The Australian Economy and Financial Markets

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World Economy

GDP Growth – World
Year-ended

- Weighted using Australian export shares
- PPP-weighted; accounts for 85 per cent of world GDP
- Sources: ABS; CEIC Data; IMF; RBA; Refinitiv

GDP Growth – Advanced Economies
Year-ended

- US
- Euro area
- Japan
- Sources: Refinitiv

GDP Growth – East Asia
Year-ended

- Indonesia
- South Korea
- Malaysia
- Sources: CEIC Data; RBA
Inflation – Advanced Economies*

* Personal consumption expenditure (PCE) inflation for the US; Japan data excludes the effects of the consumption tax increase in April 2014

Sources: RBA; Refinitiv

Labour Markets – Advanced Economies

* Average hourly earnings for the US; compensation per employee for the euro area; smoothed full-time base wages for Japan

Sources: ECB; Eurostat; RBA; Refinitiv
World Economy

China – Activity Indicators
Year-ended growth
- Manufacturing PMI*
- Industrial production
- Fixed asset investment
- Real retail sales

China – Residential Property Indicators
Year-ended growth
- New property prices
- Investment
- Floor space sold
- Inventory

China – Total Social Financing
Contribution to six-month annualised growth
- Business financing*
- Household loans

China – Gross Output of Selected Products*
- Electricity generation
- Steel products
- Plate glass
- Cement
- Crude steel

* Diffusion index; average of the official and Caixin
** Upper bound estimate after including local government bond issuance to pay off debt previously included in TSF

Sources: CEIC Data; Markit Economics; RBA
**Australian Growth**

**GDP Growth**

- **Year-ended**
- **Quarterly**

Source: ABS

**Mining and Non-mining Activity**

- **Year-ended growth, RBA estimates**

Sources: ABS; RBA

**State Final Demand**

- **Year-ended growth**

Sources: ABS; RBA

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* Net of mining-related imports; components are contributions to year-ended mining activity growth; contribution from changes in inventories not shown.

Sources: ABS; RBA
Australian Inflation

**Consumer Price Inflation***

Year-ended

Quarterly (seasonally adjusted)

* Excluding interest charges prior to the September quarter 1998 and adjusted for the tax changes of 1999–2000

Sources: ABS; RBA

**Tradable and Non-tradable Inflation***

Tradables

Year-ended

Quarterly (seasonally adjusted)

Non-tradables

* Adjusted for the tax changes of 1999–2000

** Excludes volatile items (fruit, vegetables & automotive fuel)

*** Excludes interest charges prior to the September quarter 1998, and deposit & loan facilities prior to the September quarter 2011

Sources: ABS; RBA

**Underlying Inflation***

Trimmed mean

Weighted median

CPI excl volatile items

* Excluding interest charges prior to the September quarter 1998 and adjusted for the tax changes of 1999–2000

Sources: ABS; RBA
Household Sector

**Household Income and Consumption**

- **Consumption**
- **Disposable income**
- **Saving ratio**

- Real, year-ended growth

![Graph of Household Income and Consumption](chart)

* Households sector includes unincorporated enterprises; disposable income is after tax and interest payments; saving ratio is net of depreciation

Sources: ABS; RBA

**Private Dwelling Investment**

- Chain volume, quarterly

![Graph of Private Dwelling Investment](chart)

* Reference year is 2016/17

Source: ABS

**Private Residential Building Approvals**

- Monthly

![Graph of Private Residential Building Approvals](chart)

**Consumer Sentiment**

- Average since 1980 = 100

![Graph of Consumer Sentiment](chart)

* Average of the ANZ-Roy Morgan and Westpac-Melbourne Institute consumer sentiment measure of respondents' perceptions of their personal finances relative to the previous year; ANZ-Roy Morgan index rescaled to have the same average as the Westpac-Melbourne Institute index since 1996

Sources: ANZ-Roy Morgan; RBA; Westpac and Melbourne Institute
Household Sector

Housing Prices and Household Debt*
Ratio to annual household disposable income

Housing Prices
Year-ended growth, seasonally adjusted

Housing Loan Approvals
Excluding refinancing

Household Wealth and Liabilities*
Per cent of annual household disposable income

Sources: ABS; CoreLogic; RBA

* Household disposable income is after tax, before the deduction of interest payments, and includes income of unincorporated enterprises

** ABS is a quarterly stratified median price index; Residex is a quarterly repeat sales price index
*** Monthly hedonic price index; non-seasonally adjusted
**** Quarterly stratified median price index
Sources: ABS; APM; CoreLogic; RBA

