on goods and services** exhibits a seasonal pattern with March quarter balances on average more favourable to Australia.

BALANCE ON GOODS AND SERVICES AT CURRENT PRICES: ORIGINAL



Source: *Balance of Payments and International Investment Position, Australia (5302.0)*, Quarterly data.

BALANCE ON GOODS AND SERVICES AT CURRENT PRICES

Period	Net goods \$m	Net services \$m	Balance on goods and services \$m
ANNUAL			
1996-1997	1,496	74	1,570
1997-1998	-3,546	-1,192	-4,738
1998-1999	-12,644	-1,784	-14,428
1999-2000	-12,955	-1,396	-14,351
2000-2001	-30	905	875
2001-2002	-757	-1,218	-1,975
QUARTERLY			
2000-2001			
March	635	898	1,533
June	2,128	-670	1,458
2001-2002			
September	1,351	-599	752
December	-485	-627	-1,112
March	-320	1,084	764
June	-1,303	-1,076	-2,379

Source: *Balance of Payments and International Investment Position, Australia (5302.0)*.

Explanatory Notes

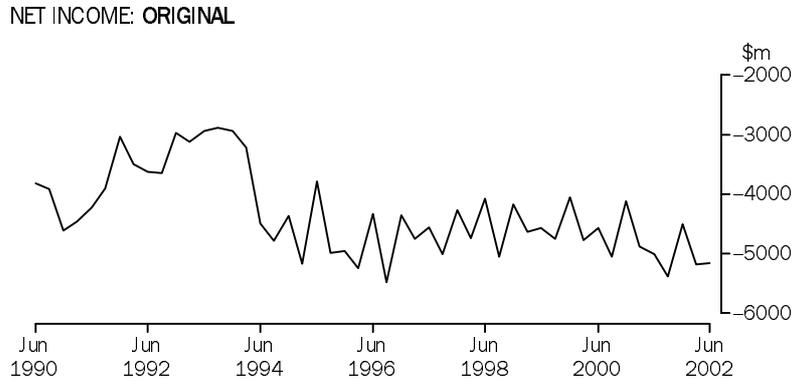
The balance on goods and services refers to the **net sum of goods and services credits (exports) and debits (imports)**. It is a useful and immediate indicator of a nation's overall trading position and appears in the current account section of the balance of payments.

A net debit (negative figure) is referred to as a goods and services deficit and indicates that total imports of goods and services exceed total exports of goods and services. A surplus on the balance of goods and services appears as a credit item and indicates that total exports of goods and services exceed total imports of goods and services.

Within the balance on goods and services two other balances are presented (net goods, and net services), reflecting the division between goods and services.

Net Income

As Australia has net foreign liabilities, it typically has a deficit on income, due to the net interest and dividends payable to non-residents. The September quarter 1993 income deficit was the lowest of the past 12 years at \$2,887m. The income deficit quickly fell in 1994 to around \$5b, and has remained around that level since.



Source: Balance of Payments and International Investment Position, Australia (53Q2.0), Quarterly data.

NET INCOME

Period	Income credits	Income debits	Net income
	\$m	\$m	\$m
ANNUAL			
1996-97	8,563	-27,714	-19,151
1997-98	10,384	-28,475	-18,091
1998-99	10,288	-28,718	-18,430
1999-2000	13,773	-31,923	-18,150
2000-2001	16,179	-35,256	-19,077
2001-2002	14,913	-35,133	-20,220
QUARTERLY			
2000-2001			
March	4,169	-9,052	-4,883
June	3,859	-8,880	-5,021
2001-2002			
September	3,613	-8,995	-5,382
December	3,785	-8,294	-4,509
March	3,906	-9,083	-5,177
June	3,609	-8,761	-5,152

Source: Balance of Payments and International Investment Position, Australia (5302.0).

Explanatory Notes

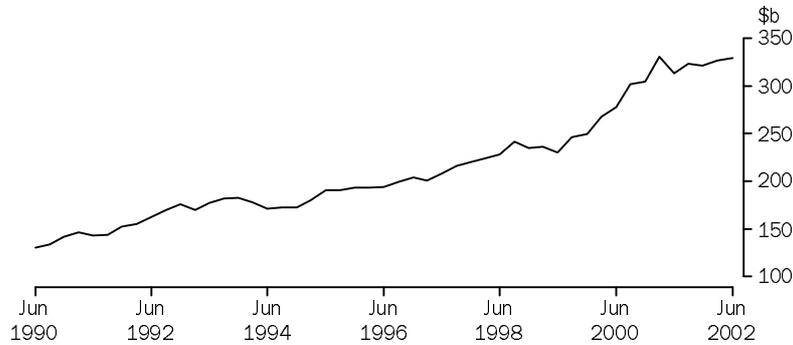
The income item of the balance of payments covers income earned by Australian residents from non-residents (credits) and income earned by non-residents from Australian residents (debits). The sum of the income debits and the income credits gives net income. In broad terms, income relates to the return to the owner of a factor resource (i.e. labour or capital) from the use of that resource by either the owner or another economic entity.

In the balance of payments, income is divided into two categories: **investment income** (for the use of capital) and **compensation of employees** (for the use of labour). Investment income refers to the earnings by owners of financial assets and commonly includes such items as dividends and interest. Compensation of employees refers to wages and salaries earned by employees resident in one country from employers resident in another. In Australia's case, the investment income flows are far greater than those for compensation of employees.

Foreign Debt

Over the last 10 years Australia's net foreign debt has more than doubled from \$130.8b at 30 June 1990 to \$329.8b at 30 June 2002. The ratio of net foreign debt to GDP was 47.0% at 30 June 2002, up on the results of recent years. Net interest income payable on net foreign debt as a percentage of goods and services credits was 9.2% in 2001-2002, a slight decrease on previous years.

NET FOREIGN DEBT, LEVEL AT END OF PERIOD



Source: Balance of Payments and International Investment Position, Australia (5302.0), Quarterly data.

LEVELS OF FOREIGN DEBT AT END OF PERIOD AND SELECTED RATIOS

Period	Debt liabilities(a) \$m	Reserve assets \$m	Other debt assets \$m	Net foreign debt(a)(b) \$m	Ratio of net foreign debt to GDP(c) %	Ratio of net interest to goods and services credits(d) %
ANNUAL						
1996-1997	302,846	-22,791	-71,427	208,628	39.4	-11.2
1997-1998	346,971	-24,260	-94,929	227,782	40.6	-9.7
1998-1999	359,839	-23,954	-105,196	230,689	39.0	-9.4
1999-2000	421,771	-27,948	-116,019	277,804	44.2	-10.6
2000-2001	498,775	-37,951	-147,352	313,472	46.6	-9.6
2001-2002	523,654	-37,435	-156,456	329,763	47.0	-9.2
QUARTERLY						
2000-2001						
March	529,552	-35,306	-163,051	331,195	50.0	-9.8
June	498,775	-37,951	-147,352	313,472	46.6	-9.6
2001-2002						
September	520,394	-39,216	-158,169	323,009	47.5	-9.5
December	507,016	-36,549	-149,190	321,277	46.4	-9.4
March	508,948	-33,117	-148,398	327,433	46.6	-9.2
June	523,654	-37,435	-156,456	329,763	47.0	-9.2

(a) Levels from December quarter 1991 are not strictly comparable with levels from earlier periods, due to changes in methodology.

(b) Equals debt liabilities less reserve assets and other debt assets.

(c) Ratio derived by expressing net debt at a particular date as a percentage of current price original GDP for the year preceding this date.

(d) Ratio derived by expressing net interest on debt as a percentage of exports of goods and services for the year preceding this date.

Source: Balance of Payments and International Investment Position (5302.0).

Explanatory Notes

Foreign debt is the amount borrowed from non-residents by residents of a country. It is distinguished from equity investment by the obligation to pay interest and/or repay principal.

Gross foreign debt is the total amount borrowed from non-residents. Net foreign debt is equal to gross foreign debt minus lending by residents of Australia to non-residents, including reserve assets.

The level of debt is often expressed as a percentage of Gross Domestic Product (GDP). This is done to place the extent of foreign debt in context and to enable valid comparisons over time and between countries. Movements in this ratio are an indication of the changing significance of foreign debt.

An economy's capacity to pay the costs associated with debt are portrayed by its debt service ratio. The debt service ratio shows the percentage of goods and services credits (export earnings) being used to meet interest obligations on debt.

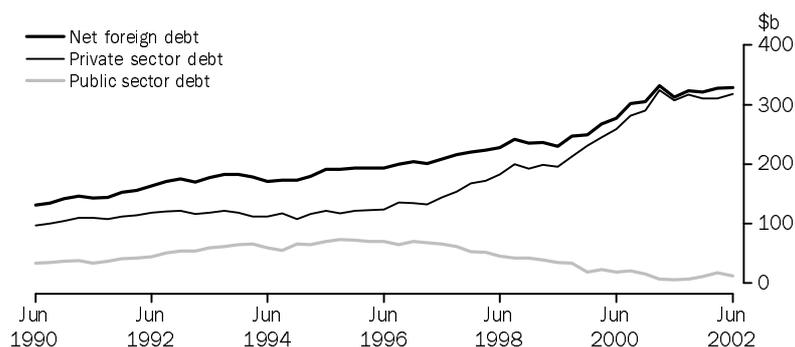
There are two important relationships between the level of foreign debt and the balance of payments. First, the financial account entries reflect how much Australia has had to borrow to finance the net acquisition of real resources (goods, services and income) and other financial resources (net equity). Secondly, the interest obligations on debt owing to non-residents add directly to the current account deficit.

While foreign debt is an important indicator in its own right, a comprehensive analysis of Australia's economic situation should also take account of equity assets and liabilities, as well as non-financial assets. All of Australia's assets and liabilities are recorded in the national balance sheet.

Composition of Net Foreign Debt

At 30 June 2002, net foreign debt of the public sector was \$12.1b (4% of total net foreign debt) and net foreign debt of the private sector was \$317.6b (96% of total net foreign debt). Much of the public sector debt consists of domestically issued government securities in which non-residents choose to invest. At 30 June 2002, non-residents held \$24.4b in domestically issued Australian government securities. Over the period 1996-97 to 2001-02 net foreign debt of the public sector has fallen (from \$65.2b at 30 June 1997 to \$12.1b at 30 June 2002). Conversely net foreign debt of the private sector has more than doubled (from \$143.4b to \$317.6b).

COMPOSITION OF NET FOREIGN DEBT, LEVEL AT END OF PERIOD



Source: *Balance of Payments and International Investment Position, Australia (5302.0)*, Monthly data.

LEVELS OF FOREIGN DEBT AT END OF PERIOD

Period	Public sector debt	Private sector debt	Net foreign debt(a)
	\$m	\$m	\$m
ANNUAL			
1996-1997	65,231	143,398	208,628
1997-1998	45,392	182,390	227,782
1998-1999	34,509	196,179	230,689
1999-2000	18,569	259,235	277,804
2000-2001	5,599	307,872	313,472
2001-2002	12,147	317,617	329,763
QUARTERLY			
2000-2001			
March	6,731	324,464	331,195
June	5,599	307,872	313,472
2001-2002			
September	6,567	316,442	323,009
December	10,783	310,494	321,277
March	17,479	309,954	327,433
June	12,147	317,617	329,763

(a) Equals debt liabilities less reserve assets and other debt assets.

Source: *Balance of Payments and International Investment Position, Australia (5302.0)*.

Explanatory Notes

Australia's net foreign debt includes debt incurred by both the private and public sectors.

Net public sector debt is the gross debt of Commonwealth, State and Local governments (general government) and government business enterprises (including financial corporations) less reserve assets and other foreign debt assets held by these resident entities.

Statistics on the composition of foreign debt are used to analyse the nature of Australia's foreign debt. For example, having debt concentrated in the private sector is considered by many as more desirable than having it issued by the public sector, since it is assumed that the private sector is more likely to borrow to finance investment rather than consumption. However, a comprehensive analysis of the financial position of the two sectors should also consider their domestic assets and liabilities as well as those with non-residents.

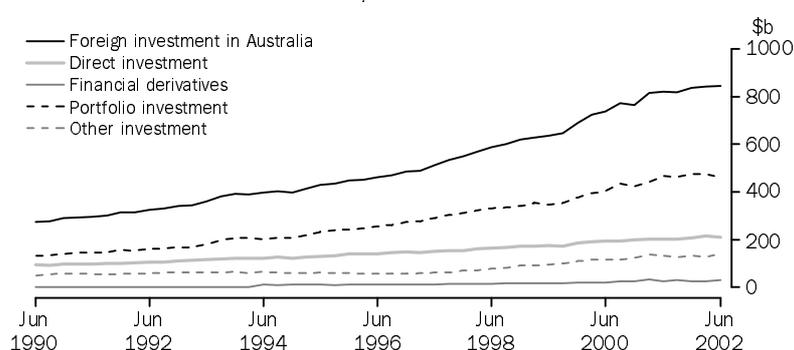
The composition of foreign debt may also be examined by industry, country, currency and maturity structure.

Foreign Investment in Australia

The level of foreign investment in Australia at 30 June 2002 was \$844.4b, an increase of 65% on the position as at 30 June 1997. Portfolio investment was \$465.7b (55% of total foreign investment in Australia), direct investment was \$210.9b (25%), financial derivatives was \$30.9b (4%) and other investment was \$136.8b (16%).

Over the period 30 June 1997 to 30 June 2002, the proportional split of total foreign investment in Australia into direct investment, portfolio investment, financial derivatives and other investment remained relatively stable, though financial derivatives and other investment have increased their relative shares. Over this same period, financial derivatives increased 202% (from \$10.2b 30 June 1997 to \$30.9b at 30 June 2002), other investment liabilities increased 123% (from \$61.5b to \$136.8b), portfolio investment increased 61% (from \$289.2b to \$465.7b) and direct investment increased 40% (from \$150.8b to \$210.9b).

FOREIGN INVESTMENT IN AUSTRALIA, LEVEL AT END OF PERIOD



Source: Balance of Payments and International Investment Position, Australia (5302.0), Quarterly data.

LEVEL OF FOREIGN INVESTMENT IN AUSTRALIA AT END OF PERIOD

Period	Direct \$m	Portfolio \$m	Financial derivatives \$m	Other \$m	Total \$m
ANNUAL					
1996-1997	150,827	289,182	10,221	61,470	511,700
1997-1998	162,371	332,038	15,040	77,783	587,231
1998-1999	174,478	348,145	17,826	94,565	635,014
1999-2000	195,679	405,857	21,431	114,022	736,989
2000-2001	201,060	468,119	23,591	130,418	823,187
2001-2002	210,909	465,747	30,910	136,838	844,404
QUARTERLY					
2000-2001					
March	200,869	443,658	34,708	138,572	817,808
June	201,060	468,119	23,591	130,418	823,187
2001-2002					
September	202,373	460,757	29,750	125,883	818,763
December	208,413	476,201	24,739	130,567	839,920
March	215,705	473,049	23,782	129,742	842,277
June	210,909	465,747	30,910	136,838	844,404

Source: Balance of Payments and International Investment Position, Australia (5302.0).

Explanatory Notes

Foreign investment in Australia generally refers to the stock of Australian liabilities owed to non-residents; and to the financial transactions and other changes which change this stock. It is broken down into direct, portfolio, financial derivatives and other investment.

Direct investment is a category of international investment that reflects the objective of obtaining a long-term interest by a resident in one economy in an enterprise in another economy, and implies a significant degree of influence by the investor on the management of the enterprise. A direct investment relationship is generally deemed to be established when an investor, who is a resident in one economy, holds 10% or more of the ordinary shares or voting stock of an enterprise in another economy. All financial transactions and positions between entities in a direct investment relationship (excluding certain inter-bank positions) are classified to direct investment.

The portfolio investment category covers investment in equity and debt securities (other than direct investment), financial derivatives (such as currency and interest rate swaps) are secondary securities linked to specific financial instruments, indicators or commodities, while other investment covers the remaining kinds of investments such as trade credits, loans, currency and deposits.

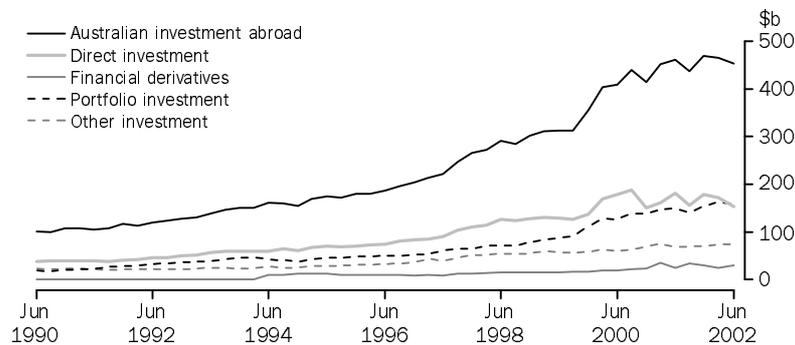
Australian Investment Abroad

At 30 June 2002, Australian investment abroad totalled \$453.9b of which portfolio investment was \$159.3b (35% of total Australian investment abroad), direct investment was \$153.4b (34%), other investment \$73.8b (16%), reserve assets \$37.4b (8%) and financial derivatives \$30.0b (7%) .

Over the period 30 June 1997 to 30 June 2002, financial derivatives increased 224% (from \$9.3b at 30 June 1997 to \$30.0b at June 2002) portfolio investment increased 160% (from \$61.2b at to \$159.3b), direct investment increased 72% (from \$89.0b to \$153.4b), other investment assets 88% (from \$39.3b to \$73.8b) and reserve assets 65% (from \$22.8b to \$37.4b).

The proportional split of total Australian investment abroad into direct investment, portfolio investment, financial derivatives, other investment assets and reserve assets remained relatively stable over the period 1996-1997 to 1999-2000; however for 2000-2001 and 2001-2002 there was a shift away from direct investment to portfolio investment. During this period direct investment decreased by 6% whilst portfolio investment increased by 3%.

AUSTRALIAN INVESTMENT ABROAD, LEVEL AT END OF PERIOD



Source: Balance of Payments and International Investment Position, Australia (5302.0), Quarterly data.

LEVEL OF AUSTRALIAN INVESTMENT ABROAD AT END OF PERIOD

Period	Direct \$m	Portfolio \$m	Financial derivatives \$m	Other \$m	Reserve assets \$m	Total \$m
ANNUAL						
1996-1997	-88,999	-61,164	-9,265	-39,326	-22,791	-221,545
1997-1998	-125,580	-71,962	-14,357	-54,134	-24,260	-290,293
1998-1999	-129,465	-87,196	-15,529	-57,215	-23,954	-313,359
1999-2000	-178,284	-126,738	-18,658	-58,856	-27,948	-410,484
2000-2001	-181,788	-150,041	-23,802	-68,571	-37,951	-462,154
2001-2002	-153,371	-159,269	-30,030	-73,772	-37,435	-453,877
QUARTERLY						
2000-2001						
March	-160,820	-147,326	-34,998	-74,869	-35,306	-453,320
June	-181,788	-150,041	-23,802	-68,571	-37,951	-462,154
2001-2002						
September	-157,079	-140,403	-33,340	-68,668	-39,216	-438,707
December	-178,911	-155,409	-28,933	-69,995	-36,549	-469,797
March	-171,386	-162,129	-23,730	-74,442	-33,117	-464,804
June	-153,371	-159,269	-30,030	-73,772	-37,435	-453,877

Source: Balance of Payments and International Investment Position (5302.0).

Explanatory Notes

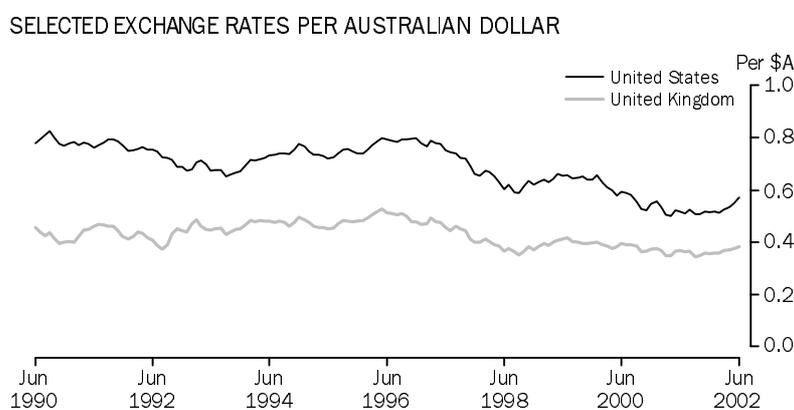
Australian investment abroad generally refers to the stock of foreign financial assets (claims on non-residents) owned by Australian residents; and to the capital transactions and other changes which increase or decrease this stock. In balance of payments presentation, Australian investment abroad is shown with a negative sign.

There are five types of Australian investment abroad. Four of these are - direct, portfolio, financial derivatives and other investment. The fifth type is reserve assets. Reserve assets are foreign financial assets available to, and controlled by, the monetary authorities (principally the Reserve Bank of Australia) for financing or regulating payments, imbalances and other purposes.

Australians invest in foreign countries for a variety of reasons including: the securing and maintenance of market share, sales promotion, effective marketing, avoidance of foreign tariffs and import restrictions, securing of raw materials and to take advantage of cheaper inputs or higher rates of return on investments or to spread their risk.

Exchange Rates

Over the closing decade of the twentieth century the value of the Australian dollar (\$) generally declined against the major currencies (US dollar, UK pound, and Japanese yen). After falling early in the 1990s, the \$A had recovered lost ground against both the US dollar and the UK pound by mid 1996, before decreasing, though with a slight increase in mid 1999, into the new century.



Source: *International Trade in Goods and Services, Australia (5368.0)*, Monthly data.

EXCHANGE RATES: CURRENCY PER AUSTRALIAN DOLLAR(a)

Period	United States dollar	United Kingdom pound	Japanese yen
ANNUAL			
1996-1997	0.78	0.49	90.51
1997-1998	0.68	0.41	86.02
1998-1999	0.63	0.38	77.81
1999-2000	0.63	0.39	67.90
2000-2001	0.54	0.37	61.49
2001-2002	0.52	0.36	66.10
MONTHLY			
2001-2002			
July	0.51	0.36	63.56
August	0.53	0.37	63.77
September	0.51	0.35	60.16
October	0.51	0.35	61.30
November	0.52	0.36	63.25
December	0.51	0.36	65.50
January	0.52	0.36	68.51
February	0.51	0.36	68.54
March	0.52	0.37	68.74
April	0.54	0.37	70.06
May	0.55	0.38	69.55
June	0.57	0.38	70.29

(a) Rates are averages for the reference period.

Source: *International Trade in Goods and Services, Australia (5368.0)*.

Explanatory Notes

The price of one currency against another is known as the exchange rate. For example, the average cost during June 2002 of one Australian dollar was 0.57 United States dollars, 0.38 United Kingdom pounds and 70.29 Japanese yen. Therefore, the exchange rate can be used as a measure of a currency's value.

Exchange rates vary over time. When the exchange rate for the Australian dollar against another currency rises (appreciates), it buys more of the foreign currency.

Exchange markets facilitate world trade by providing markets in which to clear the proceeds of that trading. When selling goods and services abroad, Australian residents often receive foreign currencies and will purchase foreign currencies when making payment for imports of goods and services. Exchange markets also enable the risks associated with holding currencies to be traded.

The value of the exchange rate affects the amounts that Australia receives for its exports and pays for its imports, as most exports and imports are denominated in foreign currencies. Generally when the exchange rate for a country's currency appreciates, the price residents pay for imports declines, while for non-residents our exports become more expensive. Alternatively, a currency depreciation will cause the price of imports into Australia to rise and lower the international price of our exports. These changes can affect the demand for imports and exports. Income payments on Australia's foreign assets and liabilities denominated in Australian dollars are also affected by exchange rate movements, as are the repayments on these assets and liabilities. Because of these effects, exchange rates have an important bearing on the balance of payments.

Trade-weighted Index

During the 1990s, the value of the Australian dollar (\$A), as measured against other currencies in the trade-weighted index, was quite volatile. The index fell from a high of 61.6 in September 1990 to 47.8 in September 1993, before recovering over the latter part of the decade to reach 58.3 at June 1999. Since then, it fell again, to 52.9 in June 2000, increasing slightly to 53.4 by June 2002.



Source: *International Trade in Goods and Services (5368.0), Monthly data.*

TRADE WEIGHTED INDEX AND UNITED STATES DOLLAR EXCHANGE RATE(a)

Period	Trade weighted index	United States dollar (per \$A)
ANNUAL		
1996-1997	58.7	0.78
1997-1998	58.3	0.68
1998-1999	56.0	0.63
1999-2000	55.2	0.63
2000-2001	50.3	0.54
2001-2002	50.8	0.52
MONTHLY		
2000-2001		
July	49.8	0.51
August	50.0	0.53
September	48.1	0.51
October	48.6	0.51
November	50.0	0.52
December	50.1	0.51
January	50.9	0.52
February	50.7	0.51
March	51.4	0.52
April	52.3	0.54
May	52.6	0.55
June	53.4	0.57

(a) Rates are averages for the reference period.

Source: *International Trade in Goods and Services (5368.0).*

Explanatory Notes

The Australian dollar exchange rate is often quoted in terms of its exchange with the United States dollar (\$US).

However, to get a more comprehensive indication of Australia's exchange rate, a trade-weighted index (TWI) is used. The TWI, which is calculated by the Reserve Bank of Australia (RBA), measures changes in the Australian currency relative to the currencies of our main trading partners. The relative importance of trade occurring between each country and Australia is taken into account. Over time, international trade patterns tend to alter, making it necessary to modify the weights to reflect the new trade patterns. The trade-weighted index is reweighted annually (on 1 October) and on special occasions as required.

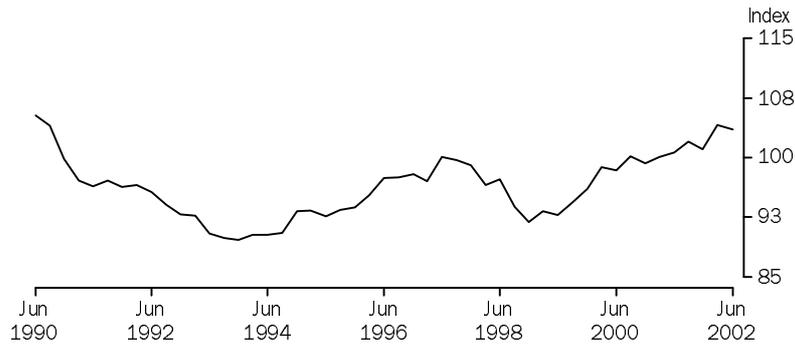
The TWI includes the currencies of 20 countries which account for at least 90% of Australia's trade. Calculation of the TWI is based on the exchange rates for the \$A against the chosen currencies at 4 p.m. for each trading day.

The TWI is an absolute number and does not express the price of any single currency.

Terms of Trade and Indexes of Competitiveness

Australia's terms of trade for goods and services, in trend estimate terms, fell sharply from the June quarter 1990 to its lowest level in the decade in September 1993. This fall reflected both declining export prices and strongly rising import prices. Due to decreases in import prices the terms of trade recovered generally for the next four years to peak in September quarter 1997. It decreased again from December 1997 to March 1999 as import prices rebounded, but since then, Australia's terms of trade have been on an upward trend because of rising exports prices.

TERMS OF TRADE FOR GOODS AND SERVICES: SEASONALLY ADJUSTED



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Quarterly data.

TERMS OF TRADE AND INDEXES OF COMPETITIVENESS

Period	Terms of trade(a)	Index of adjusted CPI(b)(c)	Index of adjusted GDP deflator(b)(c)	Index of adjusted unit labour costs(b)(c)
ANNUAL				
1996-1997	98.1	124.9	123.1	126.6
1997-1998	98.1	110.6	111.1	112.1
1998-1999	93.0	101.3	100.8	102.1
1999-2000	97.0	100.0	100.0	100.0
2000-2001	100.0	90.3	92.9	92.2
2001-2002	102.6	n.a.	n.a.	n.a.
QUARTERLY (SEASONALLY ADJUSTED)				
2000-2001				
December	99.3	88.3	90.5	90.9
March	100.1	90.0	93.0	92.5
June	100.7	88.9	91.7	89.9
2001-2002				
September	102.0	88.9	91.3	89.3
December	101.1	n.a.	n.a.	n.a.
March	104.1	n.a.	n.a.	n.a.
June	103.5	n.a.	n.a.	n.a.

(a) Base year 1999-2000 = 100.0.

(b) Base year 2000-2001 = 100.0.

(c) Adjusted for exchange rate changes. See Explanatory notes for further details.

Source: Australian Economic Indicators (1350.0).

Explanatory Notes

A country's terms of trade shows a country's export prices relative to its import prices. It is expressed as an index, which is calculated by dividing an index of prices received for exports by an index of prices paid for imports.

A rise in the index implies an improvement in a country's terms of trade, making it possible to purchase more imports with the same amount of exports. An improvement in a country's terms of trade occurs when export prices rise, when import prices fall, when export prices rise at a faster rate than import prices, or when export prices fall at a slower rate than import prices.

A fall in the index occurs when a country's terms of trade deteriorates. It is necessary to export more to purchase the same amount of imports. A deterioration occurs when import prices rise, when export prices fall or when import prices rise at a faster rate than export prices, or when import prices fall at a slower rate than export prices.

The adjusted CPI index is the ratio of the Australian consumer price index to the weighted geometric average of exchange rate adjusted consumer price indexes for Australia's four major trading partners for the period 1984-85 to 1987-88 (United States, Japan, United Kingdom, and West Germany).

The adjusted GDP deflator index is the ratio of the GDP deflator for Australia to the weighted geometric average of exchange rate adjusted GDP deflators for Australia's four major trading partners.

The adjusted unit labour cost index is the ratio of unit labour costs in the non-farm sector of the Australian economy to the weighted geometric average of the exchange rate adjusted unit labour cost indexes estimated for the business sectors of Australia's four major trading partners.

CHAPTER 4

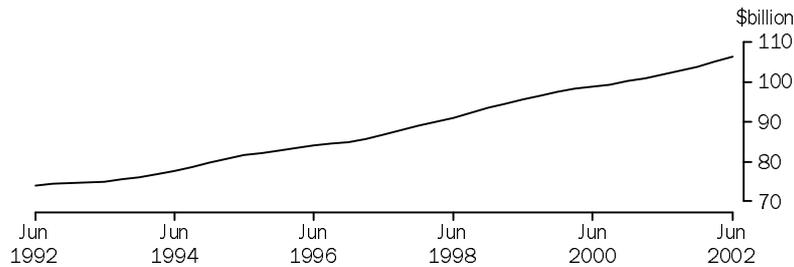
DOMESTIC CONSUMPTION AND INVESTMENT

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Household Final Consumption Expenditure

Household final consumption expenditure, in trend chain volume terms, grew solidly during the last 10 years. From June quarter 1992 to June quarter 2002, household final consumption expenditure grew at an average annual rate of 3.7%, increasing every quarter during that period. Household final consumption expenditure was \$107b in the June quarter 2002.

HOUSEHOLD FINAL CONSUMPTION EXPENDITURE, CHAIN VOLUME MEASURES(a):
TREND



(a) Reference year for chain volume measures is 2000-01.

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0)
Quarterly data.

SELECTED COMPONENTS OF HOUSEHOLD FINAL CONSUMPTION EXPENDITURE, Chain Volume Measures(a)

	Food	Clothing and footwear	Health	Rent and other dwelling services	Total
	\$m	\$m	\$m	\$m	\$m
ANNUAL					
1996-97	39,514	13,499	15,500	65,743	341,945
1997-98	40,692	14,038	14,740	67,764	358,426
1998-99	41,187	15,390	15,904	69,945	376,402
1999-00	41,980	16,510	16,602	72,660	392,045
2000-01	41,415	15,425	17,982	75,306	402,615
2001-02	42,768	16,640	19,838	77,743	418,164
QUARTERLY (TREND)					
2000-01					
December	10,289	3,824	4,384	18,759	100,140
March	10,356	3,905	4,610	18,901	101,051
June	10,438	4,007	4,784	19,047	101,934
2001-02					
September	10,511	4,045	4,862	19,200	102,774
December	10,607	4,123	4,913	19,359	103,809
March	10,748	4,217	4,993	19,514	105,116
June	10,910	4,284	5,088	19,663	106,517

(a) Reference year for chain volume measures is 2000-01.

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

Explanatory Notes

Household final consumption expenditure measures current expenditure by households and producers of private non-profit services for households, such as charities, clubs, trade unions and private schools. The items covered include expenditure on consumer durables such as cars, furniture and long-lasting household appliances; consumer semi-durables such as clothing and other appliances; single use goods such as food; and services of all kinds, for example, hairdressing and public transport.

Household final consumption expenditure makes up over half of expenditure on GDP and is the largest component of aggregate demand. Consequently, changes in household final consumption expenditure from one period to another have a significant impact on movements in GDP.

The level of household final consumption expenditure is dependent on a number of factors including: present and anticipated future levels of income, expenditure and saving habits, relative price levels and the rate of inflation.

Economic policy makers may attempt to influence the level of household final consumption expenditure to either dampen or stimulate the economy by altering interest rates or through taxation or wages policy.

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

Australian National Accounts: National Income, Expenditure and Product (5206.0)

Contains quarterly data for household final consumption expenditure.

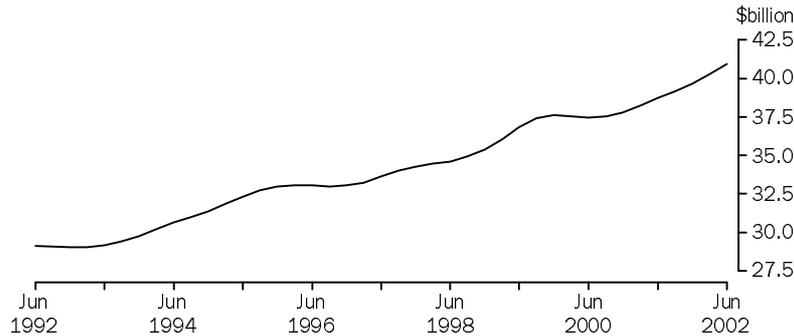
Australian System of National Accounts (5204.0)

Contains annual data for household final consumption expenditure.

Retail Turnover

Total retail turnover (including selected services), in trend chain volume terms, grew from \$29b in June quarter 1992 to \$41b in June quarter 2002, an increase of 40.5% or an average growth of 3.5% per year. Strong growth occurred between June quarter 1993 and December quarter 1995 followed by four quarters of low growth. A second period of strong growth occurred between December quarter 1996 and December quarter 1999 followed by two quarters in which the trend fell. The trend has been increasing from June 2000 to the latest period, June 2002.

TOTAL RETAIL TURNOVER, CHAIN VOLUME MEASURES(a): TREND



(a) Reference year for chain volume measures is 2000-01.
 Source: ABS, Retail Trade, Australia (8501.0), Quarterly data.

TOTAL RETAIL TURNOVER, CHAIN VOLUME MEASURES(a)

Period	Total \$m
ANNUAL (ORIGINAL)	
1996-97	132,789
1997-98	137,503
1998-99	143,137
1999-2000	151,032
2000-01	151,884
2001-02	160,267
QUARTERLY (TREND)	
2000-01	
September	37,554
December	37,833
March	38,234
June	38,723
2001-02	
September	39,181
December	39,689
March	40,302
June	40,946

(a) Reference year for chain volume measures is 2000-01.

Source: Retail Trade, Australia (8501.0).

Explanatory Notes

The retail trade series presents monthly estimates of turnover for retail businesses (such as grocers, clothing stores, department stores, etc.) and hospitality and selected service businesses (such as cafes and restaurants, hotels and licensed clubs, etc.) for each state and territory.

The principal objective of the retail trade series is to show month to month movements of retail turnover. Turnover includes retail sales; wholesale sales; takings from repairs, meals and hiring of goods (except for rent, leasing and hiring of land and buildings); commissions from agency activity (e.g. commissions received from collecting dry cleaning); and net takings from gaming machines.

Estimates are compiled monthly in current price terms and quarterly in chain volume terms.

The retail trade series dates back to 1962 and is one of the main economic indicator series of the ABS. Retailers, industry associations, economists, government and media use these statistics in conjunction with other economic indicators to help assess current Australian economic performance. Quarterly retail trade estimates, along with other data, are used in the calculation of household final consumption expenditure in the Australian national accounts.

The monthly and quarterly series are supplemented by more detailed but irregular financial year surveys. The last irregular survey was conducted in respect of the 1998-99 financial year.

Further Reading

Retail Trade, Australia (8501.0)

Contains monthly estimates of turnover for retail and selected service businesses in original, seasonally adjusted and trend terms. Quarterly estimates of retail turnover in chain volume terms are also provided.

Retail Industry, Australia (8622.0)

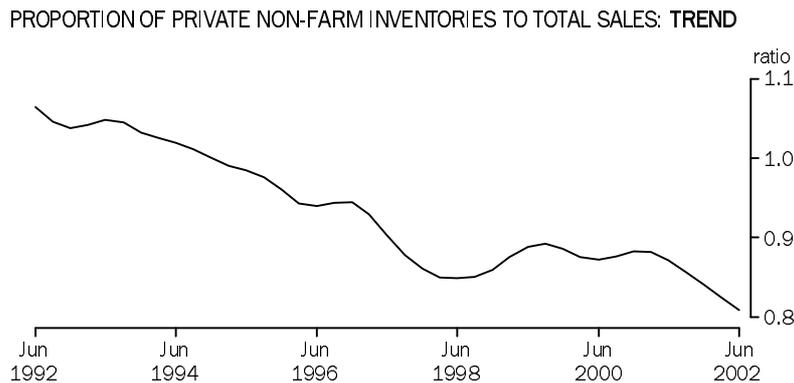
Contains, in respect of the 1998-99 financial year, details of number of businesses, employment, wages and salaries, income and expenses, operating profit, and selected performance measures by industry.

Retail Industry, Australia: Commodity Sales (8624.0)

Contains, in respect of the 1998-99 financial year, details of selected retail sales by commodity item by industry.

Private Non-farm Inventories to Total Sales Ratio

The trend private non-farm inventories to total sales ratio generally declined between the March quarter 1991 and the June quarter 1998, when it reached a low of 0.849. The ratio then increased slightly to September quarter 1999, after which it began to fall again. In June quarter 2002 the ratio was at its lowest ever level of 0.809. The trend decrease in the non-farm inventories to total sales ratio is generally attributed to the adoption by businesses of more cost-effective inventory management systems.



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Quarterly data.

PROPORTION OF PRIVATE NON-FARM INVENTORIES TO TOTAL SALES(a)

	Private non-farm inventory levels - book values(a) \$m	Total sales \$m	Proportion of private non-farm inventories to sales \$m
ANNUAL			
1996-97	72,956	319,872	0.228
1997-98	73,150	344,985	0.212
1998-99	77,634	357,532	0.217
1999-2000	83,818	379,002	0.221
2000-01	88,320	403,853	0.219
2001-02	87,835	426,970	0.206
QUARTERLY (TREND)			
2000-01			
December	89,282	101,168	0.883
March	90,173	102,275	0.882
June	90,536	103,829	0.872
2001-02			
September	90,503	105,579	0.857
December	90,217	107,232	0.841
March	89,808	108,872	0.825
June	89,444	110,573	0.809

(a) Includes for all periods the marketing authorities privatised in July 1999.

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0)

Explanatory Notes

Private non-farm inventories include goods intended for sale (either of own production or purchased for resale), work in progress, raw materials and stores of all private non-farm businesses. All private non-farm industries are covered, with the major inventory-holding industries being manufacturing, wholesale trade, retail trade and mining.

Private non-farm inventory levels may fluctuate significantly with changes in economic activity. The periodic fluctuations in the level of non-farm inventories are often referred to as the 'inventories cycle'.

The private non-farm inventories to total sales ratio compares the value of inventories held by private sector businesses, other than those engaged in agriculture, with the value of total sales of goods in a given period of time. Sales are defined as household final consumption expenditure on goods plus private and public gross fixed capital formation on dwellings, other buildings and structures, and machinery and equipment plus exports of goods.

The private non-farm inventories to total sales ratio can be an important indicator of future business intentions. An increase in the ratio may indicate that businesses have decided to build up inventories in anticipation of increased sales. On the other hand, the ratio may fall as businesses decide to run down their inventories if sales are expected to weaken.

Of course, at times there will also be some unplanned inventory build-ups or run-downs. If sales are higher than expected, inventory levels will be less than planned. Conversely, if sales are lower than anticipated, there will be an increase in inventory holdings in the short term. In this way, inventories act as the buffer between changes in demand and the supply of goods available to meet that demand.

Further Reading

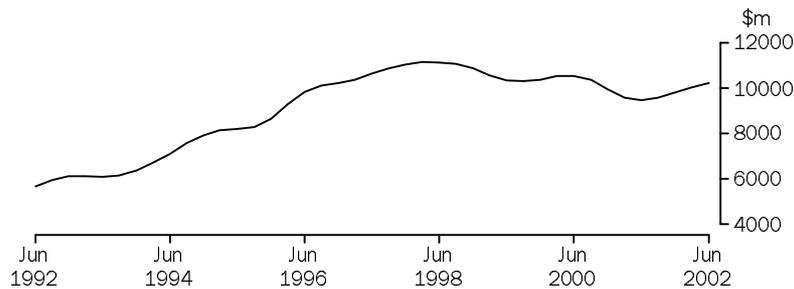
Australian National Accounts : National Income, Expenditure and Product (5206.0)

Contains broad measures of inventories, including the inventories to total sales ratio in seasonally adjusted and trend terms.

Private New Capital Expenditure

The trend estimate of total actual private new capital expenditure, in chain volume terms, generally increased strongly over the six years from June quarter 1992 to March quarter 1998. The March quarter 1998 estimate (\$11,164m) was 97% higher than the June quarter 1992 level. The series then decreased in most quarters until June quarter 2001, with the estimate in that quarter being 15% below the March 1998 peak. The series has again increased through 2001-02, with the June quarter 1992 estimate being 8% higher than in June quarter 1991 but still 8% below the March quarter 1998 level.

TOTAL ACTUAL PRIVATE NEW CAPITAL EXPENDITURE,
CHAIN VOLUME MEASURES(a): TREND



(a) Reference year for chain volume measures is 2000-01.

Source: *Private New Capital Expenditure and Expected Expenditure, Australia (5625.0), Quarterly data.*

ACTUAL PRIVATE NEW CAPITAL EXPENDITURE, CHAIN VOLUME MEASURES(a)

Period	Building and structures	Equipment, plant and machinery	Total
	\$m	\$m	
ANNUAL (ORIGINAL)			
1996-97	16,181	25,904	41,240
1997-98	14,436	29,851	44,017
1998-99	14,631	28,403	42,658
1999-2000	12,321	29,893	42,143
2000-01	9,954	29,357	39,311
2001-02	9,302	30,413	39,714
QUARTERLY (TREND)			
2000-01			
September	2,836	7,545	10,367
December	2,513	7,422	9,935
March	2,347	7,223	9,575
June	2,338	7,138	9,479
2001-02			
September	2,350	7,240	9,591
December	2,322	7,486	9,808
March	2,293	7,740	10,033
June	2,304	7,931	10,232

(a) Reference year for chain volume measures is 2000-01.

Source: *Private New Capital Expenditure and Expected Expenditure, Australia (5625.0).*

Explanatory Notes

The private new capital expenditure series relates to new capital expenditure by private non-farm businesses in Australia.

Capital expenditure may be for assets which will increase production, increase efficiency or replace old equipment. New capital expenditure refers to the acquisition of new tangible assets either on own account or under a finance lease and includes major improvements, alterations and additions. In general, expenditure on second-hand assets is excluded unless these are imported for the first time.

The estimates are broken down by asset type (buildings and structures; equipment, plant and machinery), by industry (mining; manufacturing; and other selected industries), and by state/territory.

The estimates of private new capital expenditure are an important component in the compilation of the Australian national accounts. They are used, along with other data, in measuring private gross fixed capital formation, which forms part of the expenditure based measure of gross domestic product (GDP) and is also shown in the capital account. In compiling the national accounts estimates, acquisitions of second-hand assets are added and disposals of second-hand assets are subtracted.

As well as estimates of actual expenditure, estimates of expected private new capital expenditure for periods up to 18 months in advance are also compiled. Once actual expenditure for a financial year is known, it is useful to compare the expected expenditure with the actual expenditure. The resultant realisation ratios (actual expenditure divided by expected expenditure for the same period) assist in interpreting expectation statistics for future periods and can be applied to make predictions of actual expenditure for a future period.

Private new capital expenditure estimates provide one of the key measures of the performance of the Australian economy. The level of investment in private new capital expenditure has a major impact on the future productive capacity of the economy. It can also have a significant affect on GDP.

Further Reading

Private New Capital Expenditure and Expected Expenditure, Australia (5625.0)

Contains quarterly estimates of actual and expected new capital expenditure by type of asset and selected industry. Original, seasonally adjusted and trend estimates are provided in current price and chain volume terms. From March quarter 2002, estimates by state which were formerly contained in ABS cat. no. 5646.0 have also been included.

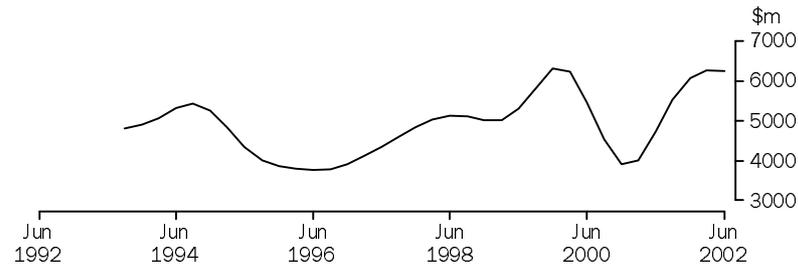
Directory of Capital Expenditure Data Sources and Related Statistics (5653.0)

Contains details of data sources on capital expenditure and related statistics produced by the ABS and other government agencies.

Residential Building Activity

Residential building is a volatile segment of construction activity. It is sensitive to general economic conditions and shocks such as interest rate changes. Preceding the introduction of The New Tax System in July 2000, a substantial amount of construction activity was brought forward, peaking in December quarter 1999. A severe downturn followed this peak, but was quickly reversed by a combination of historically low interest rates, government incentives (e.g. The First Home Owners Grant) and strong underlying demand for new dwellings.

VALUE OF NEW RESIDENTIAL BUILDING COMMENCEMENTS,
CHAIN VOLUME MEASURES: TREND



(a) Chain volume measures, reference year is 2000-2001.

(b) Chain volume measures are not additive for most periods; the component measures do not sum to a total.

Source: *Building Activity, Australia (8752.0), Quarterly data.*

Chapter 4 - Domestic Consumption and Investment

4.5 RESIDENTIAL BUILDING APPROVALS AND COMMENCEMENTS, NUMBER AND VALUE, CHAIN VOLUME MEASURES(a)

Period	Approvals(b)		Commencements	
	Value		Value	
	no.	\$m	no.	\$m
ANNUAL (ORIGINAL)				
1993–94	188,046	23,410	178,504	23,091
1994–95	171,070	22,552	165,386	23,196
1995–96	125,305	17,811	122,070	18,494
1996–97	135,472	20,044	125,223	19,302
1997–98	154,469	23,644	144,859	23,275
1998–99	157,466	24,664	146,130	24,055
1999–2000	175,942	27,721	166,812	28,670
2000–01	124,762	20,174	121,419	19,701
2001–02	171,510	27,355	159,693	28,594
QUARTERLY (TREND)				
2000–01				
September	30,262	4,963	34,135	4,544
December	28,797	4,456	28,793	3,918
March	30,165	4,930	27,401	4,014
June	35,538	5,825	31,089	4,737
2001–02				
September	42,548	6,496	36,693	5,535
December	43,158	6,821	40,339	6,079
March	41,809	6,955	41,453	6,263
June	43,996	7,082	41,209	6,253

(a) Chain volume measures reference year is 2000-01

(b) Data for the number of approvals includes dwelling units created as part of alterations or additions to, or conversions of existing buildings, as well as new houses and new other residential dwellings. Data on the value of approvals includes new houses and new other residential buildings and dwellings only. Refer to ABS catalogues 8731.0 and 8752.0 for more information.

Source: Building Approvals, Australia (8731.0), Building Activity, Australia (8752.0).

Explanatory Notes

A residential building is a building which is predominantly used for long-term residential purposes, and can contain one dwelling unit (e.g. house) or more than one dwelling unit (e.g. flats).

Residential building construction depends on the demand that exists for new places of residence. When the population is expanding rapidly the level of residential construction tends to increase in order to meet higher demand for new homes.

The willingness of individuals and investors to undertake residential building construction is affected by the interest rate and the economic climate. During times of economic expansion and/or low interest rates, individuals and investors are more willing to invest in new residential buildings than in periods of economic decline or high interest rates. Other factors which affect investment are the cost of land, labour and building materials. All of these are affected by the prevailing economic climate.

Residential construction statistics are used by government and private organisations. The housing industry uses building statistics in forecasting the demand and supply of new housing. The government also uses forecasts of residential building activity as one input to determine future policy regarding residential construction in the overall economic context. The statistics are also used to compile the dwellings component of gross fixed capital formation in the national accounts, which forms part of the expenditure measure of gross domestic product (GDP) as well as being shown in the capital account.

The ABS produces a range of statistics relating to residential building, including statistics on the number and value of approvals during a period, the number and value of commencements during a period, and the value of work done during the period. The series are closely related, with approvals tending to lead commencements and work done.

The housing sector is seen to be a leading indicator of the general state of the economy. Because housing is seen as a basic requirement for all Australians, there has been a continuing demand for more houses as the population has grown. As economic conditions become more favourable, the housing sector is one of the first areas to strengthen as pent-up demand becomes realised.

Further Reading

Building Activity, Australia (8752.0)

Provides quarterly estimates on number of dwelling units and value of residential buildings, value of alterations and additions to residential buildings and value of non-residential building by class of building, stage of construction, value of work done during period and value of work yet to be done; for each State and Territory and for private and public sectors for Australia.

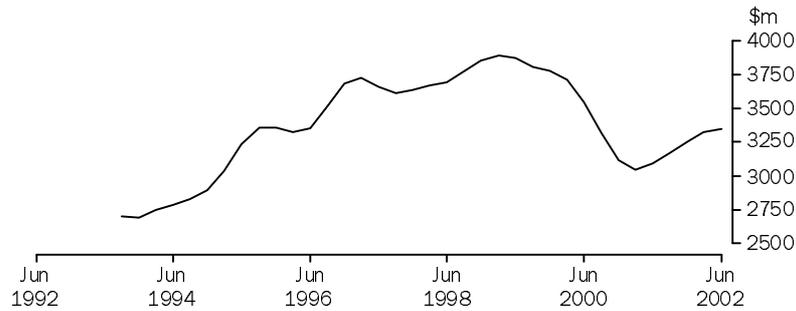
Building Approvals, Australia (8731.0)

Contains monthly information on the number of dwelling units and the value of residential building approved for the private and public sectors.

Non-residential Building Activity

The value of non-residential building work done, in chain volume terms, generally increased in the period up until March quarter 1999. Following the completion of activity brought about by the Sydney Olympic Games and around the introduction of The New Tax System, the value of non-residential building work done declined substantially. From March quarter 2001, the sector has recorded steady growth.

VALUE OF NON-RESIDENTIAL BUILDING WORK DONE, CHAIN VOLUME MEASURES:
TREND



(a) Chain volume measures reference year is 2000-2001.

Source: *Building Activity, Australia (8752.0)*, Quarterly data.

NON-RESIDENTIAL BUILDING ACTIVITY, CHAIN VOLUME MEASURES

Period	Private sector	Total
	\$m	\$m
ANNUAL (ORIGINAL)		
1993-94	7,160	10,925
1994-95	7,337	11,051
1995-96	7,591	11,250
1996-97	7,919	11,538
1997-98	8,341	11,981
1998-99	8,811	12,514
1999-2000	9,243	12,979
2000-01	9,567	13,266
2001-02	9,767	13,387
QUARTERLY (TREND)		
2000-01		
September	2,399	3,320
December	2,225	3,116
March	2,168	3,045
June	2,194	3,093
2001-02		
September	2,251	3,170
December	2,343	3,253
March	2,441	3,323
June	2,511	3,349

(a) Chain volume measures reference year is 2000-01

Source: *Building Activity, Australia (8752.0)*.

Explanatory Notes

Non-residential buildings are buildings other than residential buildings and include hotels, shops, factories, offices, etc. Non-residential buildings are used by businesses (both private and public) to produce goods and services.

Construction of non-residential buildings depends on the demand for particular types of buildings as well as on the level of economic activity. While overall economic conditions have an influence on investment decisions, the demand for particular types of buildings can vary considerably, depending on expectations for future activity in the industry in which a particular type of building can be used. For example, the demand for construction of new hotels depends on expected future tourism activity, the demand for factories is based on the outlook of the manufacturing industry and the demand for shops and offices on the current (over or under) supply of these buildings and expectations of future demand. Construction of community and public service buildings (hospitals, schools, etc.) tends to be more constant and is more affected by government budget considerations than overall economic activity.

Estimates of non-residential building are used by public and private sector analysts as a measure of economic activity and an indicator of business confidence and growth. They are also used in the compilation of the "other building" component of gross fixed capital formation in the national accounts, which forms part of the expenditure measure of gross domestic product (GDP), as well as being shown in the capital account.

Further Reading

Building Activity, Australia (8752.0)

Provides quarterly estimates on number of dwelling units and value of residential buildings, value of alterations and additions to residential buildings and value of non-residential building by class of building, by stage of construction, value of work done during period, value of work yet to be done; for each State and Territory and for private and public sectors for Australia.

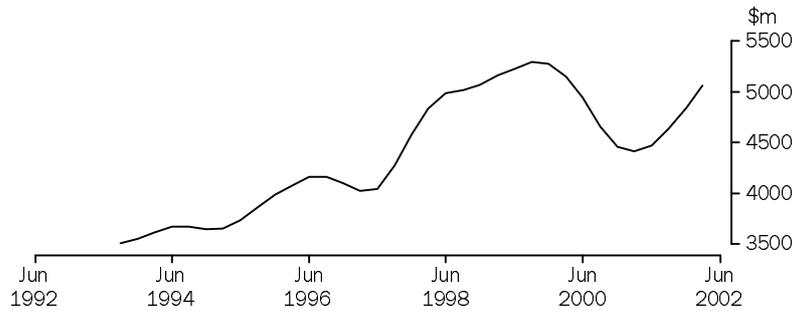
Building Approvals, Australia (8731.0)

Contains monthly information on the number and value of non-residential building by class of building approved.

Engineering Construction

The value of engineering construction work done in trend, chain volume terms gradually rose in the period 1993 to 1999, with a peak of \$5,297m in September quarter 1999. From here there was a period of decline until a trough in March quarter 2001 (\$4,419m). Since then there has been a period of steady growth. During the last 10 years the private sector has undertaken the greatest share of this activity.

ENGINEERING AND CONSTRUCTION ACTIVITY, VALUE OF WORK DONE, CHAIN VOLUME MEASURES(a): TREND



(a) Chain volume measures reference year is 2000-01

Source: *Engineering Construction Activity (8762.0)*, Quarterly Data

ENGINEERING CONSTRUCTION ACTIVITY, VALUE OF WORK DONE, CHAIN VOLUME MEASURES

Period	Total private sector	Total
	\$m	\$m
ANNUAL (ORIGINAL)		
1993-94	8,095	14,352
1994-95	8,147	14,509
1995-96	8,047	14,599
1996-97	7,869	14,637
1997-98	7,752	14,692
1998-99	7,809	14,891
1999-2000	8,060	15,233
2000-01	8,466	15,660
2001-02	8,921	16,094
QUARTERLY (TREND)		
2000-2001		
September	2,799	4,663
December	2,714	4,463
March	2,700	4,419
June	2,664	4,466
2001-2002		
September	2,760	4,635
December	3,011	4,840
March	3,307	5,062
June	3,511	5,240

Source: Australian Economic Indicators (1350.0)

Explanatory Notes

Engineering construction is infrastructure construction, e.g. roads, bridges, railways, telecommunications, water and sewerage, electricity generation and distribution facilities.

The level of engineering construction gives an indication of the economy's capability to grow and expand in the future. A modern economy needs a highly efficient infrastructure to ensure that the economy can operate to its capacity and continue to grow and that the needs of the population are adequately serviced.

A significant proportion of engineering construction is funded by government although much of the work is contracted out to private sector firms.

Engineering construction is a component of gross fixed capital formation in the national accounts, which forms part of the expenditure measure of gross domestic product (GDP) as well as being shown in the capital account.

Further Reading

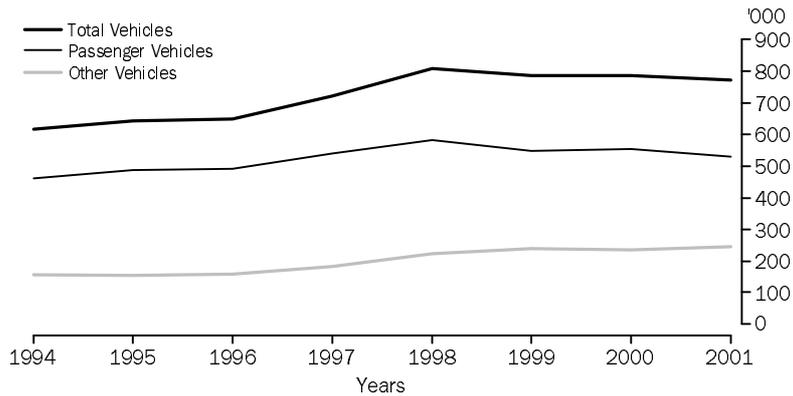
Engineering Construction Activity, Australia (8762.0)

Provides value of engineering construction work done, value of commencements and value of work yet to be done classified by State or Territory, commodity (roads, bridges, pipelines, etc.), sector undertaking work, and sector for whom the work is done.

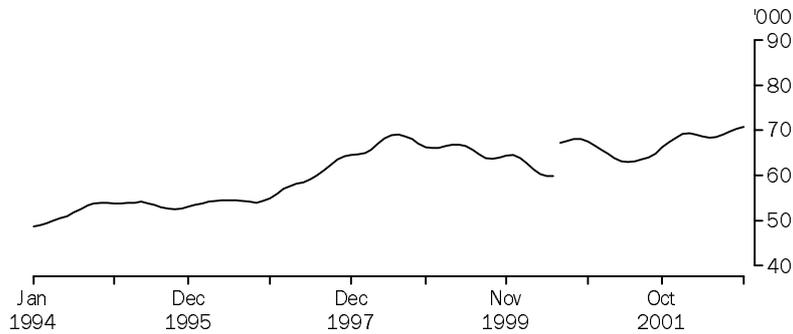
Sales of New Motor Vehicles

Sales of new motor vehicles rose from 616,256 in 1994, peaked at 807,669 in 1998, and subsequently declined to 772,681 in 2001. The sales decline was in the passenger vehicle category (excluding: motorcycles and four-wheel drive passenger vehicles) where sales in 2001 were 54,908 vehicles below the 1998 record high, an overall fall of 9.4%. In contrast, new sales of 'other' vehicles, (including: four-wheel drive passenger vehicles, trucks, buses, all terrain vehicles, and pick-up/cab chassis vehicles), reached a level in 2001 that was 19,920 vehicles above the level in 1998, a rise of 8.9%. The higher rate of sales growth for 'other' vehicles has led to their share of total sales rising from 25% in 1994, to 28% in 1998 and 31% in 2001.