* Household disposable income is after tax, before the deduction of interest payments, and includes income of unincorporated enterprises

Sources: ABS; RBA
Business Sector

**Business Investment* **

Share of nominal GDP

* Adjusted for second-hand asset transfers between the private and other sectors
Source: ABS

**Business Investment Components* **

Share of nominal GDP

* Adjusted for second-hand asset transfers between the private and other sectors
Source: ABS

**Capital Expenditure – Mining and Non-mining* **

Nominal, log scale

* Dots are firms’ expectations for 2018/19 and 2019/20, adjusted for historical differences between expected and realised spending
Sources: ABS; RBA

**Industry Share of Business Investment* **

* Nominal; includes second hand asset transfers
** Includes: information media and telecommunications; rental, hiring and real estate services; professional, scientific and technical services; administrative and support services
Source: ABS
Business Sector

Private Non-financial Corporation Profits*
Share of nominal GDP

- Non-mining
- Mining

Business Lending by Banks*
Break-adjusted

- Large business**
- Small business**

NAB Business Survey
- Business conditions*
- Business confidence*
- Capacity utilisation

Average since 1989

* Gross operating profits; inventory valuation adjusted

Sources: ABS; RBA

Private Non-financial Corporation Profits*
Share of nominal GDP

* Net balance; deviation from average since 1989

Sources: NAB; RBA

Business Lending by Banks*
Break-adjusted

* Credit exposures on the balance sheets of banks allowed by APRA to use an internal ratings-based approach for credit risk management

** Large business is the corporate category in APRA's capital framework; small business is the sum of the SME corporate and SME retail categories (the SME categories include businesses that have reported consolidated annual sales of less than $50 million)

Sources: APRA; RBA
Credit and Money

Credit and Broad Money Growth
Year-ended

Monetary Aggregates Growth
Year-ended

Credit Growth by Sector
Year-ended

Housing Credit Growth

Sources: ABS; APRA; RBA
Factors of Production and Labour Market

Factors of Production
Annual growth

Net capital stock*

Working-age population

Capital Ratios*
1979/80 = 100

Capital-output ratio

Capital-labour ratio

Unit Labour Costs Growth
Non-farm, year-ended

Unit labour costs

Average earnings per hour

Labour productivity per hour

* Capital stock excludes livestock & orchards, dwellings and ownership transfer costs

Sources: ABS; RBA

Wage Price Index Growth*

Year-ended

Quarterly

* Total pay excluding bonuses

Source: ABS

Labour productivity per hour

Sources: ABS; RBA
Factors of Production and Labour Market

Employment and Participation Rates

- Participation rate
- Employment to working-age population

Source: ABS

Labour Market

- Underemployment rate*
- Unemployment rate

* Full-time workers on reduced hours for economic reasons and part-time workers who would like, and are available, to work more hours
Source: ABS

Employment and Hours Worked*

- Employment
- Total hours worked
- Average hours worked

* Smoothed lines are 13-period Henderson trends
Sources: ABS; RBA

Job Vacancies and Advertisements

- Advertisements (ANZ survey)
- Vacancies* (ABS survey)

* This survey was suspended between May 2008 and November 2009
Sources: ABS; ANZ
Regions and Industry

State Share of Output

- New South Wales
- Victoria
- Queensland
- Western Australia
- South Australia
- Tasmania

Source: ABS

Industry Share of Output*

- Manufacturing
- Retail and wholesale trade
- Financial and insurance services
- Construction
- Mining
- Agriculture
- Other business services**

* Nominal gross value added

** Includes: information media and telecommunications; rental, hiring and real estate services; professional, scientific and technical services; administrative and support services

Source: ABS

State Unemployment Rates

- South Australia
- Victoria
- Tasmania
- Queensland
- New South Wales
- Western Australia

Source: ABS

Employment Growth by Industry

- Household services
- Business services
- Public administration
- Retail and wholesale trade
- Other*

* Includes agriculture, forestry & fishing; transport, postal & warehousing; and electricity, gas, water & waste services