1 ANNUAL SALES OF NEW MOTOR VEHICLES: ORIGINAL



2 MONTHLY SALES OF NEW MOTOR VEHICLES: TREND (a)



(a) A break in the trend series occurred between June and July 2000 as a result of changed behaviour arising from the introduction of the New Tax System.

Chapter 4 - Domestic Consumption and Investment

SALES OF NEW MOTOR VEHICLES

Year	Passenger vehicles	Other vehicles(a)	Total vehicles(a)
ANNUAL (ORIGINAL)			
1994	460,668	155,588	616,256
1995	488,372	154,185	642,557
1996	492,058	157,991	650,049
1997	540,353	182,289	722,642
1998	584,360	223,309	807,669
1999	547,572	239,243	786,815
2000	553,673	233,427	787,100
2001	529,452	243,229	772,681
MONTHLY (TREND)			
2001-02			
July	43,146	20,346	63,492
August	43,256	20,720	63,976
September	43,757	21,186	64,943
October	44,535	21,681	66,216
November	45,348	22,103	67,451
December	45,979	22,491	68,470
January	46,309	22,862	69,171
February	46,239	23,162	69,401
March	45,802	23,332	69,134
April	45,201	23,455	68,656
May	44,731	23,609	68,340
June	44,642	23,882	68,524

(a) Excludes motor cycles, plant and equipment and unpowered vehicles.

Source: Sales of New Motor Vehicles, Australia (9314.0).

Explanatory Notes

Statistics on sales of new motor vehicles are based on the VFACTS series produced by the Federal Chamber of Automotive Industries (FCAI). VFACTS reports the numbers of new motor vehicle sales by dealers and direct sales by manufacturers throughout Australia.

These statistics replace the New Motor Vehicle Registrations (NMVR) collection. The NMVR collection provided a proxy for vehicle sales and were mainly used as an indicator of general economic activity. From the early 1990's FCAI established the VFACTS collection, an alternative data source that directly measures sales of new vehicles. While the sources of the NMVR and VFACTS collections are quite different, they each produced outputs which are largely comparable and which have tracked closely for some time. Given this duplication, the ABS ceased its NMVR collection after the release of statistics relating to the month of December 2001.

A significant part of consumer spending is the purchase of new motor vehicles. Therefore, changes in new motor vehicle sales provide an indication of changes in consumer spending.

Commonwealth and State Government Treasury offices and other policy departments use sales statistics for economic planning. The statistics are also used by motor vehicle manufacturers and distributors for market research and by financial institutions in setting lending policies.

Further Reading

Motor Vehicle Census, Australia (9309.0)

Contains counts of all motor vehicles registered in Australia, by data items such as body type, make and year of manufacture.

Sales of New Motor Vehicle Registrations, Australia (9314.0)

Contains monthly sales in each State and Territory of new passenger vehicles and other vehicles.

Survey of Motor Vehicle Use, Australia (9208.0)

Contains statistics on motor vehicle usage during a 12 month reference period.

CHAPTER 5

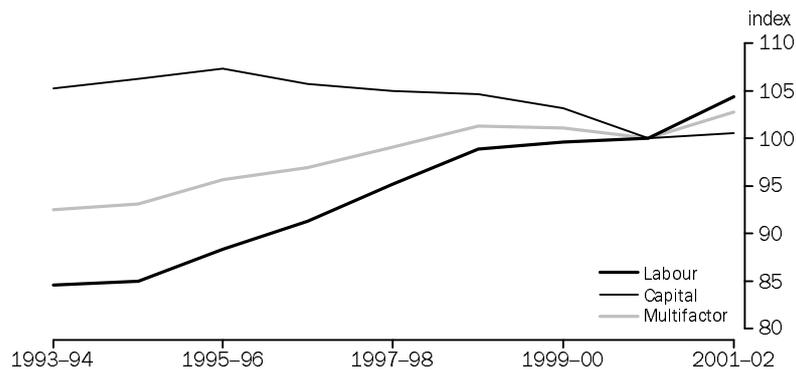
PRODUCTION AND INDUSTRY

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Productivity

The average annual growth rate between the latest two 'growth cycle' peaks (see explanatory notes below) in 1993-94 and 1998-99 was 1.8% for multifactor productivity, 3.2% for labour productivity and -0.1% for capital productivity. The growth rate for multifactor productivity over the latest cycle is higher than for any preceding cycle since multifactor productivity was first measured in respect of 1964-65.

PRODUCTIVITY INDEXES, Market Sector (2000-01 = 100.0)



Source: Australian System of National Accounts (5204.0).

PRODUCTIVITY INDEXES, Market Sector (2000-01 = 100.0)

	Labour (a)	Capital (b)	Multifactor (c)
1992-93	82.4	103.6	90.5
1993-94	84.6	105.3	92.5
1994-95	85.0	106.3	93.1
1995-96	88.4	107.3	95.7
1996-97	91.3	105.7	96.9
1997-98	95.2	105.0	99.1
1998-99	98.9	104.7	101.3
1999-00	99.6	103.2	101.1
2000-01	100.0	100.0	100.0
2001-02	104.4	100.6	102.8

(a) Gross domestic product per hour worked.

(b) Gross domestic product per unit of capital services.

(c) Gross domestic product per combined unit of labour and capital.

Source: Australian System of National Accounts (5204.0).

Explanatory Notes

Productivity is the relationship between economic output and the inputs, such as labour and capital, which have gone into producing that output. Productivity can be increased through better utilisation of resources.

Multifactor productivity (MFP) is a measure of the efficiency of the production process that takes account of more than one input (factor). It is expressed as a ratio of output to a combined measure of two or more factor inputs (e.g. capital and labour). MFP measures are typically presented in index number form.

The ABS measures MFP as the ratio of chain volume estimates of market sector GDP to a combined measure of capital services and hours worked. Growth in MFP can arise from technical progress, improvements in the work force, improvement in management practices, economies of scale and so on.

Productivity indexes fluctuate according to the business cycle. One way to measure the trend rate of growth of productivity is to calculate the average annual growth rate between growth cycle peaks. Growth cycle peaks for multifactor productivity are identified as local maximum positive deviations of the productivity index from its long-term trend.

Labour productivity is usually measured as the amount produced per hour worked. Quite clearly, this measure can be affected by technological changes and changes in other inputs (e.g. capital), as well as changes in labour efficiency.

Capital productivity is measured as the amount produced per unit of capital services employed. Equipment, structures, land and inventories are forms of capital goods used in the production of goods and services.

Productivity measures are used by both government and private organisations to gauge the effect of changes in work practices, technology, education and training.

Further Reading

Australian System of National Accounts (5204.0)

Contains the multifactor productivity index for the market sector. It also includes associated labour productivity, capital productivity and capital-labour ratio indexes.

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

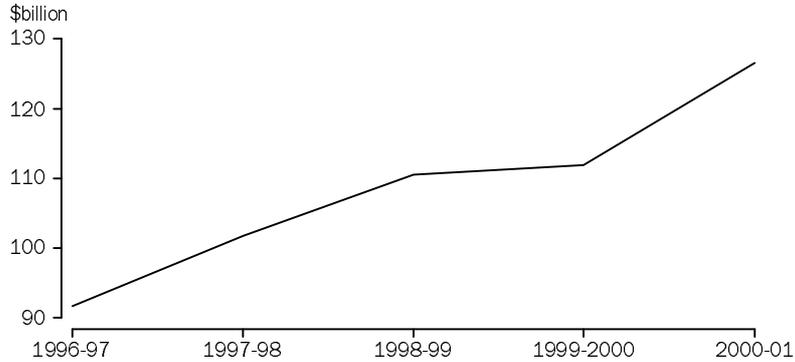
Occasional Paper: Estimates of Multifactor Productivity, Australia (5233.0)

Describes the ABS MFP indexes, including their limitations. Alternative measures of MFP are described briefly. The methods used to derive estimates of MFP have been upgraded since the occasional paper was released, and so reference should be made to 5216.0 for up-to-date methodological information.

Industry Economic Activity

There were 610,893 operating businesses in all industries (except agriculture, forestry and fishing) in Australia in 2000-2001. This number of operating businesses increased by 5.2% over the period from 1996-97 to 2000-2001. Operating profit before tax (OPBT) increased by 38% over the same period.

OPERATING PROFIT BEFORE TAX (a), Australia



(a) All Industries excluding agriculture, forestry and fishing.

Source: Business Operations and Industry Performance, Australia (8140.0), Annual data.

OPBT in 2000-01 was \$126,802m, an increase of 13% (\$14,887m) over 1999-2000, the highest percentage increase over the five year period. The largest percentage increase in OPBT occurred in the Mining industry (95%), followed by the Private Community Services (33%) and Finance and Insurance (32%) industries. The largest decrease occurred in the Transport and Storage industry (24%).

TOTAL OPERATING PROFIT BEFORE TAX (a)

Industry	1996-97	1997-98	1998-99	1999-2000	2000-01
	\$m	\$m	\$m	\$m	\$m
Mining	7,563	6,784	7,380	8,191	15,998
Manufacturing	13,072	13,601	13,146	16,042	15,509
Electricity, gas and water supply	4,212	4,800	5,058	5,150	4,599
Construction	3,152	3,144	4,174	4,195	3,669
Wholesale trade	5,889	5,513	7,566	8,097	6,237
Retail trade	5,185	5,881	6,100	6,193	5,511
Accommodation, cafes and restaurants	1,880	2,158	1,612	1,671	1,353
Transport and storage	3,564	3,671	3,855	3,096	2,369
Communication services	1,989	4,603	6,153	6,105	6,406
Finance and insurance	30,199	34,275	37,930	33,544	44,344
Property and business services	9,608	10,032	10,316	11,817	12,625
Private community services	3,486	3,924	3,787	3,355	4,455
Cultural and recreational services	927	1,843	2,609	3,121	2,536
Personal and other services	963	1,465	925	1,337	1,189
All industries (a)	91,689	101,693	110,609	111,915	126,802

(a) All industries, excluding agriculture, forestry and fishing.

Source: Business Operations and Industry Performance Australia, 2000-01 (8140.0).

Explanatory Notes

Annual measures of industry economic activity are available from the ABS Economic Activity Survey (EAS). EAS collects data based on profit and loss and balance sheet accounts of public corporations and private employing businesses in most industries of the Australian economy. Non-employing businesses and the general government sector are excluded from the estimates shown in the above table and graph. Since 1994-95, estimates using a combination of data from the EAS and business income tax data provided to the Australian Taxation Office have also been produced and these are presented in the publication **Australian Industry** (8155.0), as are estimates for non-employing businesses from 2000-01.

Data for the goods producing industries are collected via industry-specific collections such as the Manufacturing Survey and rotating Service Industry Surveys, which carry additional EAS questions. These and data sourced from other ABS collections are merged with EAS data to give a complete economy wide picture.

EAS output includes details of income and expenditure, profit, assets and liabilities. A number of ratios are provided, including measures of profitability, performance and indebtedness. The estimates are classified by industry. For many subdivisions separate statistics are also available for large businesses and small and medium businesses whose definitions are based on employment and assets.

EAS data are used to analyse the performance of various industries. They are also an important input into the compilation of supply and use tables, from which annual estimates of gross domestic product (GDP) and input-output tables are derived.

Further Reading

Business Operations and Industry Performance, Australia (8140.0)

Provides economic statistics, including aggregates and ratios, for public corporations and private employing businesses in most industries of the Australian economy.

Australian Industry, Australia (8155.0)

Presents estimates derived using a combination of data from the Economic Activity Survey and business income tax data provided to the Australian Taxation Office. The estimates include total income and expenses, and operating profit before tax. Experimental estimates are also included, which provide income and expense items at the 3 and 4 digit ANZSIC level.

Note: From 2001-03, a new set of publications will be released presenting the full range of statistics currently presented in 8140.0 and 8155.0. These will be compiled using EAS and business income tax data. Please contact the ABS for details of the catalogue numbers for these publications.

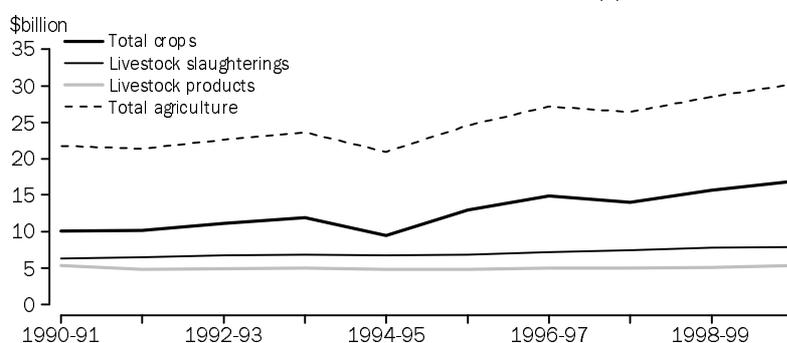
Agricultural Commodity Production

Australia's principal crops by volume of production in 2000-01 included sugar cane (28.1 million tonnes), wheat (22.1 million tonnes), barley (6.7 million tonnes), canola (1.8 million tonnes), and cotton lint (666,000 tonnes).

In terms of production from livestock, approximately 8.6 million cattle (including calves) were slaughtered in 2001-02, together with 14.5 million sheep, 17.4 million lambs and 5.4 million pigs. These livestock in total accounted for the production of almost 3.1 million tonnes of red meat.

Changes in the volume of aggregate agricultural production over time can be obtained using chain volume measures. Between 1990-91 and 1999-2000, the volume of agricultural production increased by 39%. During this period, the volume of total crop output increased by 68%, livestock slaughterings increased by 25%, while livestock products returned to the 1991 level after a decade of lower production.

CHAIN VOLUME MEASURES OF AGRICULTURAL PRODUCTION(a)



(a) Reference year for chain volume measures is 1999-2000.

Source: Unpublished ABS data.

CHAIN VOLUME MEASURE OF FARM PRODUCTION(a)

	Crops	Livestock Slaughterings	Livestock Products	Total Agriculture
	\$m	\$m	\$m	\$m
1990-1991	10,088	6,330	5,366	21,743
1991-1992	10,197	6,506	4,828	21,354
1992-1993	11,124	6,781	4,926	22,632
1993-1994	11,897	6,900	5,029	23,619
1994-1995	9,491	6,809	4,790	20,953
1995-1996	12,978	6,897	4,766	24,594
1996-1997	14,939	7,208	4,983	27,160
1997-1998	14,028	7,541	4,964	26,471
1998-1999 (b)	15,621	7,773	5,142	28,517
1999-2000 (b)	16,923	7,944	5,354	30,221

(a) Reference year 1999-2000. (b) These figures are expected to be revised down by between 1% and 3% following further analysis.

Source: Unpublished ABS data.

Explanatory Notes

Quantities of agricultural production are obtained from annual ABS agricultural commodity collections, other ABS collections, and some external sources. Most price information is obtained from non-ABS sources such as marketing boards, marketing reports, wholesalers, brokers and auctioneers. The scope of the annual agricultural commodity collections since 1993-94 has been establishments undertaking agricultural activity having an estimated value of agricultural operations (EVAO) of \$5,000 or more. The chain volume measures of output relate to that part of agricultural production sold outside the agricultural sector. They exclude the production of seed or plants used for future crops, and feed and fodder consumed or retained on farms.

A rise in the volume of production may not always be in the best interest of the producer. When a commodity has a large share of either the domestic or world market, an increase in supply can cause a fall in the price of the commodity, unless demand also increases. However, the majority of Australia's farm commodities do not have a large share of the world market. The quantity of these commodities exported can increase without having a significant effect on the supply of the commodity on the world market and therefore little effect on the price received. Australian producers are more price takers than price makers in the international commodity market.

Further Reading

ABS Publications

Agriculture, Australia (7113.0)

Provides detailed statistics on crops, livestock and livestock products; characteristics of farms; and some land management practices. Also included are detailed statistics on the financial performance of agricultural industries, the value of agricultural commodities produced (VACP) and summary trade data.

Agricultural Commodities, Australia (7121.0)

Provides final estimates for major agriculture outputs and activity. The 1999-2000 edition contains tables and commentary on agriculture industry structure, area and production of crops, livestock numbers, livestock products, value of commodities produced, land management and trade.

Livestock Products, Australia (7215.0)

Provides statistics on livestock slaughterings, meat production, milk and wool, and export data on live sheep, cattle and meat.

Other publications

Australian Commodities Forecasts and Issues (Australian Bureau of Agricultural and Resource Economics, quarterly)

Contains Australian Bureau of Agricultural and Resource Economics (ABARE) forecasts and historical data for agriculture and resource commodities. Includes data on quantity and value of production, quantity and value of exports, value of imports of selected commodities, annual and quarterly prices and world production and consumption, stocks and trade for selected commodities.

Tourism

Tourism is a significant contributor to the Australian economy, generating markets for a wide variety of goods and services.

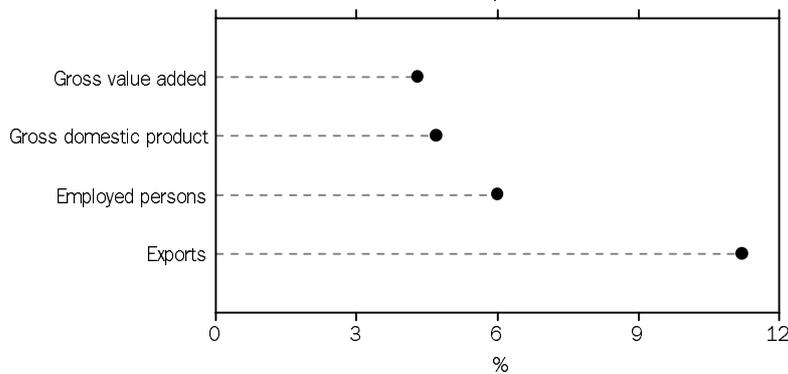
In 2000-01, tourism accounted for more than \$70 billion worth of goods and services consumed. Domestic visitors contributed 76.0% to total tourism consumption, while international visitors generated 24.0%. There were about 551,000 persons employed in tourism in 2000-01, or 6.0% of total employment in Australia.

In this period, tourism accounted for \$31.8 billion (4.7%) of Australia's Gross Domestic Product (GDP).

Tourism gross value added was \$26.3 billion or 4.3% of total industry gross value added in 2000-01.

Tourism also made a significant contribution to Australia's export earnings. In 2000-01, international visitors consumed \$17.1 billion worth of goods and services produced by the Australian economy, or 11.2% of total exports of goods and services.

TOURISM'S SHARE OF THE AUSTRALIAN ECONOMY, 2000-01

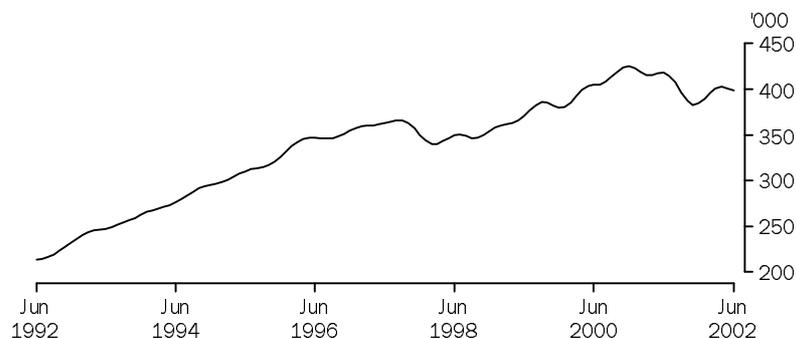


Source: Australian National Accounts: Tourism Satellite Account 2000-01 (5249.0).

In 2001-02, there were 217.3 million total domestic visitor trips taken by Australian residents aged 15 years and over in Australia. Nearly two thirds of these trips were taken by same day visitors (65.5%), with overnight visitor numbers accounting for the remainder (34.5%). In this period, there were also 4.8 million short-term overseas visitor arrivals to Australia.

In trend terms, the number of monthly short-term overseas visitor arrivals to Australia rose from 213,600 in June 1992 to 398,200 in June 2002 (an increase of 86.4%). Over this period, the most significant monthly fall was recorded in September 2001 (down 2.6% from August 2001), coinciding with the September 11 terrorist attacks on the United States.

SHORT-TERM OVERSEAS VISITOR ARRIVALS: TREND (a)



(a) Data for April 2001 to June 2001 are preliminary and subject to revision.

Source: ABS, Overseas Arrivals and Departures, Australia (3401.0), Monthly data.

Chapter 5 - Production and Industry

Tourism activity can also be described by data on the capacity, occupancy rates, and takings from short-term non-residential accommodation such as hotels, motels and guest houses, serviced apartments.

In original terms, overall demand for rooms in licensed hotels, motels, guest houses and serviced apartments fell marginally in 2001–02 compared to 2000–01, with occupancy rates down 0.1 percentage points. The figures for room nights occupied and room occupancy rates in the month of June 2002 were the lowest since December 1999.

TOURISM INDICATORS

Hotels, Motels, Guest Houses and Serviced Apartments(a)				
Period	Capacity (guest rooms)(b)	Room nights occupied	Room occupancy rates(c)	Short-term overseas visitor arrivals(d)
	no.	'000	%	'000
ANNUAL (ORIGINAL)				
1999-2000	192,830	40,897	59.0	4,651.8
2000-01	196,544	41,053	57.5	5,022.0
2001-02	196,854	41,367	57.4	4,768.3
MONTHLY (ORIGINAL)				
2001				
January	n.a.	3,433.7	56.4	416.6
February	n.a.	3,118.0	56.7	429.2
March	196,559	3,636.8	59.7	428.7
April	n.a.	3,352.1	56.9	402.6
May	n.a.	3,363.2	55.2	328.0
June	196,544	3,157.6	53.6	365.7
July	n.a.	3,603.2	59.1	446.9
August	n.a.	3,539.7	58.0	384.6
September	196,729	3,476.0	58.9	366.3
October	n.a.	3,701.3	60.3	378.5
November	n.a.	3,545.6	59.7	376.2
December	198,133	3,249.0	53.0	523.2
2002				
January	n.a.	3,477.8	56.7	379.3
February	n.a.	3,257.0	58.8	437.2
March	197,859	3,693.6	60.2	446.5
April	n.a.	3,368.5	57.0	360.3
May	n.a.	3,337.8	54.7	329.9
June	196,854	3,117.5	52.8	339.4

(a) For establishments with 15 or more rooms.

(b) All capacity data are at end of period.

(c) Room occupancy rates are averages over the period.

(d) Data for April 2001 to June 2001 are preliminary and subject to revision.

Source: Tourist Accommodation, Australia (8635.0) and Overseas Arrivals and Departures, Australia (3401.0).

Explanatory Notes

Tourism is essentially a demand concept. It is not an industry in the traditional sense, in which industries are classified in accord with the goods and services that they produce, because tourism depends on the status of the customer (as visitor). Tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes.

Tourism statistics are used by many government agencies, state and territory tourism authorities, research bodies and businesses. Different aspects of tourism activity can be described by:

- industry wide statistics;
- data on service industries (such as accommodation, retail trade, cafes and restaurants, and cultural and recreational services, in which tourism plays an important part);
- building statistics (e.g. construction of hotels);
- environmental statistics (e.g. visitors to World Heritage Areas and national and state parks);
- demographic statistics (e.g. overseas and domestic visitor arrivals);
- social statistics;
- economic statistics; and
- labour statistics and prices.

The contribution of tourism to major economic aggregates, as well as its inter-relationships with other economic activity, is measured in the Australian Tourism Satellite Account (TSA).

The TSA is compiled within a national accounting framework. It includes details by type of visitor, what products were purchased by tourists, and which industries supplied those products. It partitions industries into tourism and non-tourism activities so that the direct contribution of tourism to the economy can be estimated on a consistent basis with traditional industry groupings (*Australian and New Zealand Standard Industrial Classification* divisions) published in ABS statistics, such as agriculture, manufacturing and retail trade.

Tourism GDP is the total market value of Australian produced goods and services consumed by visitors after deducting the cost of goods and services used up in the process of production.

Tourism gross value added measures the value of tourism gross output at basic prices (i.e. excluding product taxes such as the GST) by all industries which supply tourism products, less the value of the inputs used in producing these tourism products. This measure is free from distortions in prices caused by changes in tax rates or the introduction of new taxes over time.

Further Reading

Accommodation Industry, Australia (8695.0)

Contains business size, employment, income and expenditure data as well as an historical overview of the accommodation industry.

Australian National Accounts: Tourism Satellite Account (5249.0).

Presents estimates of the direct contribution of the tourism industry to the Australian economy within the context of a satellite account linked to the Australian System of National Accounts. It provides users with a macro-economic framework to conduct analyses of tourism impacts on the economy.

Overseas Arrivals and Departures, Australia (3401.0)

Provides a summary of monthly data for all movements into and out of Australia, including details of overseas visitors by country of residence, intended length of stay and purpose of journey.

Research Paper No. 6: Tourism's Indirect Economic Effects 1997-98 (Bureau of Tourism Research, 2001).

Measures the indirect economic effects of tourism in terms of factors such as GDP, value added and employment. It complements the measure of the direct contribution of tourism to the Australian economy provided by the ABS in the Tourism Satellite Account.

Tourist Accommodation, Australia (8635.0)

Contains quarterly data on capacity, occupancy rates and takings for establishments providing short-term accommodation for each state and territory and Australia.

Tourism Indicators, Australia (8634.0)

Contains a range of tourism statistics together with articles on tourism issues.

Tourism Theme Page

Provides summaries and links to ABS products and services, non-ABS sources of tourism information, recent developments, and more.

Travel by Australians: quarterly results of the National Visitor Survey (Bureau of Tourism Research)

Provides quarterly data on the travel patterns and behaviour of Australian residents.

CHAPTER 6

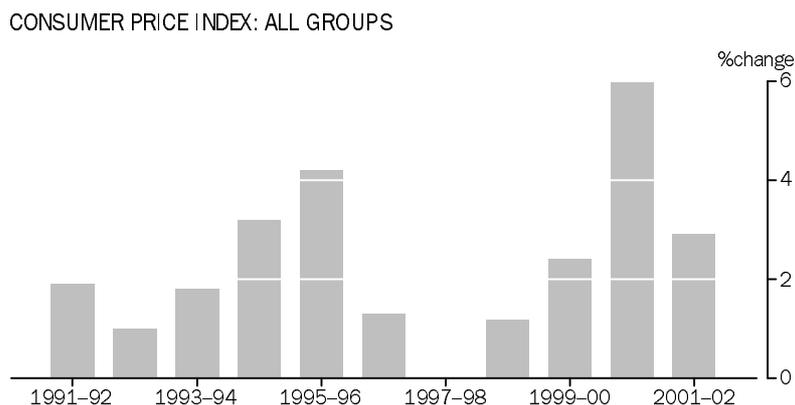
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Consumer Price Index

The All Groups Consumer Price Index (CPI) recorded an average annual rate of growth between 1991-92 and 1999-00 of about 1.9%, varying from a low of 0% in 1997-98 to a high of 4.2% in 1995-96.

On 1 July 2000 The New Tax System (TNTS) was introduced. TNTS centred around the introduction of a goods and services tax, which replaced wholesale sales tax and some state and territory taxes. TNTS had a direct effect on the CPI because the CPI measures final transaction prices inclusive of indirect taxes. Hence in 2000-01, the All Groups CPI increased by 6.0%. In 2001-02, the annual increase was 2.9%.



Source: Consumer Price Index, Australia (6401.0).

CONSUMER PRICE INDEX: SELECTED GROUPS(a) (1989-90 = 100.0)

Period	Food	Clothing and footwear	Housing	All groups
ANNUAL AVERAGE				
1998-99	126.5	106.7	95.8	121.8
1999-2000	129.2	105.5	99.9	124.7
2000-01	135.6	112.5	107.9	132.2
2001-02	142.7	112.4	111.1	136.0
QUARTERLY				
1999-2000				
June	130.2	105.7	101.2	126.2
2000-01				
September	132.4	113.5	107.4	130.9
December	133.4	113.1	107.7	131.3
March	137.6	110.7	108.2	132.7
June	138.8	112.5	108.4	133.8
2001-02				
September	139.8	111.1	110.0	134.2
December	143.4	112.7	110.7	135.4
March	144.2	112.2	111.5	136.6
June	143.5	113.7	112.2	137.6

(a) Weighted average of eight capital cities.

Source: Consumer Price Index, Australia (6401.0).

Explanatory Notes

The Consumer Price Index (CPI) has been specifically designed as a general measure of price inflation for the household sector as a whole. The simplest way of thinking about the CPI is to imagine a **basket of goods and services** comprising items typically bought by Australian households. As prices vary, the total cost of this basket will also vary. The CPI is simply a measure of the changes in the cost of this fixed basket over time.

This basket of goods and services has been selected to represent purchases by all metropolitan private households and covers expenditure on the following broad items: food; alcohol and tobacco; clothing and footwear; housing; household furnishings, supplies and services; health; transportation; communication; recreation; education; as well as on some other miscellaneous items. To ensure the basket remains representative of current spending habits, it is revised about every five years.