Source: ABS
Government

**Australian Government Budget Balance***

Per cent of nominal GDP

* Underlying cash balance; 2019/20 Budget
Source: Australian Treasury

**State Budget Balances***

Per cent of nominal GDP

* Underlying cash balance
Source: ABS

**Public Construction Work Done**

Per cent of nominal GDP

Source: ABS

**Non-financial Public Sector Net Debt**

Per cent of nominal GDP

Source: Australian Treasury
**Commodity Prices**

**RBA Index of Commodity Prices**
SDR, 2017/18 average = 100, log scale

**Bulk Commodity Prices**
Free on board basis

**Base Metals, Rural and Oil Prices**
Weekly

**Terms of Trade**
2016/17 average = 100, log scale

*Sources: ABS; Bloomberg; IHS; RBA*
Balance of Payments and External Position

**Export Volumes**
Quarterly, 2016/17 prices, log scale

- Resources
- Services
- Manufacturing

Sources: ABS; RBA

**Bulk Commodity Exports**
Quarterly

- Iron ore
- Coal

Sources: ABS; RBA

**Import Volumes**
Quarterly, 2016/17 prices, log scale

- Consumption
- Intermediate
- Services
- Capital

Source: ABS

**Exports by Destination**
Annual, share of total values

- China
- Japan
- EU-27
- South Korea
- India
- US

Source: ABS
Balance of Payments and External Position

**Current Account Balance**
Per cent of nominal GDP

- Trade balance
- Net income balance

Source: ABS

**Net Capital Inflow**
Per cent of nominal GDP

- Equity
- Debt
- Total

Source: ABS

**Net Foreign Liabilities**
By type, per cent of nominal GDP

- Total
- Long-term debt*
- Short-term debt*
- Equity

* Short-term includes debt with residual maturity of one year or less; long-term includes all other debt

Source: ABS

**External Position**
Composition after hedging, quarterly*

- Gross foreign liabilities
- Gross foreign assets

* Hedge ratios inferred from ABS Foreign Currency Exposure surveys

Sources: ABS; RBA
**Interest Rates**

### Australian Cash Rate Target

*Source: RBA*

### Policy Interest Rates

*Main refinancing rate until the introduction of 3-year LTROs in December 2011; deposit facility rate thereafter*  
*Source: Central banks*

### Australian Cash Rate and 90-day Bill Yield

*Calculated using average of year-ended weighted median inflation and year-ended trimmed mean inflation*  
*Source: ABB; ASX; RBA*

### Policy Interest Rates – Selected Advanced Economies

*Policy rate is the midpoint of the 3-month LIBOR target band*  
*Source: Central banks*
Interest Rates

Interest Rates – China

10-year Australian Government Bond Yield

Policy Interest Rates – Emerging Markets

10-year Government Bond Yields

* Breaks in series indicate changes in the official policy rates for Russia (September 2013) and Indonesia (August 2016)

Source: Central banks

Source: Refinitiv

Source: RBA

Sources: CEIC Data; RBA
**Interest Rates**

**Spread between Australian 10-year Bond Yield and the Cash Rate**

![Graph showing the spread between Australian 10-year Bond Yield and the Cash Rate from 1994 to 2019.]

Source: RBA

**Australian Non-financial Corporate Bond Yields**

**3-year target**

![Graph showing Australian Non-financial Corporate Bond Yields from 2007 to 2019 with ratings A, BBB, and Swap.]

Sources: Bloomberg; RBA

**Differential between Australian and US 10-year Government Bond Yields**

![Graph showing the differential between Australian and US 10-year Government Bond Yields from 1994 to 2019.]

Sources: Bloomberg; RBA

**Australian Non-financial Corporate Bond Spreads**

**Spread to government yields; 3-year target**

![Graph showing the spread to government yields for Australian Non-financial Corporate Bond Spreads from 2007 to 2019.]

Sources: Bloomberg; RBA

**Spread between Australian 10-year Bond Yield and the Cash Rate**

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**Australian Non-financial Corporate Bond Spreads**

**Spread to government yields; 3-year target**

![Graph showing the spread to government yields for Australian Non-financial Corporate Bond Spreads from 2007 to 2019.]

Sources: Bloomberg; RBA
Interest Rates

**US Corporate Bond Yields**
- BBB corporates*
- AA corporates*
- Five-year swap

**Emerging Market Bond Yields**
- Europe
- Latin America
- Asia

**US Corporate Bond Spreads**
To US government bonds
- BBB corporates*
- AA corporates*
- Five-year swap

**Emerging Market Bond Spreads**
To US government bonds, duration-matched
- Europe
- Latin America
- Asia

* Includes financials and non-financials
Source: Bloomberg; ICE Data is used with permission
Interest Rates