The price of the CPI basket in the base period (currently 1989-90) is assigned a value of 100.0 and prices in other periods are expressed as percentages of the price in the base period. For example, if the price of the basket had increased by 15% since the base period then the CPI would read 115.0.

The actual index number for any given period is therefore equal to:

$$\frac{\text{total cost of fixed basket in given period}}{\text{total cost of fixed basket in reference base period}} \times 100$$

The CPI has always been an important economic indicator and in recent years actions related to movements in the CPI have had direct or indirect effects on all Australians. For example, it is used by the Reserve Bank of Australia in determining monetary policy; it is used to index Social Security and superannuation payments; it is used to adjust excise and customs duty on alcohol and tobacco; and it is used in a range of business contracts for price adjustment.

The CPI is often loosely referred to as a 'cost of living index' but this is not correct. A true cost of living index, among other things, would need to take into account changes in standards of living and the substitutions that consumers make in order to maintain their standard of living in the face of changing market conditions (for instance, buying chicken instead of beef when beef prices are high). In contrast, the CPI assumes the purchase of a constant basket of goods and services and measures changes in the price of the goods and services in that basket alone. A 'cost of living index' would also include things such as mortgage interest charges, which are currently excluded from the CPI.

Further Reading

Consumer Price Index, Australia (6401.0)

Presents quarterly movements in retail prices of goods and services commonly purchased by metropolitan private households. Indexes are published for each of the State capitals, Canberra and Darwin.

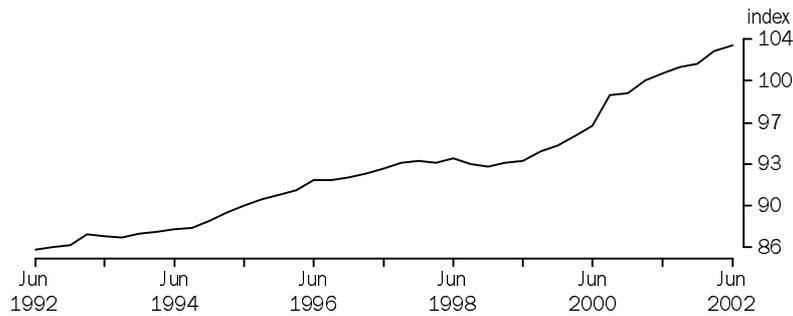
A Guide to the Consumer Price Index: 14th Series (6440.0)

Contains information designed to promote the understanding of the CPI. It includes what the CPI is, to whom the CPI relates and how it is calculated.

National Accounts - Chain Price Index

The chain price index for GDP recorded an average quarterly rate of growth of 0.3% from June quarter 1992 to June quarter 1998. This was followed by two quarters of small negative growth. Since the March quarter 1999, the average quarterly growth rate for the chain price index for GDP has been about 0.7%. In June quarter 2002, the chain price index for GDP increased by 0.5% on the previous quarter. The annual growth for 2001-02 from the previous year was 2.5%.

GROSS DOMESTIC PRODUCT (GDP), CHAIN PRICE INDEX (a),: Original



(a) Chain price indexes are annually reweighted Laspeyres price indexes.

Source: ABS, Australian National Accounts: National Income, Expenditure and Product (5206.0), Quarterly data.

Gross Domestic Product (GDP), Chain Price Index (2000-01=100.0)

GDP (Index)		
ANNUAL		
1996-97		92.3
1997-98		93.4
1998-99		93.3
1999-2000		95.3
2000-01		100.0
2001-02		102.5
QUARTERLY (ORIGINAL)		
2000-01	December	99.3
	March	100.4
	June	101.1
2001-02	September	101.6
	December	101.9
	March	103.0
	June	103.5

(a) Chain price indexes are annually reweighted Laspeyres price indexes.

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0).

Explanatory Notes

Chain price indexes are one of a suite of price indexes published by the ABS that measure price change. The consumer price index and all the producer and international trade price indexes also do this. However, the national accounts chain price indexes have one feature that the other price indexes do not share - they encompass the whole of the economy. They are annually reweighted chain Laspeyres price indexes which means that the weights used to combine their constituent, elemental price indexes are always reasonably up to date.

Chain price indexes can be thought of as a series of indexes measuring price change from a base year to quarters in the following year using current price values in each base year as weights. These indexes, which each span one year, are linked together to form a continuous time series. The time series is subsequently referenced to 100.0 in the reference year (currently 2000-01).

When calculated for the major national accounting aggregates, such as GDP or domestic final demand, chain price indexes relate to a broader range of goods and services in the economy than that represented by any of the individual consumer or producer price indexes published by the ABS. The chain price index for GDP measures the price change of all the goods and services produced in Australia, while the chain price index for domestic final demand measures the price change of the final expenditure on goods and services in Australia.

Unlike quarterly implicit price deflators (IPD), which are derived by dividing a chain volume measure into its current price equivalent, chain price indexes reflect only pure price change. In contrast, quarterly IPDs are also affected by compositional change.

Chain price indexes are used by analysts in both the public and private sector to understand the extent of inflation in the economy.

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

Australian National Accounts: National Income, Expenditure and Product (5206.0)

Contains quarterly chain price indexes for several series, including domestic final demand and gross domestic product.

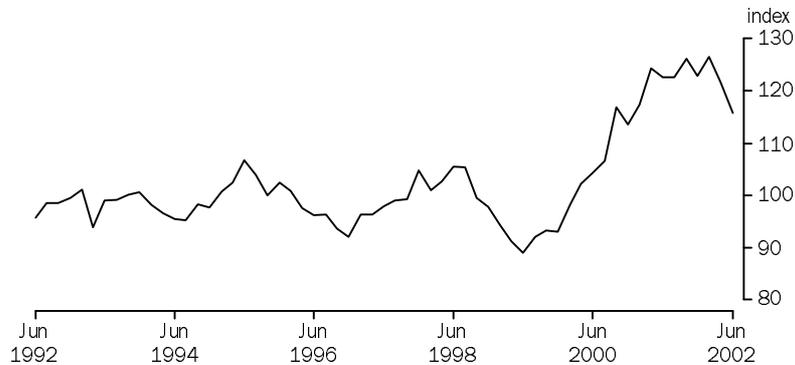
Australian System of National Accounts (5204.0)

Contains annual chain price indexes for several series, including domestic final demand and gross domestic product.

RBA Commodity Price Index

The Reserve Bank of Australia (RBA) index of commodity prices has been quite volatile over the past 10 years. However the level of the index has increased substantially since the end of the 1990s, rising from a low of 88.1 in May 1999 to a high of 128.2 in September 2001 (on a base of 1994-95 = 100.0). In June 2002, the series recorded 115.7.

RESERVE BANK OF AUSTRALIA INDEX OF COMMODITY PRICES



Source: Reserve Bank of Australia, Monthly data.

RBA INDEX OF COMMODITY PRICES(a) (1994-95= 100.0)

Period	All items
ANNUAL	
1998-99	96.7
1999-2000	96.3
2000-01	116.2
2001-02	123.3
MONTHLY	
2000-01	
April	124.4
May	123.1
June	122.6
2001-02	
July	124.2
August	122.6
September	128.2
October	126.1
November	123.1
December	122.8
January	124.7
February	126.6
March	124.7
April	121.7
May	118.9
June	115.7

(a) Monthly average data.

Source: Reserve Bank of Australia Bulletin.

Explanatory Notes

The Reserve Bank of Australia (RBA) developed the commodity price index to provide an early indication of trends in Australia's export prices. To make the index easier to understand and more relevant the RBA made the following changes to the index in 1998:

- the index is now calculated as a fixed-weight Laspeyeres index;
- the index was rebased from 1989-90 to 1994-95; and
- crude oil was excluded.

The updated index was spliced onto the previous index at July 1989.

There are 17 commodities included in the index representing approximately 75% of Australia's commodity exports. The weights given to each commodity can vary over time to allow for changes in the composition of exports.

Indexes for rural and non-rural components are calculated as well as for total commodities. In June 2000 rural commodities made up 33.2% of the overall index, with beef and veal, wool, wheat and sugar being the main rural commodities. Non-rural commodities make up the rest of the index, with gold, coking and steaming coal, iron ore and aluminium being the main non-rural commodities.

The Government and private enterprise use the RBA commodity price index to predict Australia's export earnings and future economic prospects.

Further Reading

Reserve Bank of Australia Bulletin

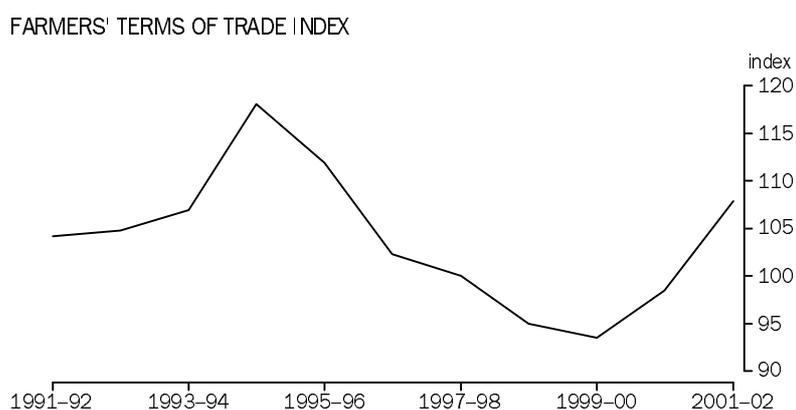
Presents monthly estimates for the Reserve Bank of Australia commodity price index for rural, non-rural and all items. See article in the September 1998 issue for an explanation of the index.

Reserve Bank of Australia Index of Commodity Prices

A monthly Reserve Bank of Australia press release that provides the commodity price index.

Prices Received and Paid by Farmers

From 1991-92 to 1994-95, the farmers' terms of trade index rose to a peak of 118.1 (on a base of 1997-98 = 100.0), as prices received increased more rapidly than prices paid. The terms of trade index then declined to 93.5 in 1999-2000, as prices paid increased while prices received fell. However, from 2000-01 prices received again increased more rapidly than prices paid, leading to an increase in terms of trade. It should be recognised that the index does not necessarily relate to gross returns received by farmers, since price movements may be offset by counteracting movements in the quantities of commodities traded.



Source: *Indexes of Prices Received and Paid by Farmers (ABARE), Annual data.*

INDEXES OF PRICES RECEIVED AND PAID BY FARMERS (1997-98 = 100.0)

Period	Prices received	Prices paid	Farmers' terms of trade(a)
ANNUAL			
1991-92	94.5	90.7	104.2
1992-93	93.7	89.5	104.8
1993-94	97.4	91.1	106.9
1994-95	112.0	94.9	118.1
1995-96	111.2	99.4	111.9
1996-97	101.6	99.3	102.3
1997-98	100.0	100.0	100.0
1998-99	95.0	100.0	95.0
1999-00	96.6	103.3	93.5
2000-01	108.3	110.0	98.5
2001-02	121.1	112.2	107.9

(a) Ratio of index of prices received by farmers to index of prices paid by farmers.

Source: *Indexes of Prices Received and Paid by Farmers (ABARE, Australian Commodities, Sept. qtr 2002).*

Explanatory Notes

The Australian Bureau of Agricultural and Resource Economics (ABARE) produces indexes of prices received and prices paid by farmers. The indexes measure movements in the price of fixed baskets of goods and services that farmers sell and purchase, respectively. ABARE revised the method for calculating farm, price and production indexes in October 1999. The indexes for the different groups of farm commodities are now calculated on a chained weight basis using Fisher's ideal index with a reference year of 1997-98.

The indexes of prices received and paid by farmers are not indicators of farmers' incomes or costs, but are used to determine farmers' terms of trade. Farmers' terms of trade is equal to the ratio of prices received to prices paid. Farmers experience a rise in their terms of trade when, for example, the average level of prices they receive increases at a faster rate than the average level of prices paid. Farmers experience a fall in their terms of trade when, for example, the prices they pay increase at a faster rate than the prices they receive.

ABARE uses farmers' terms of trade along with other information in the projection of income levels for producers of specific commodities. These forecasts are subsequently used by the Government in developing various agricultural and trade policies.

Further Reading

Agriculture, Australia (7113.0)

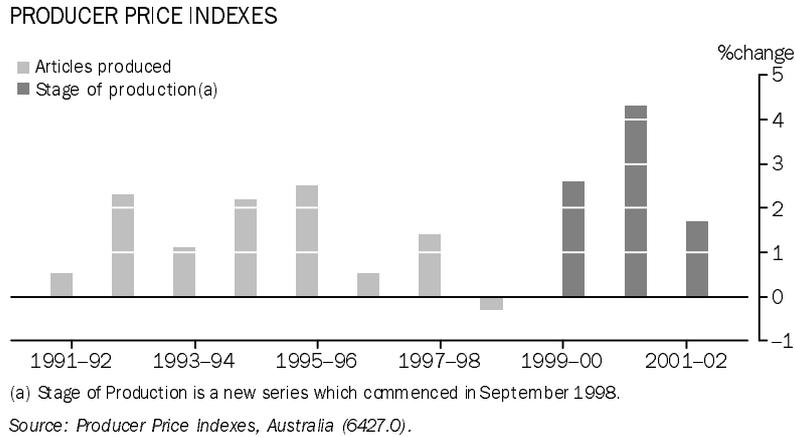
Contains detailed information on Australian agriculture. It contains detailed statistics on crops, livestock and livestock products, characteristics of farms, value of agricultural commodities produced (VACP) and summary trade data.

Australian Commodities

Contains Australian Bureau of Agricultural and Resource Economics (ABARE) forecast and historical data for agriculture and resource commodities. Includes data on quantity and value of production, quantity and value of exports, value of imports of selected commodities, annual and quarterly prices and world production and consumption, stocks and trade for selected commodities.

Producer Price Indexes

The producer price index for final commodities recorded a 8.7% increase between September quarter 1998 (the start of the stage of production series) and the June quarter 2002. Prior to September quarter 1998 the articles produced by manufacturing industries index was the headline producer price index indicator.



SELECTED PRODUCER PRICE INDEXES, ALL GROUPS

Period	Stage of production producer price indexes (final commodities) (a)	Price index of articles produced by manufacturing industries (b)	Price index of materials used in manufacturing industries (b)	Price index for output of the general construction industry (a)	Price index of materials used in house building (b)	Price index of materials used in building (other than house building) (b)	Price index for output of the transport (freight) & storage industries (a)	Price index for output of the property & business services industries (a)
ANNUAL AVERAGE								
1998-99	100.0	115.6	105.9	100.0	119.5	115.2	100.0	100.0
1999-00	102.6	120.6	115.8	104.9	122.8	116.1	100.2	103.6
2000-01	107.0	128.5	132.4	106.1	124.4	116.4	102.3	107.5
2001-02	108.8	128.8	132.4	107.9	126.0	118.6	103.2	110.6
QUARTERLY								
1999-00								
June	104.9	123.8	123.5	106.4	125.5	117.4	101.2	104.7
2000-01								
September	105.4	126.2	127.8	106.2	124.5	115.5	101.2	106.0
December	107.0	129.3	133.9	106.3	124.4	116.3	102.1	107.3
March	106.9	127.7	130.3	106.2	124.2	116.7	102.8	108.2
June	108.5	130.7	137.7	105.8	124.4	117.2	103.2	108.6
2001-02								
September	108.2	129.2	134.5	106.7	124.7	117.5	103.2	109.7
December	108.8	128.4	132.0	107.3	125.2	118.1	103.3	110.3
March	109.0	128.3	130.6	108.2	126.1	118.4	103.0	110.9
June	109.2	129.3	132.6	109.5	127.8	120.3	103.3	111.4

Source: *Producer Price Indexes, Australia (6427.0)*.

(a) Reference base: 1998-99 = 100.0

(b) Reference base: 1989-90 = 100.0

Explanatory Notes

The producer price indexes measure changes in prices received, or paid, by producers of goods and providers of services. In Australia they generally relate to prices for goods and services as they affect businesses, for example, the price of goods used as inputs to or output from the manufacturing sector, the price of materials used as inputs to the building industry and, more recently, the price of services provided by the property and business services industries, and transport (freight) and storage industries. This contrasts with the CPI which measures changes in the retail prices paid by consumers, as explained earlier in this chapter.

The most comprehensive producer price indexes are the 'stage of production' indexes which show the supply of commodities to the Australian economy categorised according to their role in the production chain. They cover both domestically produced and imported commodities. There are three separate stages of production. Preliminary (Stage 1) commodities are used in the production of intermediate (Stage 2) commodities; in turn intermediate (Stage 2) commodities flow into the production of final (Stage 3) commodities. This framework allows for analyses of price changes as commodities flow through the production process. Price changes for earlier stages of production may be indicators of possible future price changes for later stages. Only the price index for final (Stage 3) commodities is presented in the above table.

Sectoral indexes are available for four broad sectors of the Australian economy: service industries, construction industry, manufacturing industry and the coal mining industry. The producer price indexes measure changes in prices of materials used in the production processes for the manufacturing, construction and coal mining industries, as well as output prices for the construction, manufacturing, transport (freight) & storage and property and business services industries. As far as possible the prices collected are actual transaction prices, including the effects of all forms of discounting.

The indexes are used by both the public and private sectors for economic analysis and for adjusting prices in business contracts. The indexes are also used as input into the compilation of other ABS statistics, such as volume estimates in the national accounts.

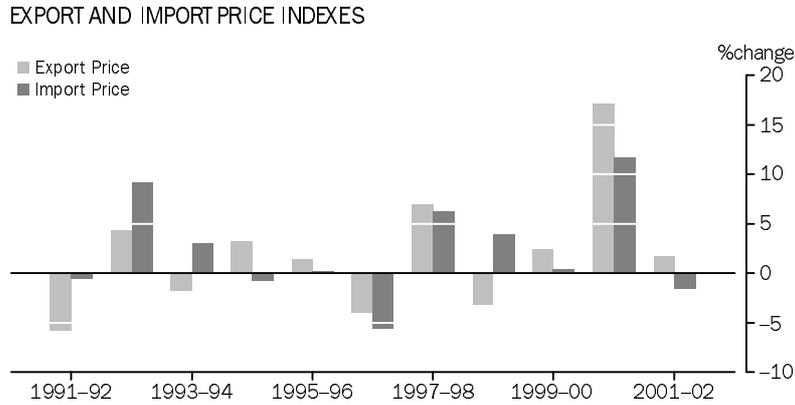
Further Reading

Producer Price Indexes, Australia (6427.0)

This publication contains a range of producer price indexes. Economy-wide indexes are presented within a stage of production framework, followed by a set of indexes relating to specific industries (selected manufacturing, construction, mining and service industries).

International Trade Price Indexes

Over the past ten years movements in both the export and import price indexes have been volatile, largely reflecting variations in the value of the Australian dollar against the major trading currencies. By June quarter 2002, import prices were 23.8% above what they were ten years earlier, while over the same period export prices had increased by 25.3%. However, there were some significant short-term differences in the price behaviour for these two series over this period.



FOREIGN TRADE PRICE INDEXES: ALL GROUPS (1989-90 = 100.0)

Period	Export price index	Import price index
ANNUAL AVERAGE		
1998-99	95.7	119.9
1999-00	98.0	120.2
2000-01	114.8	134.3
2001-02	116.7	132.3
QUARTERLY		
1999-00		
June	105.7	126.7
2000-01		
September	107.9	128.4
December	115.8	137.0
March	115.3	132.9
June	120.3	138.7
2001-02		
September	119.2	135.1
December	117.2	134.9
March	116.4	130.8
June	113.8	128.4

Source: *International Trade Price Indexes, Australia (6457.0)*.

Explanatory Notes

The two international trade price indexes measure the price of goods leaving and entering Australia. The export price index measures changes in the prices of exports of merchandise from Australia while the import price index measures changes in prices of imports of merchandise into Australia.

In general, prices are obtained from major exporters and importers of the selected commodities included in each index. The prices used in the indexes relate to the quarter in which the goods physically leave and enter Australia. They are collected on a free on board (f.o.b.) country of origin basis. Therefore, freight and insurance charges involved in shipping imports to and exports from Australian ports are excluded.

The prices used in both the export and import indexes are expressed in Australian dollars. For this reason changes in the relative value of the Australian dollar against overseas currencies will affect both price indexes, as many of the goods imported and exported by Australia are priced in foreign currencies. An appreciation of the Australian dollar has a downward influence on both indexes, while a depreciation has an upward influence, although the impact does differ between the two indexes.

The indexes are used by both the public and private sectors for both economic analysis and adjusting business contracts. The indexes are also used as inputs to other ABS statistics, such as volume estimates in the national accounts.

Further Reading

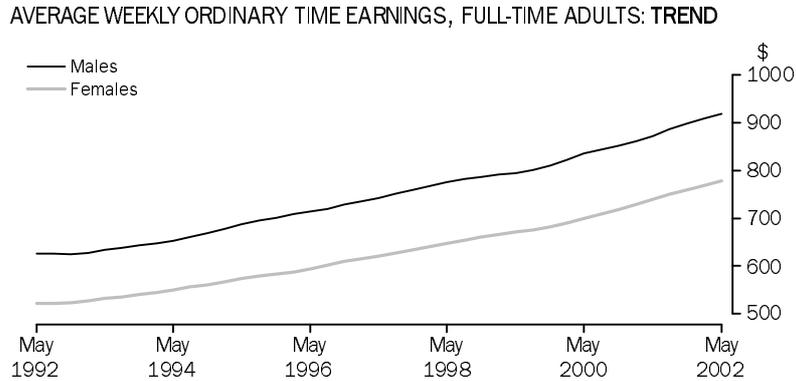
International Trade Price Indexes, Australia (6457.0)

Contains indexes measuring changes in the prices of imports of merchandise that are landed in Australia each quarter (the Import Price Index), and exports of merchandise that are shipped from Australia each quarter (the Export Price Index).

Information Paper: Review of the Import Price Index and Export Price Index, Australia (6424.0)

Average Weekly Earnings

In May 2002, trend average weekly ordinary time earnings for full-time adult employees was \$868.50. The figure for males was \$920.30 and the figure for females was \$778.30. During the period May 2001 to May 2002, male full-time adult average ordinary time earnings increased by 5.4%, while the corresponding estimate for females increased by 5.3%. Both series have increased steadily throughout most of the last ten years.



AVERAGE WEEKLY ORDINARY TIME EARNINGS, Full-time adults, Australia: Trend Estimates

Period	Males \$	Females \$	Persons \$
ANNUAL AVERAGE(a)			
1996-97	731.9	612.0	688.7
1997-98	763.7	637.2	716.8
1998-99	789.0	663.2	742.7
1999-2000	817.1	687.4	769.1
2000-01	857.3	723.8	808.6
2001-02	903.7	764.5	853.4
QUARTERLY			
2000-01			
February	860.9	728.2	812.5
May	873.0	738.8	824.1
2001-02			
August	886.5	750.0	837.3
November	898.5	760.2	848.9
February	909.5	769.5	859.0
May	920.3	778.3	868.5

(a) Derived as annual average of average weekly earnings in the specified pay period in each quarter.

Source: Average Weekly Earnings, Australia (6302.0).

Explanatory Notes

The ABS collects information from approximately 5,000 employers every quarter to estimate average weekly earnings of employees. Employers are asked to provide details of the total gross weekly earnings paid to employees (including weekly overtime earnings) and the number of employees in the organisation (split into full-time adults and all other employees, and into males and females).

Average weekly earnings can change when wages change as a result of National Wage Case outcomes, enterprise bargaining agreements between employers and employees, and other pay setting outcomes.

Movements in average weekly earnings can be affected by both changes in the level of earnings per employee and changes in the composition of the labour force. For example, changes in the proportions of full-time, part-time, casual and junior employees and variations in the distribution of occupations can affect movements in earnings series.

Further Reading

Average Weekly Earnings, Australia 1941-1990 (6350.0)

Contains an historical series of average weekly earnings for all males for Australia from September quarter 1941 to November 1990, as well as average weekly earnings estimates for all employees from August 1981, classified into a number of categories.

Average Weekly Earnings, Australia (6302.0)

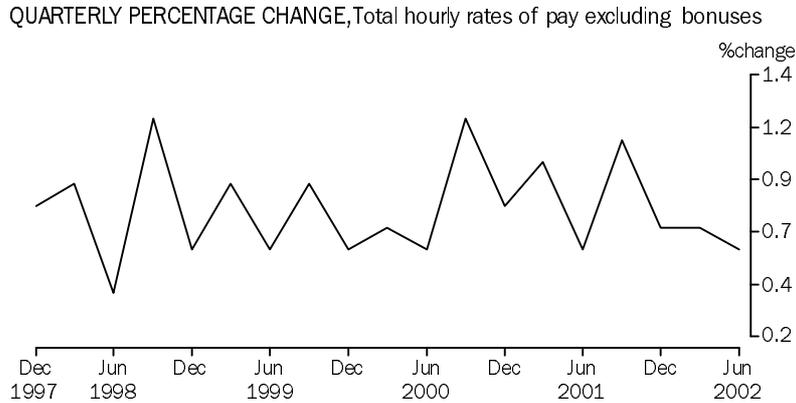
Contains quarterly estimates of average weekly ordinary time earnings and average weekly total earnings, for both full-time adult employees and all employees, classified by Sex, Sector and State and Territory.

Wage Cost Index, Australia (6345.0)

Contains indexes measuring changes in wage and salary costs for employee jobs.

Wage Cost Index

The Wage Cost Index (WCI) was compiled for the first time for the December quarter 1997 (with a base of September quarter 1997 = 100.0). For the June quarter 2002, the total hourly rates of pay excluding bonuses index for Australia was 115.9, reflecting quarterly growth from March quarter 2002 of 0.6% and annual growth of 3.1%.



Source: Wage Cost Index, Australia (6345.0).

TOTAL HOURLY RATES OF PAY EXCLUDING BONUSES

	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory	Australian Capital Territory	Australia
INDEX NUMBERS									
1999									
September	107.0	106.1	106.3	105.9	106.1	105.5	105.8	105.6	106.4
December	107.5	106.8	107.1	106.8	106.7	106.0	106.7	106.0	107.0
2000									
March	108.2	107.6	107.6	107.4	107.5	106.5	107.2	106.6	107.7
June	109.0	108.3	108.0	108.1	108.0	106.9	107.5	107.0	108.4
September	110.7	109.4	109.0	109.1	109.3	108.1	108.6	108.9	109.7
December	111.3	110.4	110.3	110.1	110.0	108.9	109.9	109.8	110.6
2001									
March	112.5	111.2	111.2	111.1	111.8	109.5	110.3	110.6	111.7
June	113.1	112.2	111.9	111.6	112.5	110.3	110.5	111.0	112.4
September	114.5	113.6	113.0	112.6	113.2	111.5	111.6	112.6	113.6
December	115.2	114.2	113.9	113.9	114.0	112.1	113.3	113.3	114.4
2002									
March	116.1	115.0	114.6	114.8	114.9	113.1	113.9	113.8	115.2
June	116.6	116.0	115.2	115.2	115.7	113.7	114.1	114.3	115.9

Source: Wage Cost Index, Australia (6345.0)

Explanatory Notes

The WCI measures labour market related changes in the wage and salary component of the price of labour. The WCI can change as a result of minimum wage case outcomes, enterprise bargaining and individual agreements between employers and employees, other formal and informal pay setting outcomes and other labour market related forces, for example skill shortages. It is not affected by:

- changes in the nature of work performed (for example, different tasks or responsibilities);
- changes in the quantity of work performed (for example, increases in hours worked);
- changes in the characteristics of the job occupant (for example, age, apprenticeship year, successful completion of training or qualifications, grade or level, experience, etc);
- changes resulting from the individual performance of a job occupant.

The WCI measures changes over time in wage and salary rates of pay for employee jobs, unaffected by changes in the quality or quantity of work performed. It is a measure of movements in the **price** of labour services, and so differs from the average weekly earnings measure. Estimates of average weekly earnings are derived simply by dividing estimates of employees' total weekly earnings by estimates of the number of employees. Changes in the average may be affected not only by changes in the level of earnings of employees but also by changes in the composition of the wage and salary earners segment of the labour force.

Four sets of indexes are produced - ordinary time hourly rates of pay, including and excluding bonuses, and total hourly rates of pay, including and excluding bonuses. Individual indexes are compiled for various combinations of State/Territory, sector, broad industry group and broad occupation group.

Governments, unions, employer groups, researchers and private bodies use the WCI as a guide to changes in wage and salary rates. It is used for adjusting business contracts as well as for economic analysis.

Further Reading

Wage Cost Index, Australia (6345.0)

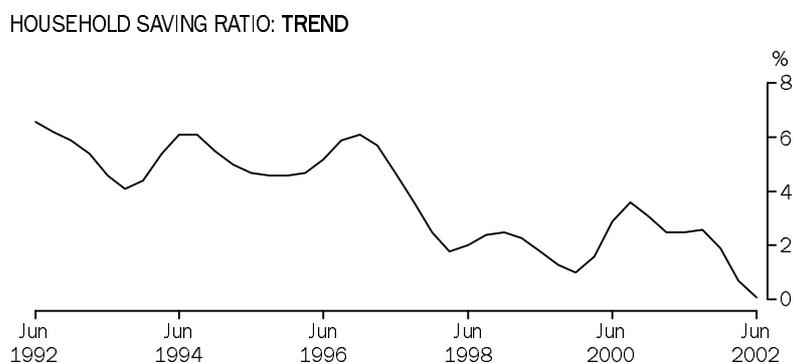
Contains quarterly indexes measuring changes in wage and salary costs for employee jobs, classified by State and Territory, sector (private/public), industry and occupation.

Information Paper: Wage Cost Index, Australia (6346.0)

Provides more information on the methodology and construction of the WCI.

Saving

The household saving ratio in trend terms fell from 5.9% in the December quarter 1996, to a historic low of 0.9% in the June quarter 2002. The annual household savings ratio for 2001-02 was 1.3%.



Source: Australian National Accounts: National Income, Expenditure and Product (5206.0), Quarterly data.

HOUSEHOLD SAVING

	Net saving (a)	Net household disposable income	Household Saving Ratio
	\$m	\$m	%
ANNUAL			
1996-97	17,827	333,137	5.6
1997-98	7,884	343,187	2.4
1998-99	10,049	362,965	2.4
1999-00	8,759	382,894	2.2
2000-01	19,258	419,852	3.8
2001-02	9,552	433,717	1.3
QUARTERLY (TREND)			
2000-01			
December	4,697	104,556	4.5
March	4,264	105,893	4.0
June	3,994	106,913	3.7
2001-02			
September	3,867	108,039	3.6
December	2,907	108,862	2.7
March	1,635	109,489	1.5
June	966	109,846	0.9

(a) Saving is derived as a Balancing item.

Source: Australian National Accounts: National Income, Expenditure and Product (5206.0)

Explanatory Notes

Saving is the excess of income over outlays during a given period. Saving can be seen as giving up current consumption to derive a future benefit because it is used to finance investment which will increase productive capacity of the economy and enable it to produce a greater quantity of goods and services in the future. Saving can be calculated for the nation as a whole and for each sector, such as the household sector.

Net household disposable income is the amount of income that households have available for spending after deducting from total income any taxes paid, interest and other property income payments, current transfers, and consumption of fixed capital. Household net saving is calculated by deducting household final consumption expenditure and consumption of fixed capital from household disposable income. The ratio of household net saving to household net disposable income is called the household saving ratio.

If total net saving in the domestic economy and consumption of fixed capital is not enough to cover planned investment, then the nation must borrow from foreign countries to finance its investment. Historically, Australia has relied heavily on foreign borrowing to finance its investment.

Governments and private organisations are interested in changes in the level of saving because of the effect on investment and Australia's borrowing requirements from overseas.

Further Reading

A Provisional Framework for Household Income, Consumption, Saving and Wealth (6549.0)

A conceptual framework setting out the relationship between household income, consumption, saving and changes in net worth. Shows links with the national accounts.

Australian System of National Accounts (5204.0)

Contains a detailed presentation of the national accounts, including details of national and sectoral saving.

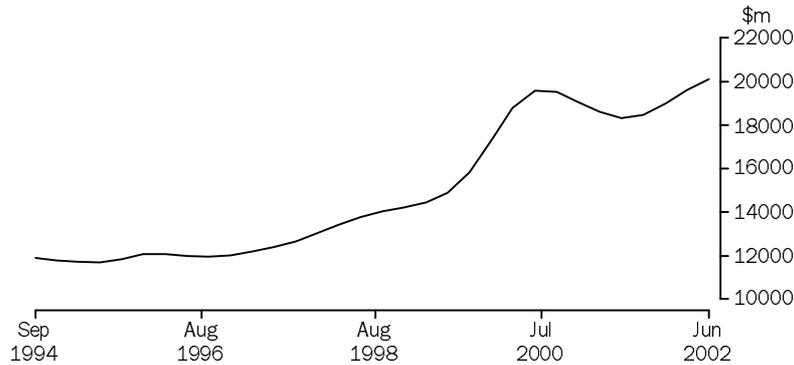
Australian National Accounts: National Income, Expenditure and Product (5206.0)

Contains quarterly measures of national saving and saving for the general government and household sectors.

Company Profits

The trend estimate for total company gross operating profit, in current price terms, was relatively flat between September quarter 1994 and December quarter 1996. From March quarter 1997, the series began to increase, with growth particularly strong during 1999-2000. The estimate in June quarter 2000 (\$19,587m) was 63% higher than for December 1996. The series then decreased during 2000-2001 but has begun to increase through 2001-02. The estimates for March and June quarters 2002 are slightly higher than the previous June quarter 2000 peak.

TOTAL COMPANY GROSS OPERATING PROFIT: TREND



Source: Business Indicators, Australia (5676.0), Quarterly data.

COMPANY PROFITS BEFORE INCOME TAX

Period	Mining	Manufacturing	Wholesale and retail trade	Other selected industries	Total
	\$m	\$m	\$m	\$m	
ANNUAL (ORIGINAL)					
1996-97	10,152	19,256	7,608	11,189	48,564
1997-98	11,814	20,423	8,006	12,648	52,887
1998-99	11,088	21,029	8,814	16,137	57,062
1999-2000	17,457	23,865	9,451	20,666	71,452
2000-01	22,464	22,702	8,709	21,632	75,497
2001-02	21,239	22,993	10,582	21,524	76,338
QUARTERLY (TREND)					
2000-01					
September	5,395	6,030	2,336	5,744	19,505
December	5,512	5,760	2,348	5,456	19,076
March	5,596	5,572	2,296	5,141	18,605
June	5,639	5,445	2,272	4,971	18,327
2001-02					
September	5,625	5,404	2,420	5,042	18,491
December	5,477	5,562	2,690	5,282	19,011
March	5,332	5,891	2,816	5,582	19,621
June	5,192	6,198	2,799	5,928	20,117

Source: Company Profits, Australia (5651.0).

Explanatory Notes

The company gross operating profit series measures underlying profits, excluding dividend income, depreciation, net interest and other items outside the normal production boundary of companies (i.e. incorporated business enterprises) employing 20 or more people in the private sector in Australia. For the purpose of the series, branches of overseas companies operating in Australia are included but overseas branches of Australian companies are excluded.

This series provides quarterly statistics by broad industry, including mining, manufacturing, wholesale trade, retail trade, transport and storage, services to finance and insurance, property and business services, and other services.

Certain industries are excluded from this series, including agriculture, forestry, fishing and hunting; finance; insurance, government administration and defence; education; health and community services; and private households employing staff. Public sector business units (i.e. all departments, authorities and other organisations owned and/or controlled by the Commonwealth, state and local governments) are also excluded.

The company gross operating profit series is used by private and government analysts to assess the profit performance of the private incorporated trading sector and as a short-term indicator of economic activity. These statistics contribute to informed decision-making regarding future economic policy for this sector and the economy as a whole. They are also used as an input into the compilation of the gross operating surplus item in the national accounts, which is part of the income measure of gross domestic product (GDP).

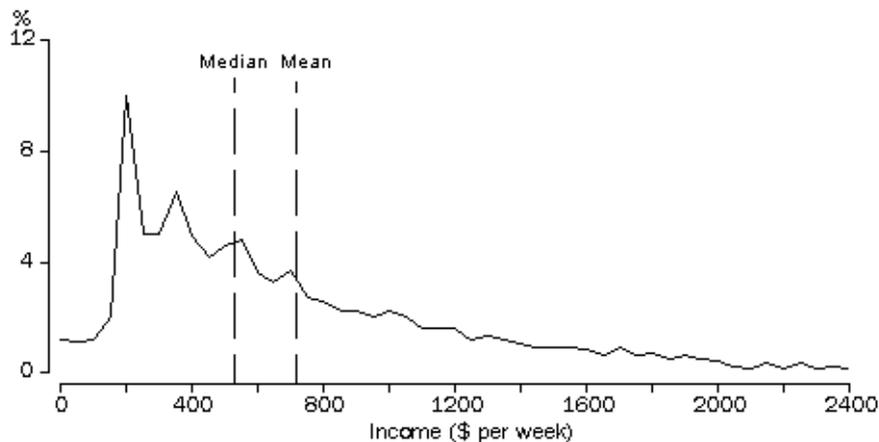
Further Reading

Business Indicators, Australia (5676.0)

Provides quarterly estimates of company gross operating profit as well as estimates of income from sales of goods and services, inventories and wages and salaries. Estimates are presented by industry in current prices and chain volume measures and in original, seasonally adjusted and trend terms. State dissections of income from sales of goods and services and wages and salaries are included.

Household Income Distribution

In 1999-00 there were approximately nine million income units living in private dwellings in Australia. While their mean gross weekly income was \$726, the median (i.e. the midpoint when all units are ranked in ascending order of income) was considerably lower at \$535. This difference reflects the typically asymmetric distribution of income where a large number in the population have relatively low incomes and a smaller number of units have relatively very high incomes.



Note: In this graph income is presented in \$50 ranges.

Source: Income Distribution, Australia (6523.0)

The degree of inequality in the income distribution of all income units - as measured by each income quintile's share of income - remained almost unchanged between 1994-95 and 1999-00, with no significant change in the shares of total income received by the income quintile groups over the six years. The Gini-coefficient in 1999-00 was 0.448 and it was also not significantly different from that of the previous years.

PERCENTAGE INCOME SHARE FOR INCOME QUINTILES

Gross weekly income quintile	1994-95	1995-96	1996-97	1997-98	1999-00
Lowest	3.6	3.8	3.9	3.8	3.8
Second	9.3	9.1	9.4	9.0	9.0
Third	15.2	15.0	15.2	15.0	15.0
Fourth	24.0	23.7	24.0	23.9	23.8
Highest	47.9	48.3	47.5	48.3	48.5
All income units	100	100	100	100	100

Source: Income Distribution, Australia (6523.0).

The analysis above relates to gross income. Similar analysis can be done using disposable income (gross income after tax and the Medicare levy are deducted) or equivalent income. Equivalent income is disposable income adjusted to reflect the needs of different income units (for example, the needs of a couple with two dependent children are greater than say a single person income unit). The distribution of equivalent income data is more equal than for gross income. In 1999-2000, the Gini-coefficient for equivalent income was 0.346 compared with 0.448 for gross income.

Explanatory Notes

Three methods are commonly used to summarise the distribution of income between income units - frequency distributions, income shares and Gini-coefficients.

The Gini-coefficient is a single statistic which summarises the dispersion of income across the entire income distribution. The Gini-coefficient ranges between zero and one. It has a value of zero when income is distributed equally, that is, when all incomes are equal. It has a value of one when one income unit receives all the income

An income unit is one person or a group of related persons within a household, whose command over income is assumed to be shared. Income sharing is assumed to take place within married (registered or de facto) couples, and between parents and dependent children.

For the purpose of income distribution analysis, income is defined as regular and recurring cash receipts including moneys received from wages or salary, government pensions and allowances, and other regular receipts such as superannuation, workers' compensation, child support, scholarships, profit or loss from own business or partnership and property income.

Further Reading

Income Distribution, Australia (6523.0)

Details are presented on the distribution of income in Australia, and on the various characteristics of income units (married couple, one parent and one-person units), their composition, and the principal source of income, age and employment status of reference person.

A Provisional Framework for Household Income, Consumption, Saving and Wealth (6549.0)

A conceptual framework setting out the relationship between household income, consumption, saving and changes in net worth. Provides definitions and classifications of components. Shows links with other conceptual frameworks such as the national accounts.

Household Expenditure Survey, Australia: the Effects of Government Benefits and Taxes on Household Income (6537.0)

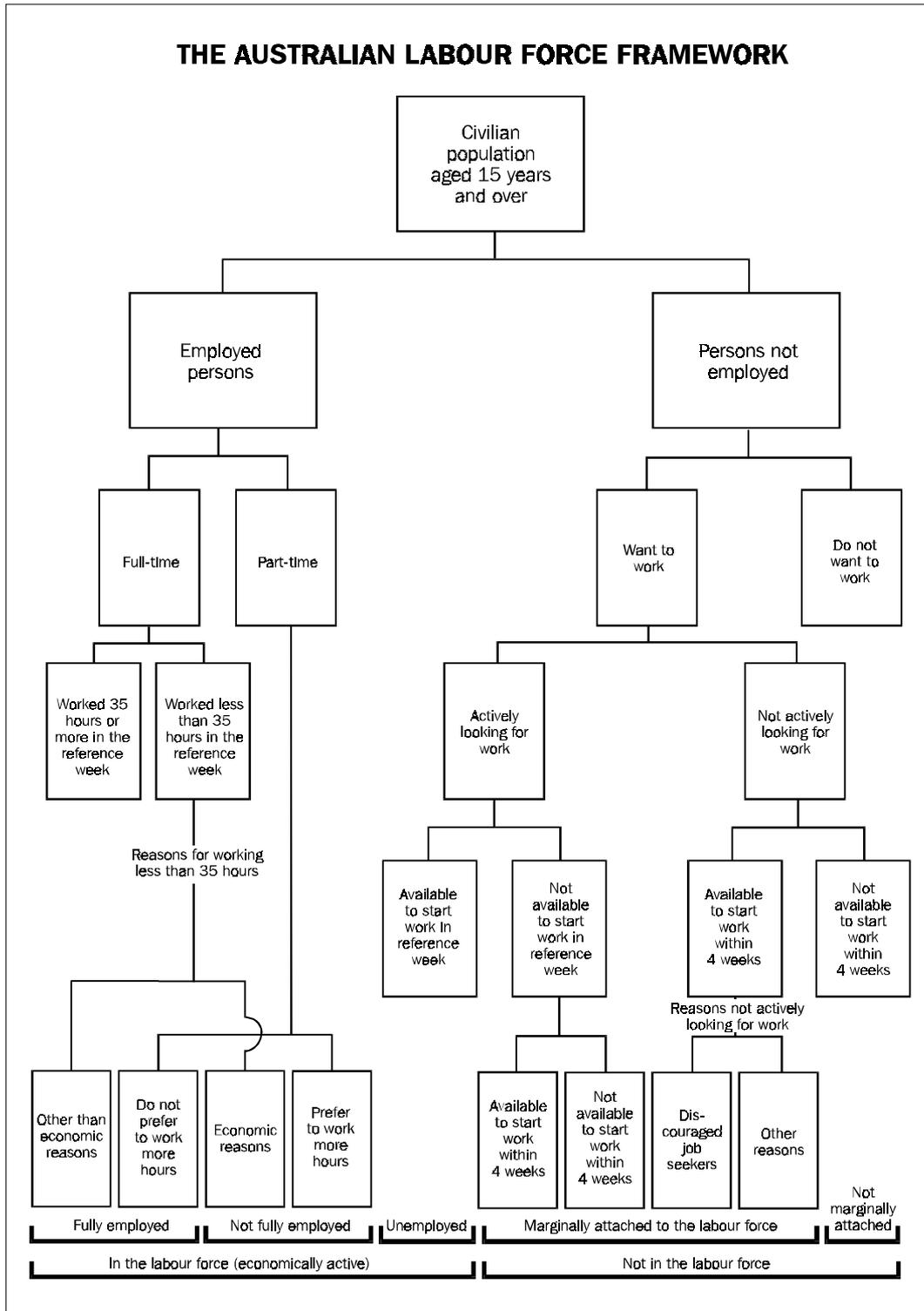
Describes and provides results from the study of the effects of government benefits and taxes on household income as revealed by the Household Expenditure Survey.

CHAPTER 7

LABOUR FORCE AND DEMOGRAPHY

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Labour Force Framework



Explanatory Notes

The labour force framework is a map of the population from a labour supply perspective. Just as the system of national accounts provides a measure of economic activity (the value of the production of goods and services), the ABS Labour Force Survey measures the economically active population (the national labour supply available for that production), under the principles of the framework.

The framework and the survey concepts and definitions are closely comparable with the recommendations of the International Labour Organisation, developed through successive Resolutions of the International Conference of Labour Statisticians.

The Labour Force Survey classifies the civilian population aged 15 or more (broadly, above compulsory schooling age) as

- currently economically active (the **labour force**, comprised of the **employed** plus the **unemployed**), or
- not currently active (those **not in the labour force**).

The labour force represents the supply of labour at a given point in time, compatible with national accounts measures of economic activity.

Beyond the formal employment and unemployment estimates, the Labour Force Survey and its regular supplementary surveys offer a much wider range of data about available labour resources. Information is regularly collected about under-employment and marginal attachment, as defined under the framework. Supplementary measures based on these data offer a broader view of the meaning and measurement of unemployment and underutilised labour.

A new questionnaire was introduced in the April 2001 Labour Force Survey. This, the first major redesign of the survey since 1978, resulted in some minor changes to key definitions and provided some additional data. The changes reflect contemporary labour market developments and international standards, and were put in place without breaking the comparability of the main data series. Labour Force Survey data in this publication are based on these new definitions.

Further Reading

Labour Statistics: Concepts, Sources and Methods (6102.0)

Discusses the concepts and definitions underpinning Australian labour statistics and the data sources and methods used in their collection and compilation. Explains what the statistics measure, how they relate to each other and how they are produced. On the ABS web site <www.abs.gov.au> see About Statistics—Concepts and Classifications; while further information about the Labour Force Survey can also be found at Themes—Labour.

Labour Force, Australia, Preliminary (6202.0)

Monthly. Estimates of employment, unemployment, unemployment rate and labour force participation rate, classified by State and Territory, sex, age, school and tertiary attendance, full-time/part-time status. On the ABS web site, see **Statistics—Employment and unemployment**.

Underemployed Workers, Australia (6265.0)

Annual. The survey covers part-time workers who indicate that they would prefer to work more hours and full-time workers who did not work full-time hours in the reference period for economic reasons. These workers, who are not fully employed, are of great interest in studying underutilised labour. The survey collects information about the characteristics and job search activities of these groups.

Persons Not in the Labour Force, Australia (6220.0)

Annual. Contains estimates of persons not in the labour force, classified by whether they wanted to work, whether looked for work in the last 12 months, reasons for not actively looking for work, main activity, time since last job and details of that job. Characteristics of persons with marginal attachment to the labour force are also included.

Information Paper: Measures of Labour Underutilisation (6296.0)

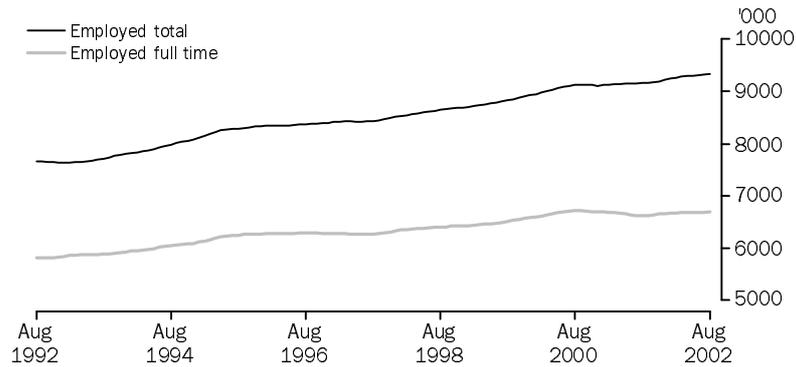
Discusses ABS labour measures and proposes four indicators of labour underutilisation. Identifies and discusses the population groups, within the wider groups of unemployed, underemployed and marginally attached persons, that were used to develop these indicators.

Employment

Growth in full-time employment resumed in October 1992. Slower growth from mid 1995 to mid 1997 was followed by a resurgence to August 2000 which has since faltered. At August 2002, full-time employment stood 0.3% below the August 2000 peak of 6.72 million; 15% above the low point in September 1992.

Total employment returned to growth later, in February 1993. Since then, the general trend in total employment has been rising more quickly than full-time employment. Strengthening growth in part-time employment has accelerated the divergence between total and full-time employment over the last two years. In August 2002, total employment stood at 9.34 million, 22% above the January 1993 low point.

EMPLOYED PERSONS: TREND



Source: *Labour Force, Australia (6203.0), Monthly data.*

Chapter 7 - Labour Force and Demography

EMPLOYED PERSONS

Period	Full-time aged 15-19 years '000	Full-time aged 20+ years '000	Total full-time '000	Total part-time '000	Total '000
TREND (AUGUST)					
1997	220.1	6048.5	6268.6	2164.5	8433.1
1998	216.7	6191.1	6407.8	2238.3	8646.0
1999	237.8	6274.6	6512.4	2317.1	8829.5
2000	240.6	6476.9	6717.5	2404.5	9122.0
2001	234.5	6384.4	6618.9	2542.6	9161.5
TREND (MONTHLY)					
2001-02					
September	232.6	6391.0	6623.6	2544.5	9168.0
October	230.2	6404.0	6634.2	2546.9	9181.1
November	227.8	6417.7	6645.4	2554.7	9200.2
December	225.6	6430.5	6656.1	2566.3	9222.4
January	224.2	6441.3	6665.5	2580.4	9245.9
February	223.5	6448.8	6672.3	2593.9	9266.2
March	223.7	6452.3	6676.1	2605.8	9281.8
April	224.2	6452.0	6676.2	2616.1	9292.3
May	224.4	6450.8	6675.2	2625.9	9301.2
June	224.1	6453.6	6677.7	2633.7	9311.5
2002-03					
July	223.5	6461.2	6684.6	2639.6	9324.2
August	222.6	6472.0	6694.6	2642.7	9337.3

Source: Labour Force Australia, (6203.0), Monthly data.

Explanatory Notes

The Labour Force Survey collects Australia's official estimates of employment and unemployment each month by interviewing a sample of some 63,000 persons in private households and other dwellings (e.g. hotels, motels). The survey covers the usually resident civilian population of Australia aged 15 or more.

Employed persons are those aged 15 years and over who, during the reference week:

- worked one hour or more for payment of any kind or profit in a job, business or farm, or
- worked one hour or more without pay in a family business or farm, or
- were employees who had a job but were not at work for various defined reasons, or
- were employers, or own account workers who had a job but were not at work.

The requirement to work for one hour or more ensures that the employment measure reflects all persons contributing to economic production.

Full-time workers are employed persons who usually work more than 35 hours a week or did so during the reference week.

Employment is an indicator of economic activity, although turning points in the employment series tend to lag turning points in the business cycle.

Government departments, financial markets, industry organisations and academic analysts use employment data to monitor the economy's performance and to develop economic and labour market policy. Employment (and unemployment) data are also used as social indicators by government departments, research organisations and welfare organisations.

Further Reading

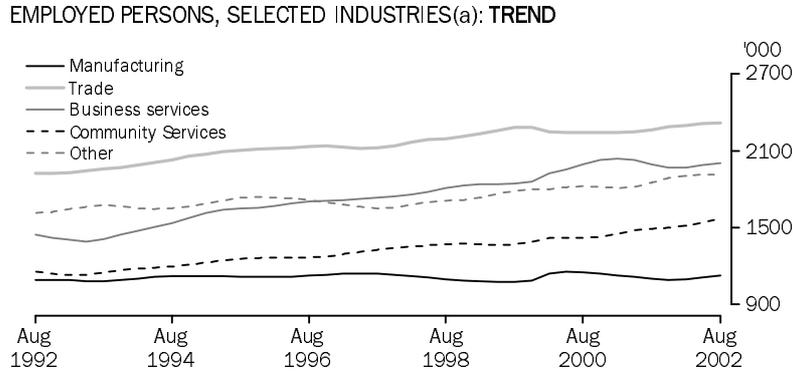
Labour Force, Australia, Preliminary (6202.0)

Monthly. Estimates of employment, unemployment, unemployment rate and labour force participation rate, classified by State and Territory, sex, age, school and tertiary attendance, full-time/part-time status. On the ABS web site, see **Statistics—Employment and unemployment**.

Also see the Labour Force Framework reading list.

Employed Persons by Industry

Despite a break in series arising from changes to coding techniques in February 2000, over the period since August 1992 the trend in Manufacturing employment remained effectively flat. While Business services and Community services experienced relatively strong rates of growth in employment since 1992, Trade and Other industries grew at a somewhat slower rate.



(a) Data for February 2000 onwards are not strictly comparable with earlier periods.

Source: *Labour Force Australia (6203.0)*, Quarterly data.

EMPLOYED PERSONS BY SELECTED INDUSTRY(a)

Period	Agriculture, forestry, and fishing '000	Manufacturing '000	Trade(b) '000	Business services(c) '000	Community services(d) '000	Other industries(e) '000
TREND (AUGUST)						
1996	420.1	1122.4	2132.5	1701.9	1268.2	1713.0
1997	432.9	1139.9	2122.4	1730.4	1328.8	1652.1
1998	414.6	1095.6	2195.3	1811.1	1369.3	1707.4
1999	436.4	1072.8	2280.9	1846.2	1369.2	1784.0
2000	438.1	1150.5	2239.9	1992.4	1419.9	1820.3
QUARTERLY (TREND)						
2000–2001						
May	429.6	1113.8	2245.8	2026.2	1477.5	1818.6
2001–2002						
August	441.1	1100.9	2263.5	1993.9	1494.8	1850.7
November	446.1	1092.8	2287.2	1969.5	1499.5	1886.8
February	435.3	1098.5	2302.7	1972.8	1513.8	1907.7
May	418.6	1110.4	2311.4	1988.1	1539.2	1914.4
2002–03						
August	402.8	1123.9	2315.9	2008.0	1569.1	1915.4

(a) Data for February 2000 onwards are not strictly comparable with earlier periods.

(b) Trade includes Wholesale trade; Retail trade; and Accommodation, cafes and restaurants.

(c) Business services includes Transport and storage; Communication services; Finance and insurance; and Property and business services.

(d) Community services includes Health and community services; Cultural and recreational services; and Personal and other services.

(e) Other industries includes Mining; Electricity, gas and water supply; Construction, Government administration and defence; and Education.

Source: *Labour Force, Australia (6203.0)*.

Explanatory Notes

In the Labour Force Survey, for each employed person's main job, the kind of industry, business or service carried out by that person's employer is collected and classified to industry according to the Australian and New Zealand Standard Industrial Classification (ANZSIC).

New coding techniques introduced in February 2000 resulted in a break in series for Labour Force Survey data classified by industry. The estimated difference in estimates from the old to the new method varied markedly in size and in statistical significance at the ANZSIC industry division level. For example, under the new coding method, employment in Wholesale trade was estimated to be 13% lower, the greatest difference in percentage terms. A significant proportion of responses previously coded to Wholesale trade were coded to Manufacturing and to Retail trade by the new method. There were also significant movements between Manufacturing and Retail trade, resulting in a 5% increase for Manufacturing and a 2% decline in Retail trade.

Estimates of employed persons classified by industry (together with estimates of unemployed persons by industry of employer in previous job) provide insights into changes in the economy for labour market and industry policy planning.

Information on employment in specific industries is also collected in a number of annual or periodic censuses or surveys of those particular industries. Estimates from business surveys relate to jobs in paid employment, in contrast to the Labour Force Survey measure of persons currently employed.

Further Reading

Labour Force, Australia (6203.0)

Monthly. Estimates of employment, unemployment, unemployment rate and labour force participation rate, classified by State and Territory, State capital city, sex, age, school and tertiary attendance, full-time/part-time, duration of unemployment, country of birth and year of arrival in Australia, industry and occupation. On the ABS web site, see **Statistics—Employment and unemployment**.

Employee Earnings and Hours, Australia (6306.0)

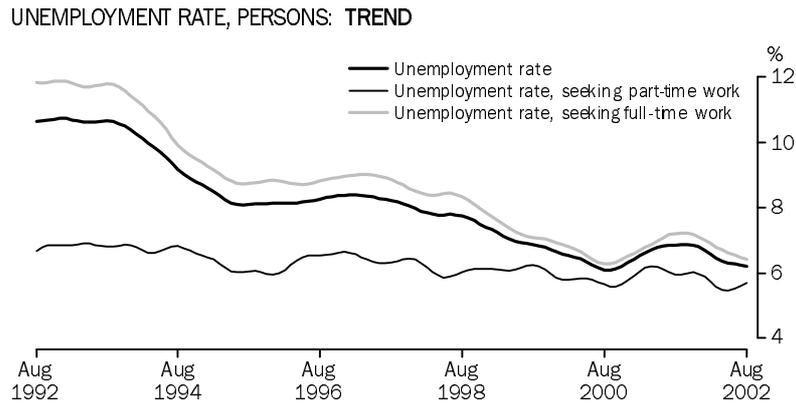
Biennial. Provides statistics on the composition and distribution of earnings and hours of employees, and how their pay is set.

Also see the Labour Force Framework reading list.

Unemployment and Labour Force Participation

After the 1990-91 economic downturn, the unemployment rate remained at or near 10.7% in trend terms until October 1993. From late 1993 the rate declined steadily to stabilise around 8% from mid 1995 to the end of 1997. After falling relatively steadily to 6.1% in August 2000, by late 2001 the unemployment rate had risen to 6.9%. Since November 2001 the unemployment rate has been falling, to stand at 6.2% in August 2002.

For those seeking full-time work, the unemployment rate followed a similar pattern throughout the period since 1992, falling by 5.5 percentage points to reach 6.4% in August 2002. In contrast, despite short-run fluctuations, the part-time unemployment rate followed a general trend of slow decline.



Source: *Labour Force, Australia (6203.0), Monthly data.*

Chapter 7 - Labour Force and Demography

LABOUR FORCE STATUS OF CIVILIAN POPULATION: PERSONS

Period	Unemployed '000	Employed '000	Labour force '000	Civilian population aged 15+ years(a) '000	Unemployment rate %	Participation rate %
TREND (AUGUST)						
1997	755.2	8433.1	9188.4	14581.1	8.2	63.0
1998	726.7	8646.0	9372.7	14794.8	7.6	63.3
1999	651.1	8829.5	9480.6	15018.9	6.9	63.1
2000	592.4	9122.0	9714.4	15243.9	6.1	63.7
2001	675.0	9161.5	9836.4	15441.9	6.9	63.7
TREND (MONTHLY)						
2001-02						
September	676.7	9168.0	9844.7	15460.1	6.9	63.7
October	678.0	9181.1	9859.1	15478.9	6.9	63.7
November	677.6	9200.2	9877.7	15497.7	6.9	63.7
December	672.8	9222.4	9895.2	15516.5	6.8	63.8
January	663.9	9245.9	9909.8	15532.7	6.7	63.8
February	652.3	9266.2	9918.5	15548.8	6.6	63.8
March	640.6	9281.8	9922.4	15565.0	6.5	63.7
April	631.4	9292.3	9923.6	15585.6	6.4	63.7
May	625.7	9301.2	9926.9	15606.1	6.3	63.6
June	622.8	9311.5	9934.2	15626.7	6.3	63.6
2002-03						
July	621.3	9324.2	9945.5	15647.3	6.2	63.6
August	620.2	9337.3	9957.5	15667.8	6.2	63.6

(a) Series is not trend. Original data provided.

Source: The Labour Force, Australia (6203.0).

Explanatory Notes

Broadly, the official unemployment data provided by the Labour Force Survey defines the **unemployed** as

- persons who are not employed who are
 - actively looking for work and
 - are available to start work.

The employed, the unemployed and those not in the labour force are mutually exclusive measures of the population and its economic activity. The requirement that the employed work for one hour or more ensures that people looking for another job while employed are not wrongly included among the unemployed: that is, the unemployed are only measured among those without any work.

Unemployment estimates are an indicator of the degree of oversupply of labour. Changes in the level of oversupply can usefully be compared with changes in labour demand, expressed as employment plus job vacancies.

The **unemployment rate** is defined as the number of unemployed persons expressed as a percentage of the labour force (employed plus unemployed). This measure of labour under-utilisation is an important indicator of the performance of the economy. A high rate of unemployment indicates limited employment opportunities in an over-supplied labour market. A low rate of unemployment indicates a tight labour market, potential scarcity of skilled labour and possible future cost pressures from wage demands by workers.

The **labour force participation rate** is the labour force expressed as a percentage of the civilian population aged 15 years and over. It measures the proportion of the population who form the labour supply. The participation rate is an aid to monitoring changes in the size and composition of the labour supply.

Although turning points in the unemployment level, unemployment rate and participation rate series lag turning points in general economic activity, trends in these series over time serve as indicators of the performance of the economy at large. The personal characteristics of the unemployed can also be used to identify areas of social concern.

While the unemployment level and rate are well understood as formal measures of the labour supply, no single measure of unemployment can satisfy all the purposes for which such data are required. The ABS uses other data from the Labour Force Survey and its regular supplementary survey programme to form annual measures of underemployment and marginal attachment. These help to shed more light on under-use of the actual and potential labour supply.

Further Reading

Labour Force, Australia, Preliminary (6202.0)

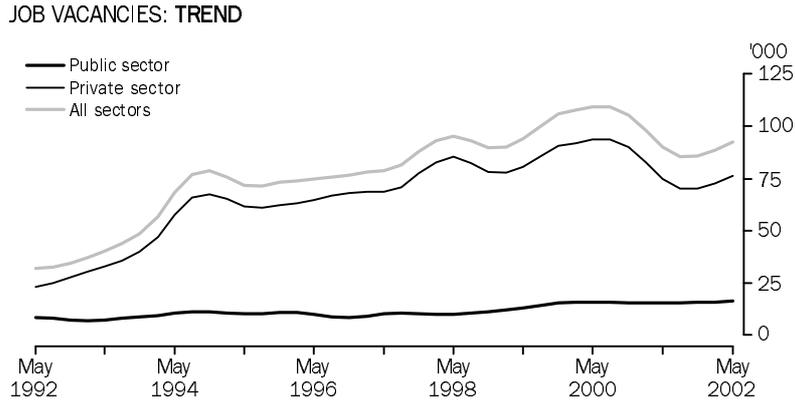
Monthly. Estimates of employment, unemployment, unemployment rate and labour force participation rate, classified by State and Territory, sex, age, school and tertiary attendance, full-time/part-time status. On the ABS web site, see **Statistics—Employment and unemployment**.

Also see the Labour Force Framework reading list.

Job Vacancies

The number of job vacancies has increased considerably over the last ten years, particularly in the private sector. In May 2002 there were 74,900 private sector vacancies and 15,400 public sector vacancies, up from the 23,400 private sector vacancies and 8,400 public sector vacancies recorded in May 1992.

The job vacancy rate for Australia was 1.15% in May 2002. It has fluctuated over the past ten years, and has increased from a low level of 0.47% in May 1992, during the economic downturn, to a recent high level of 1.62% in August 2000.



Source: *Job Vacancies, Australia (6354.0)*.

JOB VACANCIES

Period	Private Sector '000	Public Sector '000	All Sectors '000	Job vacancy rate %
ANNUAL AVERAGE				
1996-97	72.1	9.0	81.1	1.12
1997-98	83.9	10.2	94.1	1.23
1998-99	82.8	11.8	94.6	1.20
1999-2000	95.7	16.7	112.4	1.45
2000-01	91.1	15.0	106.2	1.39
2001-02	75.9	15.6	91.5	1.18
QUARTERLY				
2000-01				
February	85.8	14.2	100.0	1.32
May	72.8	14.5	87.4	1.12
2001-02				
August	81.2	15.8	96.9	1.26
November	72.4	15.0	87.4	1.14
February	75.1	16.1	91.3	1.17
May	74.9	15.4	90.3	1.15

Source: *Job Vacancies, Australia (6354.0)*.

Explanatory Notes

A job vacancy is a job available for immediate filling and for which recruitment action has taken place. Recruitment action includes efforts to fill vacancies by advertising, factory notices, notifying public or private employment agencies, notifying trade unions and by contacting, interviewing or selecting applicants already registered with the enterprise or organisation. Jobs available only to persons employed by the enterprise or organisation are excluded.

Job vacancies provide a measure of the demand for labour. When the demand for labour is low, the number of job vacancies decreases. If the demand for labour is high, the number of job vacancies increases. The demand for labour is an indicator of changes in the level of economic activity. Recessions are characterised by a low level of job vacancies, while periods of strong economic growth tend to be characterised by an increase in job vacancies.

The job vacancy rate is calculated by expressing the number of job vacancies as a percentage of occupied jobs plus job vacancies. Government, unions and private bodies monitor job vacancy rates to gain an indication of future levels of employment. A rise in the job vacancy rate is usually followed by an increase in employment.

Further Reading

Job Vacancies, Australia (6354.0)

Contains quarterly estimates of the number of job vacancies by Sector, Industry and State and Territory, and job vacancy rates by State and Territory.

Industrial Disputes

The number of working days lost due to industrial disputes was 329,300 in the 12 months to June 2002. This was the lowest number for a financial year for many decades and continues the historically low levels recorded over the last 10 years.

While the number of working days lost, and number of employees involved, have been declining over the past six years, the number of disputes has actually been increasing. This indicates that the relative size of disputes, in terms of the length of the dispute or the numbers involved, is decreasing significantly. For example, in 1996-97, on average there were 1293 working days lost and 1032 employees involved per dispute, while in 2001-02 the corresponding figures were 482 working days lost and 260 employees involved per dispute.



Source: *Industrial Disputes, Australia (6321.0)*.

Chapter 7 - Labour Force and Demography

INDUSTRIAL DISPUTES

Period	Disputes	Employees involved	Working days lost	Working days lost per '000 employees
	no.	'000	'000	no.
ANNUAL				
1996–97	495	510.8	640.1	90
1997–98	428	354.6	591.8	82
1998–99	659	277.2	412.0	56
1999–2000	769	578.3	794.1	104
2000–01	697	231.9	349.5	45
2001–02	683	177.8	329.3	41
MONTHLY				
2001–02				
July	86	22.2	47.6	n.a.
August	75	22.9	41.0	n.a.
September	78	18.5	22.5	n.a.
October	73	23.3	34.5	n.a.
November	78	20.0	37.2	n.a.
December	43	10.0	10.5	n.a.
January	40	6.6	5.1	n.a.
February	72	18.3	22.7	n.a.
March	102	34.2	44.9	n.a.
April	79	14.9	16.3	n.a.
May	91	20.1	29.5	n.a.
June	76	11.6	17.5	n.a.

Source: Industrial Disputes, Australia (6321.0).

Explanatory Notes

An industrial dispute is defined as a withdrawal from work by a group of employees, or a refusal by an employer or a number of employers to permit some or all of their employees to work, each withdrawal or refusal being made in order to enforce a demand, to resist a demand, or to express a grievance.

Industrial disputes statistics relate to disputes which involved stoppages of work of ten working days or more at the locations where the stoppages occurred. Ten working days is equivalent to the amount of ordinary time worked by ten people in one day, regardless of the length of the stoppage. For example, 3,000 workers on strike for 2 hours would be counted as 750 working days lost (assuming they work an 8 hour day).

Statistics on industrial disputes are used by government departments, industrial relations authorities, employer organisations, and trade unions, as broad indicators of the level of industrial disputation and the development of industrial relations policy.

Further Reading

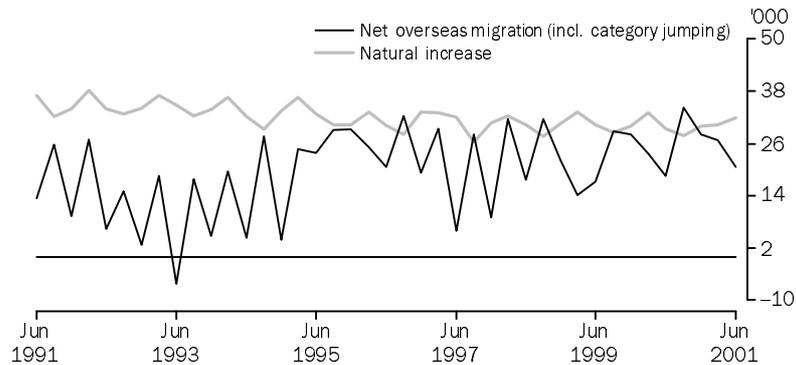
Industrial Disputes, Australia (6321.0)

Provides estimates of number of disputes, employees involved, working days lost, and working days lost per thousand employees in disputes involving stoppages of work of ten working days or more, classified by State and Territory and Industry, duration of dispute, cause of dispute and method of settlement.

Population

Australia's population grew at an average annual rate of 1.2% between June 1991 and June 2001. Natural increase has been the main contributor to Australia's population growth on an annual basis since 1981-1982 except in 1987-1988 and 1988-1989 when net overseas migration was higher. While natural increase remained fairly stable during the past decade, net overseas migration fluctuated substantially in response to changes in government policy. At 30 June 2001 Australia's population was 19.5 million, an increase of 260,000 from 1999-2000.

COMPONENTS OF POPULATION CHANGE



Source: Australian Demographic Statistics (3101.0), Quarterly data.

ESTIMATED RESIDENT POPULATION AND COMPONENTS OF POPULATION CHANGE(a)

Period	Natural increase '000	Net overseas migration '000	Total increase(b) '000	Total population at end of period '000
YEAR ENDED 30 JUNE				
1995-96	124.0	104.1	239.0	18 310.7
1996-97	126.4	87.1	227.1	18 537.9
1997-98	119.9	86.4	221.7	18 759.6
1998-99	121.7	85.1	224.6	18 984.2
1999-2000	120.9	99.1	241.2	19 225.3
2000-01	119.8	109.7	259.9	19 485.3
QUARTERLY				
2000				
March	33.0	23.7	62.0	19 172.2
June	29.4	18.4	53.2	19 225.3
September	27.8	34.3	69.7	19 295.0
December	29.9	28.1	65.6	19 360.6
2001				
March	30.2	26.8	64.6	19 425.2
June	31.8	20.6	60.0	19 485.3
September	26.6	35.7	62.2	19 547.5
December	28.5	27.5	56.0	19 603.5

(a) Usual residence basis.

(b) The difference between total increase and the sum of natural increase and net overseas migration during 1996-2001 is due to preliminary intercensal discrepancy. A description of the intercensal discrepancy is given in Demographic Estimates and Projections: Concepts, Sources and Methods, Statistical Concepts Library, ABS website <http://www.abs.gov.au>
Source: Australian Demographic Statistics (3101.0).

Explanatory Notes

Population is defined as the total number of people who reside in Australia. The ABS bases its estimates of the population of Australia on the Census of Population and Housing. Allowances are made for census undercount, overseas visitors are excluded and Australian residents temporarily overseas on census night are added. Estimates of the population are updated quarterly using data on births, deaths, overseas and interstate migration.

Changes in Australia's population are caused by natural increase and net overseas migration. Natural increase is the excess of births over deaths. Net overseas migration is the net permanent and long-term overseas migration plus an adjustment for the effects of category jumping. Category jumping is the term used to describe changes between intended and actual duration of stay of travellers to/from Australia. Category jumping consists of two components—an Australian resident component and an overseas visitor component. The Australian resident component is estimated by comparing the number of residents departing short-term with all residents who left and returned in the following 12 months, to obtain the net number of Australian residents who jump category. Similarly, the number of overseas visitors arriving short-term is compared with all overseas visitors who arrived and departed in the following 12 months, to obtain the net number of overseas visitors who category jump. Estimates of category jumping are derived by subtracting the Australian resident component from the overseas visitor component.

Population estimates have wide application by both government and private enterprise. Population estimates are used by the government to determine the number of seats allocated to each state and territory in the House of Representatives, to allocate Commonwealth funds to each state, territory and local government authority, to plan requirements for hospitals, schools, transport, housing development and other infrastructure and for many other purposes.

The ABS also produces population projections for Australia, for each state and territory and for capital cities/balance of states based on a range of specified assumptions.

Further Reading

Australian Demographic Statistics (3101.0)

Contains quarterly estimates of total population by states, territories and Australia. Included are the most recent estimates of population in five-year age groups. Details of births, deaths, overseas and interstate migration as well as marriages and divorces are also included.

Population by Sex and Age, States and Territories of Australia (3201.0)

Contains annual estimates of population for each state and territory classified by sex and single years of age (0 to 84); also grouped ages, sex ratios, median and mean ages of the population; age-sex pyramid for Australia.

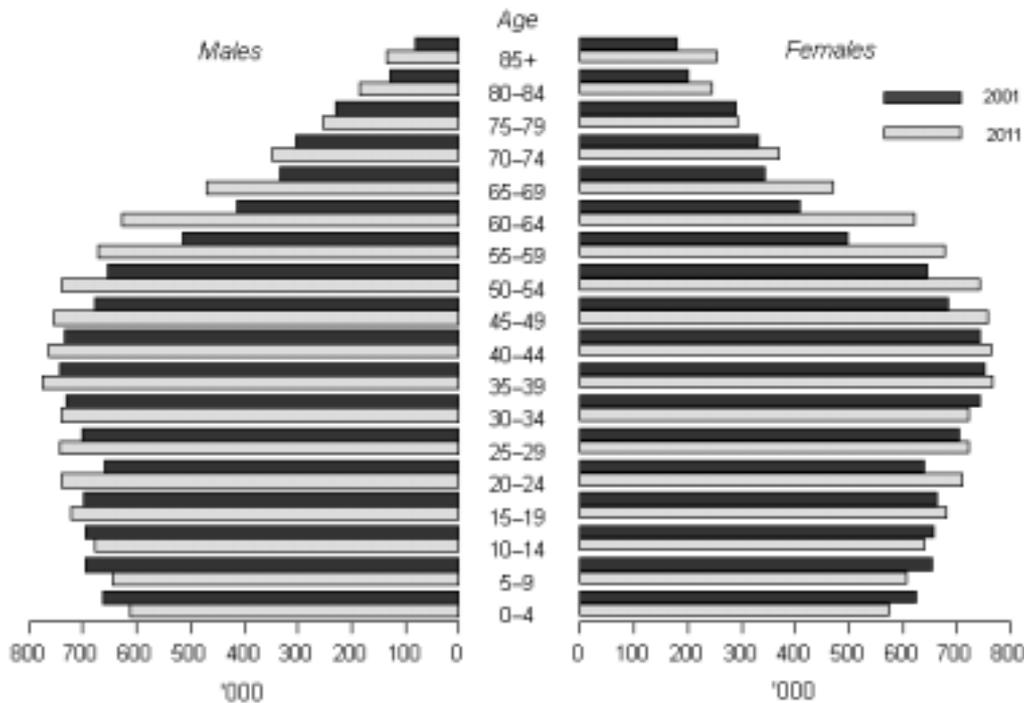
Population Projections, Australia (3222.0)

Contains projections of the resident population of Australia, each state and territory and capital city and balances of state by age and sex for each year to 2051.

Population Structure

Currently, the two main features of Australia's population are low fertility rates and the ageing of the population. Since 1990, the total fertility rate has fallen steadily and is now at the lowest level ever recorded (1.75 babies per woman in 2000). Falling fertility and increasing longevity are the main causes of the ageing of the population. The median age of the population has increased by 6.1 years in the last 20 years, from 29.6 years in 1981 to 35.7 years in 2001. Based on certain assumptions about fertility, mortality and migration (series II of the projections), the median age of the population is projected to increase to 38.5 by 2011. At June 2001 the number of persons aged 65 years or more was just over 2.4 million, or 12.5% of the total population. This is projected to increase to 3.0 million (14.3% of the total population) in the year 2011. The proportion of children aged 0-14 years is projected to decrease from 20.5% of the total population at June 2001 to 17.7% in the year 2011.

Population by age and sex, Australia, 2001 and 2011



DEMOGRAPHY

Year ended 31 December	Total fertility rate	Life expectancy at birth(a)		Infant mortality rate	Net overseas migration
		Males	Females		
1995	1.83	75.0	80.8	5.7	106, 900
1996	1.80	75.2	81.1	5.8	97, 400
1997	1.78	75.6	81.3	5.3	72, 400
1998	1.76	75.9	81.5	5.0	103, 100
1999	1.75	76.2	81.8	5.7	88, 400
2000	1.75	76.6	82.0	5.2	104, 500

(a) From 1995, life expectancy at birth values refer to the three years ending in the reference year. From 1995, the life tables were constructed jointly by the Australian Government Actuary and the ABS.

Source: Australian Demographic Statistics (3101.0); Births, Australia (3301.0); and Deaths, Australia (3302.0).

Explanatory Notes

Demographic data assist researchers and policy makers in studying the characteristics of the population and in understanding how these characteristics have changed over time.

The total fertility rate is the sum of age-specific fertility rates (live births at each age of mother per female population of that age). It represents the number of children a female would bear during her lifetime if she experiences current age-specific fertility rates at each age of her reproductive life.

Life expectancy refers to the average number of additional years a person of a given age and sex might expect to live if the age-specific death rates of the given period continued throughout his/her lifetime. Life expectancy is often used to indicate changes in the health status of a community or to make comparisons between communities.

The infant mortality rate measures the number of deaths of children under one year of age in a calendar year per 1,000 live births in the same calendar year, and is also a key indicator of the health of a community.

Net overseas migration is net permanent and long-term overseas migration plus an adjustment for the effect of change in stay from short-term to permanent or long-term or vice versa. Natural increase is the excess of births over deaths. Net overseas migration and natural increase are the two components of Australia's population change.

The ABS also produces population projections for Australia, for each state and territory and for capital cities/balance of states based on a range of specified assumptions.

Further Reading

Australian Demographic Statistics (3101.0)

Contains quarterly estimates of total population by states, territories and Australia. Included are the most recent estimates of population in five-year age groups. Details of births, deaths, overseas and interstate migration as well as marriages and divorces are also included.

Births, Australia (3301.0)

Contains annual data on births by state, territory and Australia, characteristics of the parent(s) and also shows crude and age-specific birth rates and reproduction rates.

Deaths, Australia (3302.0)

Contains annual data on the number of deaths by state, territory and Australia. Deaths are classified by age, sex, birthplace, marital status, occupation and cause of death. Also contains information on deaths of indigenous people.

Causes of Death, Australia (3303.0)

Contains annual data on the causes of death by selected age groups.

Marriages and Divorces, Australia (3310.0)

Presents details of marriages and divorces and includes estimates of the population by marital status.

Migration, Australia (3412.0)

Gives details on the breakdown of net overseas migration and includes estimates of the population by country of birth.

Population Projections, Australia (3222.0)

Contains projections of the resident population of Australia, each state and territory and capital city and balances of state by age and sex for each year to 2051.

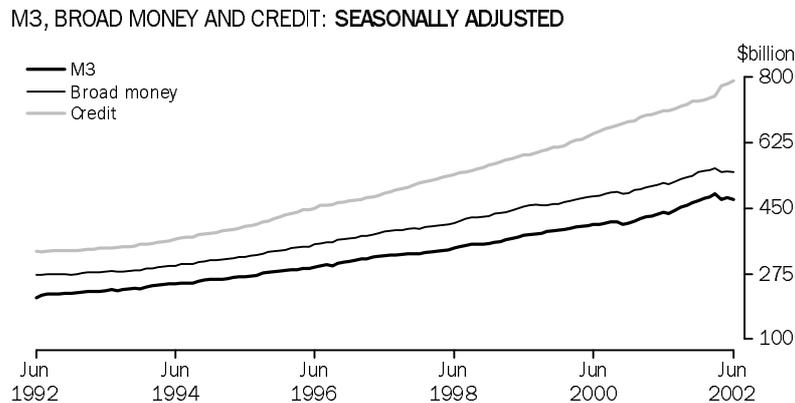
CHAPTER 8

FINANCIAL MARKETS

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M3, Broad Money and Credit

Over the period from 1992 to 2002 the amount of money in circulation in the Australian economy, as measured by the money supply measure "broad money", increased from \$271.3b in June 1992 to \$545.7b in June 2002. Money supply grew slowly from June 1992 until late-1993. Strong growth was then recorded from late 1993 to 2002.



SELECTED MONETARY AGGREGATES

Period	M3(a) \$m	Broad money(b) \$m	Total credit(c) \$m
SEASONALLY ADJUSTED			
June 1997	322,689	385,790	488,138
June 1998	342,341	408,816	539,516
June 1999	375,989	452,826	590,015
June 2000	406,581	481,361	648,264
June 2001	439,744	517,348	709,144
2001–2002			
July	435,722	513,661	709,384
August	443,312	519,516	714,711
September	451,923	527,838	722,196
October	456,884	531,930	726,942
November	463,317	536,126	735,295
December	469,644	545,580	735,055
January	475,759	549,591	739,076
February	479,104	552,088	743,536
March	486,745	556,354	748,666
April	474,077	545,734	776,249
May	477,050	548,047	781,068
June	473,702	545,663	790,562

(a) Currency plus current deposits with bank plus deposits of the private non-bank sector.

(b) M3 plus borrowings from the private sector by non-bank financial intermediaries less holdings of currency and deposits of NBFIs.

(c) Loans, advances and bills discounted to the private sector (does not include loans to other financial intermediaries).

Source: Reserve Bank of Australia Bulletin.

Explanatory Notes

There are a number of ways in which the supply of money can be measured. Monetary aggregates have long been used by central banks as indicators of the effects of monetary policy. Aggregates used in Australia are currency, M1, M3, broad money and credit. The most commonly referred to are M3 and broad money.

The definitions of the measures are as follows:

Currency is notes and coins on issue less holdings of notes and coins by all banks and the Reserve Bank.

M1 is currency plus current deposits with banks.

M3 is M1 plus other deposits from building societies and credit unions with banks.

Broad money is M3 plus borrowings from the private sector by non-bank depository corporations less holdings of currency and deposits of non-bank depository corporations.

Credit is loans, advances and bills discounted to the private sector (it does not include loans to other financial intermediaries).

Currency has become less significant with the increasing use of credit cards and other alternative means of payment such as EFTPOS; hence the reduced focus on this aggregate.

Between 1976 and 1985 the authorities established targets for M3 growth as part of monetary policy. Relationships between money and credit, economic growth and inflation are complex. In the period following deregulation of the financial system in 1983, these relationships changed and targeting was discontinued. Monetary aggregates are now treated as one of a set of economic indicators and the authorities target economic growth, employment and inflation directly.

Further Reading

Australian National Accounts: Financial Accounts (5232.0)

Shows the level (stock) of financial assets and liabilities of each sector of the economy; the market for each of the conventional financial instruments; and inter-sectoral transactions in financial assets and liabilities.

Monetary Aggregates

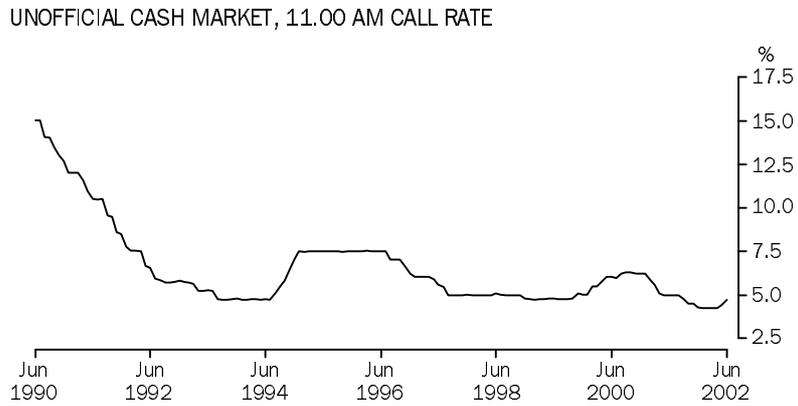
Monthly Reserve Bank of Australia press release containing Australia's monetary aggregates.

Reserve Bank of Australia Bulletin

Contains monthly levels of selected monetary aggregates for Australia.

Interest Rates

The unofficial cash market 11.00 am call was at 15.05% at June 1990. The series then experienced a sustained decline to 4.71% in October 1993. The call rate increased to around 7.50% between January 1995 and July 1996 before decreasing again to 4.74% in February 1999. Since then the call rate gradually increased to approximately 6.25% in January 2001 before declining again to be at 4.72% in June 2002.



KEY INTEREST RATES(a)

Period	Unofficial cash market, 11.00 am call rate(b)	Banks, business loans, large variable	Bank accepted bills - 90 day(c)	Commonwealth government 10-year Treasury bonds
	%	%	%	%
ANNUAL				
June 1998	5.07	8.05	5.32	5.58
June 1999	4.80	7.95	4.93	6.27
June 2000	6.02	9.30	6.23	6.16
June 2001	5.00	8.50	4.97	6.04
MONTHLY				
2001–2002				
July	5.00	8.50	5.04	6.08
August	5.00	8.50	4.95	5.54
September	4.78	8.30	4.55	5.52
October	4.52	8.05	4.36	5.21
November	4.50	8.05	4.28	5.61
December	4.28	7.95	4.25	6.01
January	4.25	7.85	4.26	6.01
February	4.25	7.85	4.31	5.95
March	4.25	7.85	4.46	6.32
April	4.25	7.85	4.59	6.10
May	4.44	8.10	4.84	6.20
June	4.72	8.35	5.07	5.99

(a) All data are end of period unless otherwise stated.

(b) Data are the weighted average of daily figures for the month.

(c) Data are the weighted average of the last week of the period.

Source: Reserve Bank of Australia Bulletin (RBA).

Explanatory Notes

Interest is the compensation paid to a lender for deferring expenditure and the price paid by a borrower for the use of the lender's funds.

There are different rates of interest which vary according to factors such as the amount borrowed, the period of the loan and the credit rating of the borrower. As a guide to the level of long-term interest rates, the yield (i.e. the equivalent of the interest rate) on a 10-year Treasury bond is shown. The cash market rate, prime rate and 90-day bank bill yield are examples of short-term interest rates.

The short-term money market is where banks and other large corporations lend funds that are temporarily in surplus to other financial institutions, etc. that have a temporary shortfall.

The Reserve Bank of Australia operates in the short-term money market (by borrowing and lending funds itself) in order to influence the cash rate. In turn, changes in the level of the cash rate affect other interest rates. The unofficial cash market 11.00 am call rate measures the amount of interest paid on unsecured overnight loans of cash.

Interest rates on short-term investments, e.g. 90-day bank bills, are very closely related to the cash rate. Ultimately, interest rates on bank deposits and funds placed with building societies, credit unions and the like are also related to the cash rate to varying degrees. Changes in the cost of borrowing by intermediaries flow through to their loan rates. For example, the prime rate, which indicates the amount of interest charged by banks on loans to preferred customers, tends to move with reference to the cash rate.

These interrelationships allow the Reserve Bank, through its operations in the short-term money market, to have an effect on many interest rates in the economy. This means that the Bank can influence the cost and hence the amount of borrowing and lending in the economy, with the aim of maintaining low inflation and contributing to a policy mix to achieve strong economic growth. Broadly speaking, this is what is meant by monetary policy.

Further Reading

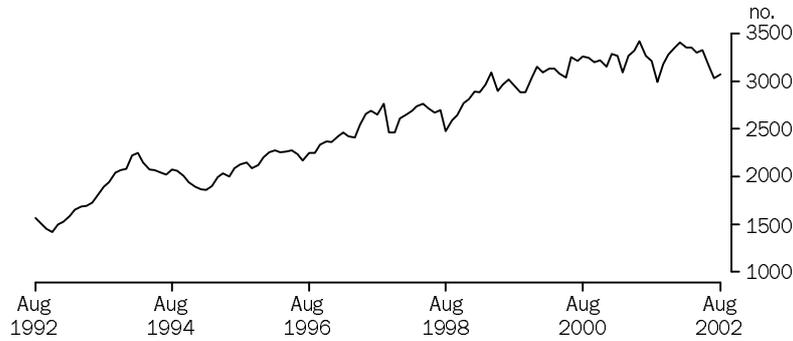
Reserve Bank of Australia Bulletin

Contains information on interest rates for the money market, capital market, banks and other financial institutions.

Share Price Indexes

The All Ordinaries index generally increased steadily between August 1990 and August 2002, with stronger upward trends from April 1995. The main exceptions to the general increase were when the index turned down sharply in October 1997, August 1998, September 2001 as a result of the events of September 11, and during 2002 due to further global instability.

ALL ORDINARIES INDEX (31 DECEMBER 1979 = 500.0)



Source: Australian Stock Exchange, Monthly Index Analysis, Monthly data.
Shares magazine, Monthly data.

SHARE PRICE INDEXES(a) (31 DEC 1979 = 500.0)

Period	All industrials	All resources	All ordinaries
ANNUAL			
1999-2000	5,769.5	1,338.3	3,257.6
2000-2001	5,973.7	1,582.0	3,425.2
2001-2002	5,432.9	1,575.3	3,163.2
MONTHLY			
2001-02			
July	5,718.9	1,459.9	3,270.8
August	5,649.6	1,416.8	3,217.8
September	5,251.8	1,328.5	2,998.0
October	5,603.0	1,407.0	3,185.3
November	5,721.0	1,506.4	3,276.9
December	5,847.7	1,572.9	3,360.0
January	5,886.2	1,650.8	3,404.0
February	5,752.5	1,711.4	3,358.6
March	5,764.1	1,693.8	3,363.3
April	5,684.5	1,610.6	3,299.5
May	5,710.8	1,644.7	3,325.1
June	5,432.9	1,575.3	3,163.2
2002-03			
July	5,227.9	1,499.7	3,032.6
August	5,311.8	1,480.5	3,073.7

(a) Share prices on joint trading floors. Monthly figures are average of daily figures for the month. Annual index is from the last month of the year.

Source: Australian Stock Exchange, Monthly Index Analysis, Monthly data.

Explanatory Notes

Share price indexes provide an indication of price movements for listed shares on the Australian Stock Exchange (ASX). One of the most important of these is the All Ordinaries index. Share prices reflect business confidence in general, as well as expectations in specific industries.

On 3 April 2000 Standard & Poors took over the management of the ASX Indices. The All Ordinaries now includes 500 stocks being selected solely by market capitalisation (the market value of shares on issue, calculated using the number of shares multiplied by the share price for each company).

Another important index is the all resources index which measures the movement in share prices for leading mining and oil companies. There are also 24 sub-indexes for specific sectors within the share market.

Share price indexes only measure the capital gain or loss experienced by shareholders through fluctuations in share prices and do not take into account dividends earned. However, accumulation indexes, which indicate total pre-tax returns (after reinvesting dividends) from investments in listed shares, are also calculated.

Further Reading

Monthly Index Analysis

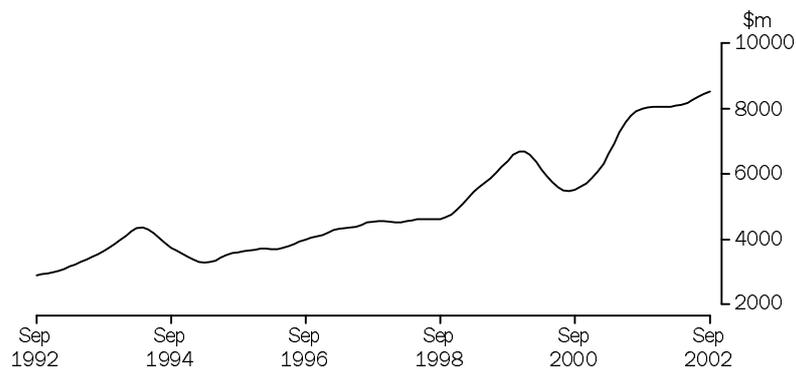
This Australian Stock Exchange release contains monthly records of all Australian share price and accumulation index movements, including sample changes, index weights comparisons with international indexes, currency adjusted indexes and exchange rates.

Australian Stock Exchange web site (<http://www.asx.com.au>)

Home Loans

The trend series for secured finance commitments to individuals for owner occupied housing has shown two major periods of activity since July 1990. The series peaked at \$4,351m in April 1994 before declining to a value of \$3,283m in March 1995. The series then increased gradually until November 1998, after which it grew very strongly until December 1999 partly due to construction work before the introduction of The New Taxation System in July 2000. A weakening construction finance series, along with rising interest rates contributed to a steep decline in the series from its December 1999 peak to a low of \$5,487m in August 2000. Since then the series has steeply increased, influenced by the first home owner scheme which operated over this period. The series concluded at a record level of \$8,522m in September 2002.

TOTAL HOUSING FINANCE FOR OWNER OCCUPATION TREND



Source: *Housing Finance for Owner Occupation, Australia (5609.0), Monthly data.*

SECURED HOUSING FINANCE COMMITMENTS TO INDIVIDUALS(a)

Period	Construction of dwellings \$m	Purchase of newly erected dwellings \$m	Purchase of established dwellings(b) \$m	Total \$m	New bank home loans interest rate(c) %
ANNUAL					
1996–1997	6,649.1	2,653.9	40,676.3	49,979.3	7.20
1997–1998	8,380.5	2,907.4	43,374.8	54,662.7	6.70
1998–1999	9,355.8	2,801.6	49,342.4	61,499.9	6.50
1999–2000	10,616.7	2,840.8	61,494.8	74,952.3	7.80
2000–2001	7,393.6	2,737.6	64,293.2	74,424.4	6.80
2001–2002	11,531.6	3,511.1	81,438.9	96,481.7	6.55
MONTHLY (TREND)					
2001–2002					
July	934.7	312.3	6,542.4	7,789.5	6.80
August	967.4	320.5	6,638.3	7,926.2	6.80
September	985.7	322.5	6,696.4	8,004.5	6.55
October	993.7	319.2	6,739.1	8,052.0	6.30
November	992.9	311.0	6,768.9	8,072.8	6.30
December	983.9	300.3	6,789.9	8,074.2	6.05
January	968.0	289.6	6,812.7	8,070.3	6.05
February	947.9	279.6	6,840.3	8,067.8	6.05
March	930.0	271.3	6,877.0	8,078.4	6.05
April	919.4	265.7	6,933.4	8,118.6	6.05
May	917.8	261.9	7,006.8	8,186.5	6.30
June	921.6	258.9	7,092.9	8,273.5	6.55
2002–2003					
July	924.9	255.9	7,184.8	8,365.6	6.55
August	926.3	253.3	7,272.4	8,452.0	6.55
September	926.9	250.7	7,344.5	8,522.1	6.55

(a) Excluding alterations and additions.

(b) Including refinancing.

(c) Data are at end of period.

Source: Housing Finance for Owner Occupation, Australia (5609.0), and Reserve Bank of Australia Bulletin.

Explanatory Notes

The housing finance series represents the monthly value of commitments by financial institutions to provide finance for the purchase of owner occupied housing. The value of finance commitments may increase as the number of commitments increases, or as the average size of all commitments increases. A finance commitment usually (but not always) precedes the provision of finance by the lender to the borrower. For example, a lender may make a commitment to lend a specified amount for the construction of a dwelling, and then progressively provide the finance over a number of months as construction work is completed.

Not all housing purchases are financed by a loan from a financial institution. A dwelling may be bought without the need for a loan, or a loan may be obtained from a family member, a solicitor or an accountant (or other non-financial entities).

Monetary policy influences the interest rate lenders charge housing finance borrowers. When monetary policy is tightened, short term interest rates rise, and there is upward pressure on the cost of borrowing. When monetary policy is loosened, short term interest rates fall, and there is downward pressure on borrowing costs. Interest rates have an important bearing on the demand for housing finance.

Further Reading

Housing Finance for Owner Occupation, Australia (5609.0)

Presents data on secured finance commitments to individuals for construction of dwellings, purchase of new and established dwellings by banks, permanent building societies and other lenders.

Financial Accounts

Total demand for credit by the non-financial sectors during the year ended June 2002 was \$114.1b. At the end of 30 June 2002, total credit market outstandings were \$1755.7b. The increase in demand for credit for the most recent four quarters has been the result of increasing demand by the household sector, increasing from \$42.9b to \$78.3b in loans and placements over the 12 month period ended June 2002.

TOTAL DEMAND FOR CREDIT



Source: Australian National Accounts, Financial Accounts (5232.0), Quarterly data.

DEMAND FOR CREDIT (\$b)

Period	1997-9 8	1998-9 9	1999-20 00	2000-0 1	2001-02
Total funds raised on conventional credit markets by non-financial domestic sectors	99.9	96.1	128.8	86.1	114.1
Private non-financial corporations					
Bills of exchange	3.7	3.7	4.6	4.0	-1.3
One name paper	0.4	5.2	5.7	-4.7	-1.9
Bonds	4.9	10.6	10.8	8.1	2.6
Loans and placements	19.9	17.6	10.5	21.5	11.12
Shares and other equity (a)	37.7	26.0	30.6	19.9	26.5
National public non-financial corporations					
Bills of exchange	0.0	0.1	0.1	0.0	-0.2
One name paper	0.2	0.4	0.7	0.1	-0.9
Bonds	0.5	0.3	1.8	3.1	2.4
Loans and placements	-3.4	0.2	-0.1	0.9	-0.6
Shares and other equity (a)	14.3	-0.3	16.1	0.0	0.0
State and local public non-financial corporations					
Bills of exchange	0.3	0.0	-0.1	0.1	0.2
Bonds	0.0	-0.1	0.0	0.0	0.0
Loans and placements	-1.7	-0.3	1.0	3.1	1.0
National general government					
One name paper	-3.0	-2.3	-1.9	-0.7	-0.9
Bonds	-15.5	-5.4	-8.8	-8.9	-2.4
State and local general government					
Bonds	0.1	0.0	0.1	0.0	-0.2
Loans and placements	-0.1	-3.2	-3.5	-4.1	-0.4
Households					
Bills of exchange	0.1	0.5	0.6	0.6	-0.1
Loans and placements	41.1	43.3	60.5	42.9	78.3

(a) These estimates are considered to be of poor quality.

Note: Positive numbers indicate an increase in borrowings. Negative numbers indicate debt repayments.

Source: Australian National Accounts: Financial Accounts (5232.0).

Explanatory Notes

The table presents a summary of the demand for credit in Australia by the non-financial domestic sectors. It includes annual net raisings of credit, by the issue of both debt and equity, on conventional credit markets. The ABS defines conventional credit markets to include the share, bond, money and loan markets, in Australia and overseas which are reasonably open to all potential borrowers wishing to raise capital by means of loans, debt securities, shares and units.

Credit may be defined broadly as funds provided to those seeking to borrow. However, analytically useful measures of credit usually exclude borrowings by financial enterprises because their main role is as an intermediary, i.e. they borrow in order to lend to others (creating loan assets). Hence, including both the liabilities and loan assets of financial intermediaries in the table would be double counting. Also excluded are all non-market funding arrangements, such as debt and equity claims between related companies, levels of government, and governments and their trading enterprises, as are some types of financial instruments, such as trade debts, not considered to be part of an organised market.

The aggregate at the head of the table is a measure of the primary credit flow in Australia; that is, credit which is to be used primarily to finance non-financial outlays such as investment in plant and equipment.

Further Reading

Australian National Accounts: Concepts, Sources and Methods (5216.0)

Contains a detailed explanation of the system of Australian national accounts outlining major concepts and definitions.

Australian National Accounts: Financial Accounts (5232.0)

Presents data on the level (stock) of financial assets and liabilities of each sector of the economy; the market for each of the conventional financial instruments; and inter-sectoral transactions in financial assets and liabilities.

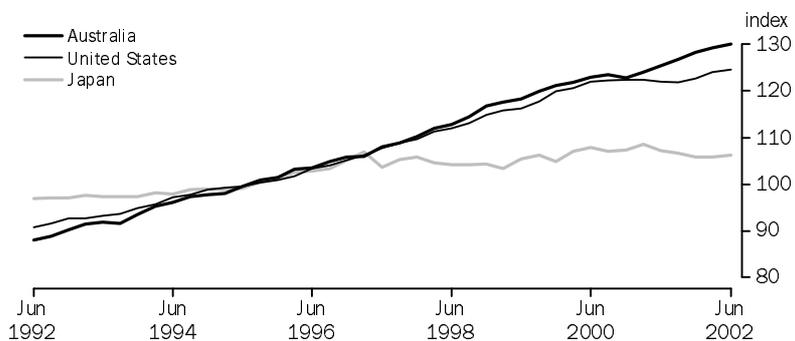
CHAPTER 9

INTERNATIONAL COMPARISONS

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Real Gross Domestic Product Volume Index

REAL GROSS DOMESTIC PRODUCT VOLUME INDEXES:
SEASONALLY ADJUSTED (1995=100.0)



Source: OECD, Quarterly data

REAL GROSS DOMESTIC PRODUCT VOLUME INDEXES(a) (1995 =100.0)

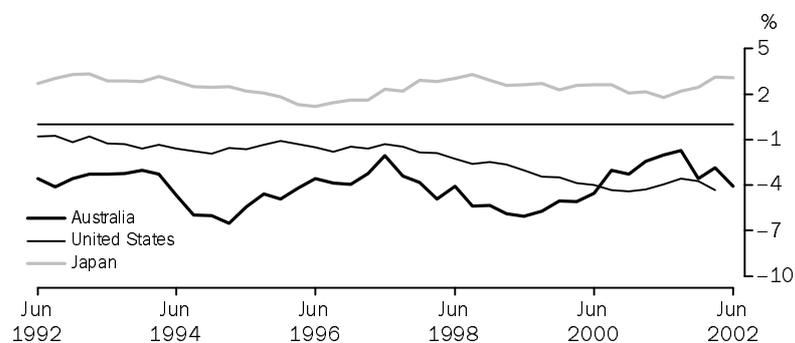
Period	United States	Japan	Germany	United Kingdom	OECD Major 7	Australia
ANNUAL						
1996-1997	105.8	104.8	101.6	104.3	104.4	106.2
1997-1998	110.6	104.9	103.5	107.8	107.6	110.9
1998-1999	115.0	104.3	104.6	110.4	110.4	116.8
1999-2000	120.1	106.5	108.0	113.8	114.5	121.5
2000-2001	122.3	107.6	110.0	116.6	116.7	123.9
2001-2002	123.3	106.0	110.1	118.3	nya	128.6
QUARTERLY (SEASONALLY ADJUSTED)						
2000-2001						
September	122.2	107.1	109.6	115.8	116.3	123.5
December	122.5	107.4	109.7	116.3	116.7	122.8
March	122.4	108.5	110.3	116.9	117.0	124.0
June	121.9	107.2	110.3	117.5	116.6	125.3
2001-2002						
September	121.8	106.5	110.1	117.9	116.5	126.8
December	122.6	105.7	109.8	118.0	116.7	128.3
March	124.1	105.7	110.1	118.2	117.5	129.2
June	124.5	106.2	110.4	118.9	n.y.a	130.0

(a) Data for Japan measures real gross national product.

Source: Organisation for Economic Co-operation and Development (OECD) and Australian Bureau of Statistics (ABS).

Balance on Current Account

BALANCE ON CURRENT ACCOUNT:
AS A PERCENTAGE OF SEASONALLY ADJUSTED GDP



Source: OECD, Quarterly data.

BALANCE ON CURRENT ACCOUNT: PERCENTAGE OF SEASONALLY ADJUSTED GDP(a)

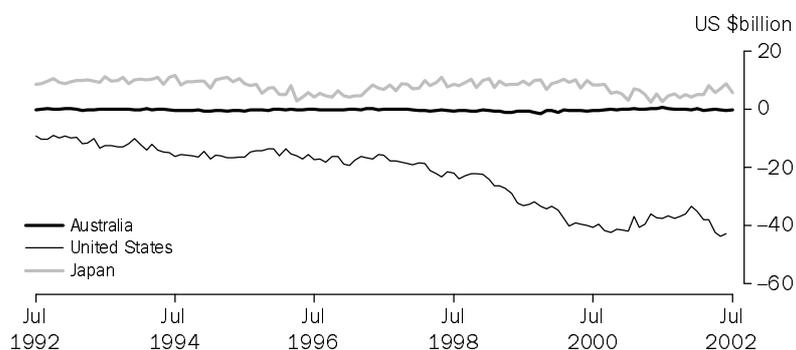
Period	United States	Japan	United Kingdom	Australia
ANNUAL				
1996-1997	-1.5	1.7	-0.5	-3.3
1997-1998	-1.9	2.7	-0.6	-4.1
1998-1999	-2.7	2.9	-1.4	-5.7
1999-2000	-3.7	2.6	-1.9	-5.1
2000-2001	-4.3	2.2	-2.1	-2.7
2001-2002	nya	2.7	nya	-3.1
QUARTERLY (SEASONALLY ADJUSTED)				
2000-2001				
September	-4.3	2.7	-1.7	-3.0
December	-4.5	2.1	-2.6	-3.3
March	-4.3	2.1	-1.8	-2.5
June	-3.9	1.8	-2.5	-2.0
2001-2002				
September	-3.6	2.2	-1.5	-1.7
December	-3.7	2.4	-2.6	-3.6
March	-4.4	3.1	-2.2	-2.9
June	nya	3.1	nya	-4.1

(a) Statistics are calculated as the original balance on current account as a percentage of the seasonally adjusted current price gross domestic product, except for Japan where real gross national product replaces gross domestic product.

Source: Organisation for Economic Co-operation and Development (OECD) and Australian Bureau of Statistics (ABS).

Balance on Merchandise Trade

BALANCE ON MERCHANDISE TRADE: SEASONALLY ADJUSTED



Source: OECD Monthly data

BALANCE ON MERCHANDISE TRADE(a)

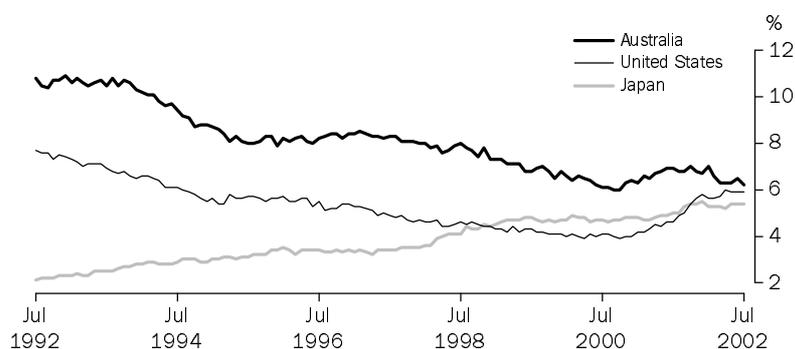
Period	United States \$USb	Japan \$USb	Germany \$USb	United Kingdom \$USb	Australia \$USb
ANNUAL					
1996-1997	-206.3	66.2	67.4	-23.4	0.0
1997-1998	-232.5	99.7	71.3	-34.2	-1.8
1998-1999	-300.6	108.1	70.3	-49.8	-7.3
1999-2000	-429.3	110.7	65.7	-50.8	-7.7
2000-2001	-478.9	72.1	62.9	-54.6	0.3
2001-2002	-458.0	66.4	101.8	-52.8	0.5
MONTHLY (SEASONALLY ADJUSTED)					
2000-2001					
May	-36.1	2.3	7.4	-4.5	0.4
June	-37.4	5.3	5.8	-5.2	0.4
2001-2002					
July	-37.5	2.8	7.1	-4.3	0.6
August	-36.5	4.8	9.2	-5.4	0.3
September	-37.6	5.4	7.4	-4.0	0.1
October	-36.9	3.9	7.7	-4.0	0.2
November	-36.0	5.1	5.5	-4.7	-0.0
December	-33.3	4.2	9.6	-5.4	-0.1
January	-35.4	5.0	10.0	-4.6	0.4
February	-38.1	5.1	8.5	-3.9	-0.4
March	-38.2	8.1	9.7	-4.3	-0.2
April	-42.1	5.9	8.0	-4.4	0.2
May	-43.7	7.2	10.1	-2.7	-0.1
June	-42.8	9.1	9.1	-5.2	-0.5
2002-2003					
July	n.y.a.	5.7	9.1	n.y.a.	-0.3

(a) All series are exports (f.o.b.) less imports (c.i.f.), except the United States and Australia where imports are also f.o.b. Data are measured on a foreign trade basis. The OECD now publish this data in US billions.

Source: Organisation for Economic Co-operation and Development (OECD) and Australian Bureau of Statistics (ABS).

Unemployment Rates

STANDARDISED UNEMPLOYMENT RATES: SEASONALLY ADJUSTED



Source: OECD, Monthly data.

UNEMPLOYMENT RATE(a)

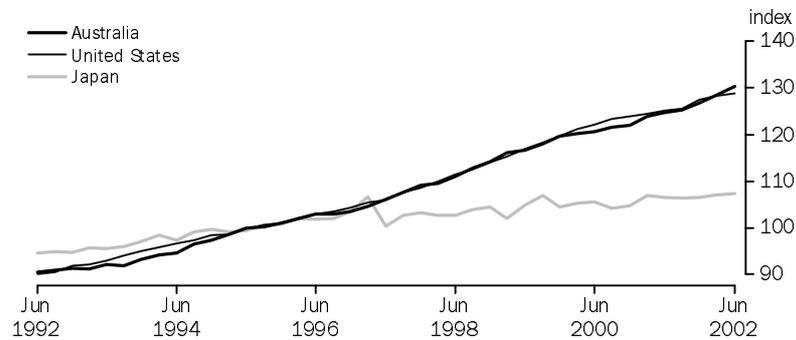
Period	United States %	Japan %	Germany %	United Kingdom %	OECD Major 7 %	Australia %
ANNUAL						
1996-1997	5.2	3.3	9.4	7.5	6.6	8.3
1997-1998	4.7	3.7	9.8	6.4	6.4	8.0
1998-1999	4.4	4.5	8.9	6.0	6.2	7.4
1999-2000	4.1	4.7	8.2	5.6	5.9	6.6
2000-2001	4.2	4.8	7.7	5.1	5.6	6.4
2001-2002	5.5	5.3	8.0	n.y.a.	6.3	6.7
MONTHLY (SEASONALLY ADJUSTED)						
2000-2001						
May	4.4	4.9	7.7	5.0	5.7	6.8
June	4.6	4.9	7.7	5.0	5.8	6.9
2001-2002						
July	4.6	5.0	7.7	5.0	5.8	6.9
August	4.9	5.0	7.8	5.0	6.0	6.8
September	5.0	5.3	7.8	5.1	6.0	6.8
October	5.4	5.4	7.9	5.1	6.2	7.0
November	5.6	5.4	7.9	5.1	6.4	6.8
December	5.8	5.5	7.9	5.1	6.5	6.7
January	5.6	5.3	8.0	5.0	6.3	7.0
February	5.6	5.3	8.0	5.1	6.3	6.6
March	5.7	5.3	8.0	5.1	6.4	6.3
April	6.0	5.2	8.0	5.2	6.5	6.3
May	5.9	5.4	8.2	5.1	6.5	6.3
June	5.9	5.4	8.3	n.y.a.	6.5	6.5
2002-2003						
July	5.9	5.4	8.3	n.y.a.	6.5	6.2

(a) All series are OECD standardised unemployment rates.

Source: Organisation for Economic Co-operation and Development and Australian Bureau of Statistics.

Private Consumption Expenditure Volume Index

PRIVATE CONSUMPTION EXPENDITURE VOLUME INDEXES:
SEASONALLY ADJUSTED (1995=100.0)



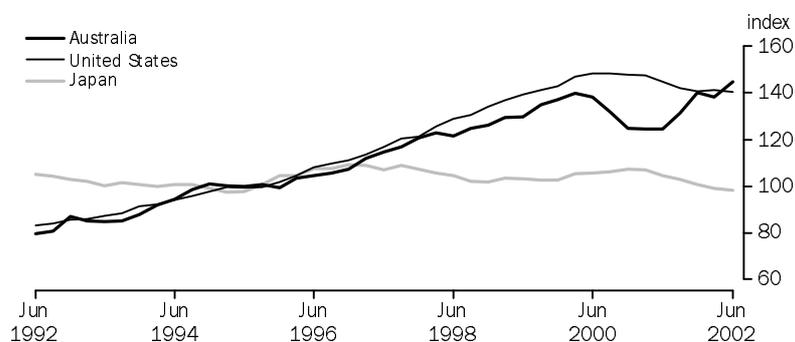
PRIVATE CONSUMPTION EXPENDITURE VOLUME INDEXES (1995 = 100.0)

Period	United States	Japan	Germany	United Kingdom	Australia
ANNUAL					
1996-1997	104.8	103.1	101.5	106.0	104.3
1997-1998	109.4	102.8	102.1	109.8	109.3
1998-1999	114.7	103.9	105.1	114.2	114.9
1999-2000	120.3	105.6	108.0	119.8	119.6
2000-2001	124.2	105.6	109.6	125.4	123.0
2001-2002	127.5	106.8	110.0	n.y.a.	127.8
QUARTERLY (SEASONALLY ADJUSTED)					
2000-2001					
December	123.9	104.8	108.5	124.7	121.9
March	124.6	106.8	110.0	126.2	123.9
June	125.1	106.5	110.9	127.1	124.7
2001-2002					
September	125.5	106.4	110.7	128.5	125.4
December	127.4	106.5	110.2	129.9	126.8
March	128.3	107.0	109.5	130.6	128.4
June	128.9	107.3	109.6	n.y.a.	130.4

Source: Organisation for Economic Co-operation and Development.

Private Fixed Capital Investment Volume Index

PRIVATE FIXED CAPITAL INVESTMENT VOLUME INDEXES:
SEASONALLY ADJUSTED (1995=100.0)



Source: OECD, Quarterly data.

PRIVATE FIXED CAPITAL INVESTMENT VOLUME INDEXES(a) (1995 = 100.0)

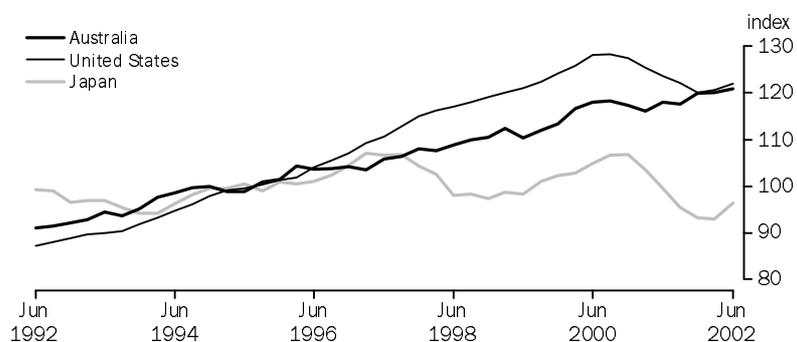
Period	United States	Japan	Germany	United Kingdom	Australia
ANNUAL					
1996-1997	112.7	108.3	100.3	107.6	109.9
1997-1998	124.0	106.6	101.8	119.3	120.4
1998-1999	135.4	102.7	103.8	127.0	127.5
1999-2000	144.9	104.1	108.3	127.2	137.5
2000-2001	147.1	106.2	107.8	131.6	126.5
2001-2002	141.2	100.3	101.0	n.y.a.	138.6
QUARTERLY (SEASONALLY ADJUSTED)					
2000-2001					
December	147.7	107.2	109.4	135.3	124.9
March	147.6	107.0	106.6	131.1	124.4
June	144.8	104.5	105.0	131.5	124.6
2001-2002					
September	142.1	103.0	103.1	126.5	131.3
December	140.8	100.6	101.8	126.3	140.0
March	141.4	99.0	100.8	124.4	138.0
June	140.5	98.4	98.2	nya	145.0

(a) Fixed capital investment volume indexes for Germany and the United Kingdom are for gross domestic fixed investment.

Source: Organisation for Economic Co-operation and Development and Australian Bureau of Statistics.

Industrial Production Volume Index

INDUSTRIAL PRODUCTION VOLUME INDEXES:
SEASONALLY ADJUSTED (1995=100.0)



Source: OECD, Quarterly data.

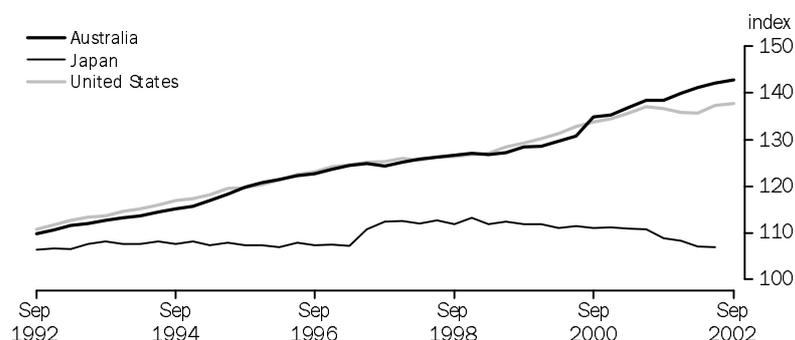
INDUSTRIAL PRODUCTION VOLUME INDEXES (1995 = 100.0)

Period	United States	Japan	Germany	United Kingdom	OECD Major 7	Australia
ANNUAL						
1996-1997	108.1	105.1	102.3	102.0	105.1	104.3
1997-1998	115.3	102.9	107.3	103.0	109.4	107.8
1998-1999	119.5	98.2	108.7	103.3	110.5	110.8
1999-2000	125.2	102.8	113.6	105.4	115.4	115.0
2000-2001	126.2	104.1	119.4	105.8	117.2	117.4
2001-2002	121.2	94.5	116.0	101.3	112.0	119.4
QUARTERLY (SEASONALLY ADJUSTED)						
2000-2001						
December	127.4	106.8	119.3	106.3	118.5	117.3
March	125.4	103.5	120.6	105.8	117.0	116.2
June	123.6	99.4	118.4	104.5	114.8	118.0
2001-2002						
September	122.1	95.4	117.7	103.5	113.1	117.6
December	120.0	93.1	114.9	101.0	110.9	119.9
March	120.7	93.0	115.8	99.8	111.4	120.0
June	122.0	96.4	115.5	100.0	112.7	120.8

Source: Organisation for Economic Co-operation and Development and Australian Bureau of Statistics.

Consumer Price Index

CONSUMER PRICE INDEXES, ALL GROUPS EXCLUDING HOUSING:
(1989-90=100.0)



Source: Consumer Price Index, Australia (6401.0), Quarterly data.

CONSUMER PRICE INDEXES, ALL GROUPS EXCLUDING HOUSING(a) (1989-1990 = 100.0)

Period	United States	Japan	Germany	Canada	United Kingdom	Hong Kong	Republic of Korea	Taiwan	New Zealand(b)	Australia
ANNUAL										
1996-1997	124.3	108.2	118.2	118.8	131.5	167.6	151.3	125.7	113.7	123.9
1997-1998	125.8	112.4	120.3	120.6	134.6	173.9	162.1	127.2	114.9	125.4
1998-1999	127.2	112.4	120.7	122.0	137.2	172.0	169.0	128.2	116.9	126.9
1999-2000	130.9	111.6	121.8	125.0	139.3	166.6	172.1	129.3	118.7	129.4
2000-2001	135.3	111.0	124.2	128.1	141.4	164.8	179.2	130.9	123.5	136.4
2001-2002	136.4	107.7	126.6	130.3	143.5	162.5	185.0	130.6	127.0	140.4
QUARTERLY										
2000-2001										
March	135.7	110.9	124.5	127.9	140.9	163.7	180.6	129.8	123.8	137.0
June	137.1	110.8	125.9	129.8	143.0	164.4	182.5	129.9	125.1	138.4
2001-2002										
September	136.7	108.8	126.0	130.1	142.9	164.0	183.7	130.4	125.8	138.4
December	135.8	108.3	125.4	128.7	143.2	163.4	183.3	131.6	126.5	139.8
March	135.7	107.0	127.3	129.9	143.4	161.4	185.1	130.1	127.1	141.1
June	137.3	106.8	127.7	132.5	144.6	161.2	187.7	130.4	128.5	142.1
2002-2003										
September	137.7	n.y.a.	127.7	n.y.a.	144.5	n.y.a.	188.2	130.5	129.0	142.8

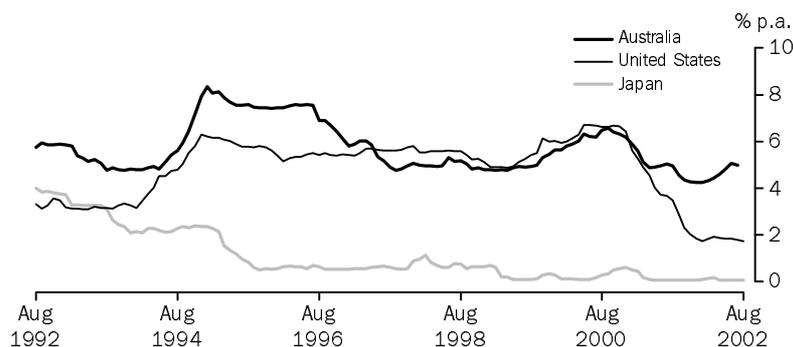
(a) Because of the many differences in the structure of the housing sector in different countries and in the way that housing is treated in their Consumer Price Indexes, and index which excludes housing is used for the purpose of international comparisons of consumer price indexes.

(b) From March quarter 1994 the statistics for New Zealand refer to 'all groups excluding housing and credit services'.

Source: Organisation for Economic Co-operation and Development (OECD) and Australian Bureau of Statistics (ABS).

Short-term Interest Rates

SHORT-TERM INTEREST RATES



Source: OECD, Monthly data.

SHORT-TERM INTEREST RATES (% per annum)(a)

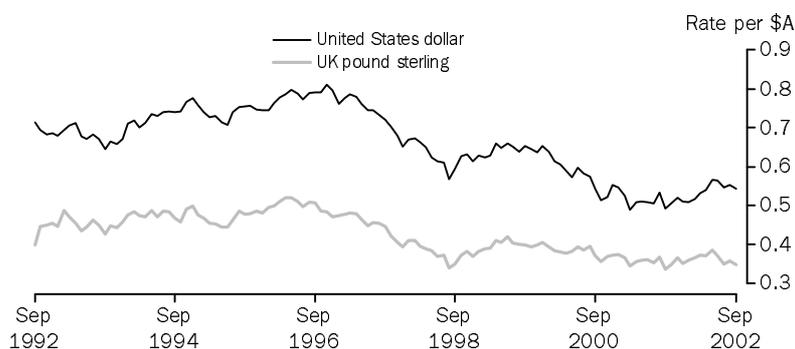
Period	United States	Japan	Euro Area	United Kingdom	Australia
ANNUAL					
1996-1997	5.66	0.61	4.29	6.66	5.35
1997-1998	5.60	0.58	4.00	7.63	5.32
1998-1999	5.13	0.07	2.63	5.12	4.93
1999-2000	6.73	0.08	4.50	6.14	6.23
2000-2001	3.74	0.03	4.45	5.19	4.97
2001-2002	1.81	0.03	3.46	4.11	5.07
MONTHLY					
2000-2001					
June	3.74	0.03	4.45	5.19	4.97
2001-2002					
July	3.66	0.04	4.47	5.19	5.04
August	3.48	0.05	4.35	4.93	4.95
September	2.87	0.03	3.98	4.65	4.55
October	2.31	0.04	3.60	4.36	4.36
November	2.03	0.04	3.39	3.93	4.28
December	1.83	0.05	3.34	3.99	4.25
January	1.74	0.06	3.34	3.98	4.26
February	1.82	0.14	3.36	3.98	4.31
March	1.91	0.17	3.39	4.06	4.46
April	1.87	0.05	3.41	4.11	4.59
May	1.82	0.05	3.46	4.08	4.84
June	1.81	0.03	3.46	4.11	5.07
2002-2003					
July	1.79	0.04	3.41	3.99	4.98
August	1.73	0.03	n.y.a.	n.y.a.	n.y.a.

(a) Rates are three month Certificate of Deposit (United States and Japan), three month European Interbank Offered Rate (Euro Area), 3-month interbank loans (United Kingdom) and 90 Day Bank Accepted Bills (Australia)

Source: Organisation for Economic Co-operation and Development.

Exchange Rates

SELECTED EXCHANGE RATES



Source: Reserve Bank of Australia, Monthly data.

EXCHANGE RATES(a)

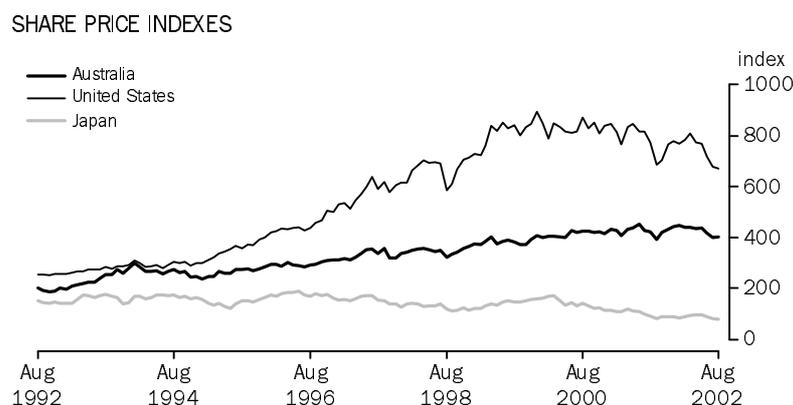
Period	United States (Dollar)	Japan (Yen)	Euro(b)	United Kingdom (Pound)	New Zealand (Dollar)
ANNUAL					
1996-1997	0.75	85.20	-	0.45	1.10
1997-1998	0.61	86.16	-	0.37	1.19
1998-1999	0.66	79.66	0.64	0.42	1.25
1999-2000	0.60	63.19	0.63	0.39	1.28
2000-2001	0.51	62.94	0.60	0.36	1.25
2001-2002	0.56	67.48	0.57	0.37	1.16
MONTHLY					
2001-2002					
July	0.50	62.92	0.58	0.35	1.23
August	0.53	63.48	0.58	0.37	1.21
September	0.49	58.69	0.54	0.33	1.21
October	0.51	61.60	0.56	0.35	1.22
November	0.52	64.48	0.59	0.37	1.26
December	0.51	67.04	0.58	0.35	1.23
January	0.51	67.42	0.59	0.36	1.22
February	0.52	69.13	0.60	0.36	1.23
March	0.53	70.53	0.61	0.37	1.21
April	0.54	69.09	0.60	0.37	1.20
May	0.57	70.27	0.60	0.39	1.18
June	0.56	67.48	0.57	0.37	1.16
2002-2003					
July	0.55	65.46	0.56	0.35	1.16
August	0.55	65.23	0.56	0.36	1.18
September	0.54	66.05	0.55	0.35	1.16

(a) Rates are for the last trading day of the reference period.

(b) On January 1, 1999 eleven European Union nations launched the euro, a single currency giving control of interest rate and exchange rate policy to the European Central Bank. The euro was immediately available for electronic financial and business transactions, but euro coins and notes will not be issued to the general public until January 2002. The participating nations are Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. Greece adopted the Euro on 1 January 2001 and Britain, Denmark and Sweden chose not to adopt the euro.

Source: Reserve Bank of Australia.

Share Price Index



Source: Reserve Bank of Australia, Monthly data.

SHARE PRICE INDEXES (31 JANUARY 1985 = 100.0)

Period	United States Dow Jones Industrial	Japan Nikkei - 225	Germany Commerzbank	United Kingdom FT Industrial Ordinary	Hong Kong Hang Seng	Taiwan Weighted	South Korea Composite	Australia All Ordinaries
ANNUAL								
At end of-								
1996-1997	596.3	171.8	327.5	303.1	1113.3	1146.3	536.6	352.5
1997-1998	695.7	132.0	703.6	384.8	625.9	958.3	214.5	345.0
1998-1999	852.6	146.2	641.7	407.4	991.4	1074.9	635.7	383.9
1999-2000	811.9	145.2	823.0	372.8	1183.6	1049.2	591.2	428.1
2000-2001	816.2	108.1	722.8	323.2	955.5	619.9	428.5	451.3
2001-2002	718.3	88.6	522.9	225.7	776.4	654.2	534.7	415.8
MONTHLY								
2000-2001								
June	816.2	108.1	722.8	323.2	955.5	619.9	428.5	451.3
2001-2002								
July	817.8	98.9	699.3	305.4	902.3	552.6	389.9	429.9
August	773.2	89.3	619.0	292.3	812.5	572.4	392.4	423.5
September	687.6	81.5	514.0	236.3	729.0	461.7	345.3	394.3
October	705.3	86.4	544.0	251.4	738.0	495.5	387.2	420.2
November	765.6	89.2	595.3	272.6	826.3	563.8	463.6	431.5
December	778.8	87.9	615.7	275.5	834.9	704.7	499.4	442.5
January	770.9	83.4	609.4	266.9	785.7	745.4	538.6	447.9
February	785.4	88.3	601.2	254.5	767.9	723.1	590.3	441.5
March	808.5	91.9	644.0	263.8	808.3	782.9	644.8	441.5
April	773.0	95.8	601.5	260.3	842.3	770.0	606.4	433.2
May	771.3	98.1	574.9	248.4	828.0	720.5	573.4	436.2
June	718.3	88.6	522.9	225.7	776.4	654.2	534.7	415.8
2002-2003								
July	679.0	82.4	441.5	199.6	752.2	627.2	516.9	399.0
August	673.3	80.2	443.0	195.6	735.8	604.9	530.2	403.4

Source: Reserve Bank of Australia.

ENDNOTES

Statistics relating to Organisation for Economic Co-operation and Development (OECD) Major 7 relate to the combination of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States of America.

International Comparisons

International comparisons show the economic performance of Australia against the performance of other countries.

Care must be taken when comparing economic indicators between countries. Statistical systems vary considerably between countries, which affects the comparability of data.

Australian and other government statistical agencies throughout the world produce and present national accounts based on the principles contained in the **System of National Accounts 1993** (SNA93). Although a number of other international standards have been developed for specific areas of economic statistics, such as the International Monetary Fund's **Balance of Payments Manual** and **A Manual on Government Finance Statistics**, the SNA93 has the central position in the standard setting process for economic statistics generally. However, the degree to which SNA93 is implemented varies considerably between countries.

Further Reading

Australian Economic Indicators (1350.0)

A comprehensive, monthly compendium of economic statistics including international comparisons. Generally presents statistics for the last **nine** years.

OECD Economic Outlook

Presents data on OECD member countries, published in June and December of each year, including employment/unemployment, current account balance, inflation and GDP.

OECD Economic Surveys: Australia

Reviews trends in the Australian economy and policy conclusions. Presents a calendar of the main economic events and Australian and international statistics in a statistical annex.

CHAPTER 10

STATISTICS: CONCEPTS, SOURCES, METHODS AND USAGE

To assist in your understanding of the statistics presented in this book, some of the more important or regularly occurring statistical concepts, sources, methods and usage are explained in this chapter. However, the explanations provided here are very brief, so if you require a detailed understanding of a topic, you must be prepared to undertake further research.

The ABS has a range of publications that discuss the following issues in detail. Some of these are included in the Further Reading reference at the end of this chapter. In addition, the publications listed as sources contain information on concepts, sources and methods of the statistics they relate to and, in some cases, provide reference to publications which explain the issues in further detail.

STATISTICAL CONCEPTS AND METHODS

Time Series

A data set is a collection of observations relating to a variable or group of variables. For example, a set of data could consist of observations of the population for each State and Territory in Australia at a single point in time, say Census night 1991. This provides a snapshot view of the population of Australia which could be used to compare populations of the various States and Territories in terms of age, sex, etc.

A time series is a list of observations for the same variable or group of variables over a period of time. For example, a time series could consist of the population for Australia for each year from 1980 to 1990. Time series enable recent estimates to be placed in a meaningful historical perspective, which permits analysts to see if the current situation is improving, deteriorating or staying much the same.

When compiling time series for analysis, care should be exercised that data has not been revised. Many statistical series produced by the ABS, especially derived series like national accounts, are subject to revision as more information becomes available. Seasonally adjusted and trend series are always subject to revision.

Classifications

Classification is one the cornerstones of statistical collection and analysis. Without the accurate and systematic arrangement of data according to common properties, statistical output cannot be comparable. Classifications group data into classes or categories according to various characteristics. For example, retail businesses may be classified according to what they sell. Instead of just compiling data about 'retailers', data could be compiled separately for footwear stores, butchers, newsagents etc.

The ABS has defined standard classifications that are used to present a wide range of data. ABS classifications align closely with international classifications enabling comparability with international statistics. A wide variety of organisations (government, private sector, educational institutions, etc.) use the ABS classifications for a variety of purposes including the analysis of data and running their own surveys and censuses. This enables them to compare their data with data from the ABS and from other organisations which use the same standard classifications.

Two of these standard classifications which are often used in reporting economic information are the classification of industries and the classification of institutional sectors.

Australian and New Zealand Standard Industrial Classification (ANZSIC)

ANZSIC is the standard classification used in Australia and New Zealand for the collection, compilation and publication of statistics by industry. The objective of the industrial classification is to identify groupings of businesses undertaking similar economic activities. Subject to certain criteria being met (economic significance and compliance with international standards), each such grouping defines an industry. The similar economic activities characterising the businesses concerned are referred to as primary activities. Each individual business is assigned an appropriate industry category on the basis of its predominant activities.

The ANZSIC structure comprises four levels: Divisions (the broadest level), Subdivisions, Groups and Classes (the finest level). At the Divisional level the main purpose is to provide a limited number of categories presenting a broad overall picture of the economy and suitable for publication in summary tables in official statistics. The Subdivision, Group and Class levels provide increasingly detailed dissections of the broad categories.

Structure of ANZSIC example:

Division C :	Manufacturing
Subdivision 22:	Textiles, Clothing, Footwear and Leather Manufacturing
Group Title 224:	Clothing Manufacturing
Class 2242:	Women's and Girls' Wear Manufacturing

There are 17 ANZSIC Divisions each identified by an alphabetical character, as presented:

A	Agriculture, Forestry and Fishing
B	Mining
C	Manufacturing
D	Electricity, Gas and Water Supply
E	Construction
F	Wholesale Trade
G	Retail Trade
H	Accommodation, Cafes and Restaurants
I	Transport and Storage
J	Communication Services
K	Finance and Insurance
L	Property and Business Services
M	Government Administration and Defence
N	Education
O	Health and Community Services
P	Cultural and Recreation Services
Q	Personal and Other Services

Standard Economic Sector Classifications of Australia (SESCA)

SESCA presents a system for classifying institutional units (such as enterprises and households) into appropriate sectors of the economy. A major component of the SESCOA is the Standard Institutional Sector Classification of Australia (SISCA) which forms the basis for the institutional sectoring of a range of statistics in the Australian Bureau of Statistics, including the National Accounts, Balance of Payments, International Investment, Financial Accounts and Government Finance Statistics.

SISCA is often used in conjunction with a number of other supporting classifications such as Public/Private classification, Level of Government classification, Jurisdiction classification and the Type of Legal Organisation classification (TOLO). This group of classifications and other related classifications are together presented as the SESCA. These associated classifications allow further identification and detail of particular characteristics of institutional units classified under the SISCA.

The structure of SISCA is as follows:

- 1 Non-financial corporations
- 2 Financial corporations
 - 2.1 Central Bank and other supervisory authorities
 - 2.1.1 Reserve Bank of Australia
 - 2.1.2 Other supervisory authorities
 - 2.2 Depository corporations
 - 2.2.1 Banks
 - 2.2.2 Other depository corporations
 - 2.3 Insurance corporations and pension funds
 - 2.3.1 Life Insurance
 - 2.3.2 Pension funds
 - 2.3.3 Other insurance corporations
 - 2.4 Other financial institutions
 - 2.4.1 Central banking authorities
 - 2.4.2 Financial intermediaries n.e.c
 - 2.4.3 Financial auxiliaries
- 3 General Government
- 4 Households
- 5 Non-profit institutions serving households
- 6 Rest of the world

Chain Volume Estimates

Chain volume estimates provide a convenient way of measuring changes in quantities (or 'real' change) in various economic statistics because they remove the direct effects of price changes.

Many economic statistics, such as gross domestic product, relate to a wide range of goods and services. Our difficulty is how to aggregate different units of measurement, e.g. the number of cars produced with tonnes of steel produced. If we use a common unit of measurement, i.e. money values (or dollars), we can express transactions for a range of goods and services as a single aggregate.

However, change in money values from one period to another is generally a combination of change in price and a change in quantity. In most cases, we are interested in changes in the physical quantities underlying the dollar values, e.g. the change in the number of cars produced. As a result, estimates are adjusted to remove the direct effects of price changes. Such estimates are said to be **chain volume estimates** (or in real terms).

The current price value of a transaction may be thought of as being the product of a price and a quantity. The value of a transaction in chain volume terms can be derived by linking together 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. The reference year for our chain volume measures is the year prior to the latest complete financial year (currently 2000-01).

It is not possible to derive chain volume estimates for items such as interest rates or profits that do not have price and quantity components. Nevertheless, such items can be expressed in real terms by deflation using a price index in order to measure changes in the purchasing power of the item. This involves dividing the current price values by a broad indicator of price change such as the CPI or the chain price index for GDP. The underlying assumption is that these price indexes are representative of price change of the goods and services that could be purchased with the money earned from profits, interest, etc.

Up until 1998 we produced **constant price estimates** to measure changes in quantities. However, the quality of constant price estimates deteriorate as relative prices change. Chain volume measures deal much better with this, hence our decision to adopt these measures and to discontinue the production of constant price estimates.

Indexes

An index number measures the value of a variable in relation to its value at a base period. The essential idea of index numbers is to give a picture of changes in a variable much like that drawn by saying 'the price of petrol rose 5% from June 1992 to December 1993'. Index numbers measure change without giving the actual numerical value of the variable. Change is measured from a base period which is expressed as 100.0.

$$\text{The index number} = \frac{\text{current value}}{\text{base value}} \times 100$$

Because indexes summarise change, they are useful in economic analysis.

Movements in index numbers from one period to another can be expressed either as percentage changes or as changes in index points. It is important not to confuse the two methods because unless the comparison is with the base period, the two yield different results.

Seasonal Factors

Some data are influenced by the nature of the period to which they relate. For example, sales of sunblock are higher for January than for July. Normal seasonal influences on data are those effects that recur regularly one or more times a year. Data that are seasonal may reflect the influence of the seasons themselves (such as farm production) or social convention (such as the incidence of holidays) or economic factors (e.g. timing of tax payments and financial year timing). Some data reflect differences in the composition of the months or quarters in terms of the number of trading days in the period or accounting practices used.

This feature of the data can make interpreting monthly, quarterly and yearly changes difficult and so the ABS uses a special statistical tool called **seasonal adjustment** to standardise the data. Seasonally adjusted data has had all the calendar-related influences removed.

Seasonally adjusted data still contains the effects of irregular influences on the data. For example, sales of beer may have been affected by some large, one-off event such as a strike in several large breweries. Seasonal analysis does not remove such effects but the ABS is able to significantly dampen such irregular influences in seasonally adjusted series by producing **smoothed seasonally adjusted** or **trend** estimates.

Trend Estimates

The smoothing or trending procedure used by the ABS is based on a set of moving averages known as Henderson filters. These moving averages dampen the irregularity of data without distorting the timing, level or shape of turning points, i.e. peaks and troughs. Trend estimates provide a simple yet very effective measure of the underlying growth or decline of a time series. They also provide a much wider basis for analysis than the more erratic seasonally adjusted or original data.

National Accounts

With separate indicators, particular aspects of economic activity can be monitored. Another important use of this information is as the building blocks of a set of accounts for Australia, called the national accounts. Just as a set of accounts for a business consolidate a lot of information about the business and present it in a set format, national accounts consolidate a range of statistics, from those involving individuals to those involving the whole nation, into a consistent format which describes the overall economic position of the nation.

The concept of national accounting is quite old, having been developed as far back as the 17th century. However, its current look is relatively new, with welfare economists led by Pigou in the 1920s producing the first effective modern measurement of national income. A fundamental re-direction of emphasis in economic analysis and policy occurred after the acceptance and adoption of principles set down in John Maynard Keynes' 1936 publication **The General Theory of Employment, Interest and Money**.

As a result, national accounting has developed as an integral part of economic analysis and policy advising. Macro-economic policy, concerned with the maintenance of income, price and employment stability, is dependent for much of its effectiveness on timely and accurate information on the components of domestic production. The national accounts provide conceptually consistent information and illustrate the relationships between the components.

Australia's national accounts are compiled in a manner which closely accords with the recommendations of the **System of National Accounts 1993 (SNA93)**. This document was produced jointly by five international organisations: the Commission of the European Communities, the International Monetary Fund, the Organisation for Economic Co-operation and Development, the United Nations and the World Bank. SNA93 is expected to provide a framework for national account statistics into the 21st century.

Australia's national accounts record the essential elements of the Australian economy: production, income, consumption (intermediate and final), accumulation of assets and liabilities, and wealth. The starting point for the system is production, which is recorded in the gross domestic product (GDP) account. The GDP account has two 'sides': income and expenditure.

On the **income side** of the account are the incomes accruing to the factors of production: compensation of employees (earned by wage and salary earners), gross operating surplus (profits) (earned by corporations, general government and the ownership of dwellings) and gross mixed income (earned by owners of unincorporated businesses), as well as net taxes on production and imports accruing to government. On the **expenditure side** of the account are final consumption expenditure, investment (represented by gross fixed capital expenditure and changes in inventories), plus the value of Australia's exports (which are part of Australia's total production) minus the value of imports (which represent part of the production of other nations).

It can be seen from the above that the familiar Keynesian identity $Y = C + I + X - M$ (where Y is income, C consumption, I investment, X exports and M imports) is apparent on the expenditure side of the GDP account.

Complementing the GDP account are an income account, a capital account, a financial account, and a balance sheet, which shows the nation's wealth.

National accounts estimates attempt to account for every monetary transaction of every economic agent in the economy, as well as imputing a value for a range of transactions that do not involve the exchange of money (for example, when producers consume their own products). The quality of national accounts statistics depends to a large degree on the quality of the original records maintained by businesses, governments and other institutions from which data are obtained.

INTERPRETING STATISTICS

Definitions

It is important that your understanding of relevant terms correspond to the ABS definitions. This ensures that interpretation of terms is uniform and the information is used in the right context. For example, how do you define 'unemployment'? Compare your definition with the ABS definition. ABS publications contain definitions of the information they include.

Footnotes

Footnotes are used to add comments and/or explanations to the tables or graphs. Footnotes are indicated by the inclusion of a letter in brackets e.g. (a), (b), (c), etc. beside the figure or heading which requires explanation. This letter and its footnote are presented under the table or chart.

The position of the footnote reference is important in the table or graph. If the footnote reference is in the title of the table or graph, then the message in the footnote relates to the whole table or graph. If it appears next to a column heading, then the message in the footnote applies to the data within that column. When analysing statistics, it is important to give attention to the footnotes as they often point out limitations in the data which could significantly affect interpretation.

Explanatory Notes

Explanatory notes are designed to assist the user in understanding the data in the publication. They provide information on the data collected and the method of collection and are useful in highlighting the limitations of the data. For example, explanatory notes generally include descriptions of the methodology and scope used to collect the data, data definitions, reliability of estimates, seasonal adjustment and comparability with other data.

Averages

An average (arithmetic mean) provides a useful summary measure of the contents of a set of data. However, averages can give a very deceptive picture of the meaning of statistics if they are misunderstood or misused. The average is affected by extremes in data (highest and lowest values) and unequal distributions. It may be beneficial in analysis to also examine the mode (most frequently occurring value) and the median (the value in the middle of an ordered data set) as a guide to the characteristics of the data.

Composition of Totals

Analysis of totals will give you an idea of overall trends in time series data. To gain a more complete understanding of the data, however, an analysis of the components making up the totals is necessary. For example, there were more women than men in Australia at the 1996 Census. However, further analysis shows men outnumbered women in each age group up to the 25-29 years age group. Women then have greater numbers until the 40-44 years age group. There are more males in each age group until 60-64 years, however women then consistently outnumber men in the older age groups.

Graphs

Graphs are an excellent way of presenting data. They enable the user to get a quicker feel for the data than when using tables or from text.

Graphs, however, can very easily mislead and care should be taken in interpretation. Care must be taken to understand what the title and axis headings mean and what data series are actually represented in the graph. Attention must be paid to the units (e.g. millions of dollars, persons) and the scales used.

Surveys and Censuses

Ideally, if we want to find out something about a group of people or businesses we would approach every person or business in the group (called the population). This is called a census. The best known census is the Census of Population and Housing, which collects information from every household in Australia. However, by applying the rules of sampling, a reliable picture of a population can be drawn from a selection or a sample of that population. The key lies in selecting a sample that is representative of the whole population.

An advantage of sample surveys over censuses is that they are cheaper and are easier to run. However, one main disadvantage is that the results contain **sampling error**, which is the difference in the results obtained by using a sample of the population rather than the whole population. In some instances this error can be quite large. Where information is being analysed from sample surveys, the size of this error should be taken into account when assessing the credibility of results. Sample survey and census results can also contain **non-sampling error**, which is error resulting from collection and processing errors, e.g. respondents being unable to accurately recall information or mistakes made in recording or coding.

STEPS IN ANALYSIS

Although there are no hard and fast rules to the correct approach, the following steps may give you a starting point for analysing time series data.

(a) Determine what data are available that are relevant to your topic. This publication is a good place to start. The references shown in the Further Reading part of each section will assist you in identifying sources of more detailed or related information. The ABS **Catalogue of Publications and Products** (1101.0) could also help you to determine what is available.

(b) Look at the layout of the table in order to understand how the data are arranged. Check the row and column names to obtain a clear idea of the variables being displayed.

(c) Scan the totals in the tables for an overall idea of the trends in the data. A graph is often the most appropriate tool for this analysis. If no graph is presented, consider graphing the data yourself to get a clear picture.

(d) If the data are available by different frequencies (e.g. annually, monthly), decide which of the available frequencies is most appropriate for your purpose. Annual data may be appropriate for examining data over a long time; quarterly or monthly data may provide a better picture of more recent developments.

(e) Make sure you have a clear idea of the questions for which you seek answers in the data. For example:

- are the values of the variable rising or falling over time?
- when was the last peak (high point) or trough (low point)?
- has the rate of change risen or fallen over time?
- have the shares of components in the total changed over time?

It is important to conduct your analysis one logical step at a time. Do not try to take all the information in at once and try not to get side-tracked with minor issues as you do your analysis.

Further Reading

Statistics - A Powerful Edge! (1331.0)

A comprehensive guide to understanding statistics - designed for the reader to gain confidence in using statistical information.

Surviving Statistics: A User's Guide to the Basics (1332.0)

A comprehensive basic guide to understanding and using statistics.

Information Paper: A Guide to Interpreting Time Series - Monitoring Trends (1349.0)

Explains why, in ABS publications, the main features and commentaries sections concerning most time series are increasingly emphasising the trend series rather than the seasonally adjusted or original data. It also explains how these trend estimates are obtained as well as how they may be used more effectively for informed decision making.