Variable Housing Interest Rates

- Standard variable reference rate*
- Outstanding loans**
- New loans***

Sources: APRA; RBA; Securitisation System

Australian Fixed Interest Rates

- 3-year maturity
- Small business
- Swap rate
- Housing*

Sources: Banks’ websites; Bloomberg; Canstar Cannex; RBA

Variable Housing Interest Rates

- Outstanding loans
- Owner-occupier
- Investor
- Principal-and-interest
- Interest-only

Sources: RBA; Securitisation System

Australian Business Lending Rates*

- Average interest rate on outstanding lending
- Small business
- Large business

Sources: APRA; RBA

* Average across major banks’ rates; data to April
** Data to March
*** Average new variable lending rate based on APRA quarterly data

* Available to owner-occupiers

Sources: APRA; RBA; Securitisation System
Share Markets

**Share Price Accumulation Indices**
Log scale, end December 1994 = 100

Sources: MSCI; RBA; Refinitiv

**Advanced Economies’ Share Price Indices**
Log scale, end December 1994 = 100

Sources: Bloomberg; RBA

**Australian Share Price Indices***
Log scale, end December 1994 = 100

Sources: Bloomberg; RBA

**Emerging Markets’ Share Price Indices**
Log scale, end December 1994 = 100

Sources: Bloomberg; MSCI; RBA

* ASX 200 companies

**Notes:**
- **Resources**
- **Financials**
- **All other sectors**

**Emerging Europe**
- **Latin America**
- **Emerging Asia**
- **China**
- **World**

**Emerging Europe**
- **Latin America**
- **Emerging Asia**
- **China**
- **World**

**Sources:**
- Bloomberg
- MSCI
- RBA
Bond Issuance

Bonds on Issue in Australia

Total Non-government Bonds on Issue

Non-government Bond Issuance

Non-government Bonds on Issue in Australia

Sources:
- ABS; AOFM; Bloomberg; KangaNews; RBA; State Treasury Corporations
- Authors' calculations

* Excludes bonds purchased by the Australian Government
** Excludes ADIs' self-securitisations, includes government-guaranteed bonds
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* Australian dollar-denominated bonds only
Sources: ABS; AOFM; Bloomberg; KangaNews; Private Placement Monitor; RBA
Bond Issuance

US and Euro Area Corporate Bond Issuance*

Emerging Market Corporate Bond Issuance*

* June quarter-to-date
Sources: Dealogic; RBA
Exchange Rates

**Australian Dollar Trade-weighted Index***

- **Nominal**
- **Real**

* May 1970 = 100 for nominal; real indexed to equate post-float averages; latest observations for real TWI are estimates

Sources: ABS; RBA; Refinitiv; WM/Reuters

**Official Reserve Assets***

- **Official reserve assets**
- **Net foreign reserves**
- **RBA foreign exchange market intervention transactions***

* The reporting methodology for official reserve asset data changes in 2015
** Excludes net forward foreign currency commitments
*** Data up to 30 June 2018; a positive value indicates a purchase of foreign exchange, while a negative value indicates a sale of foreign exchange

Source: RBA

**Australian Dollar**

- **Yen per A$** (LHS)
- **US$ per A$** (RHS)
- **Euro per A$***

* ECU per A$ until 31 December 1998
Source: Bloomberg

**Exchange Rates**

- **Yen per A$** (LHS)
- **US$ per A$** (RHS)
- **Euro per A$**

Source: RBA
**Exchange Rates**

**US Dollar**

- Yen per US$ (LHS)
- US$ per euro* (RHS, inverted scale)

**Selected Asian Currencies against the US Dollar**

31 January 2000 = 100

- India
- Thailand
- South Korea
- Malaysia
- Singapore
- Indonesia

Source: Bloomberg

**G3 Nominal Trade-weighted Indices**

1999–2019 average = 100

- US dollar
- Euro
- Japanese yen

Source: BIS; Bloomberg; Board of Governors of the Federal Reserve System

**Chinese Renminbi**

- Nominal effective exchange rate (LHS, 2010 average = 100)
- Yuan per US$ (RHS, inverted scale)

Source: BIS; Bloomberg; RBA
Banking Indicators

**Banks’ Non-performing Assets**

Consolidated global operations, share of on-balance sheet assets

- Total*
- Impaired

* Includes assets 90+ days past due that are well secured

Source: APRA

**Capital Ratios***

Consolidated global operations of locally incorporated ADIs

- Total
- Tier 1
- CET1
- Tier 2

* Per cent of risk-weighted assets; break in March 2008 due to the introduction of Basel II for most ADIs; break in March 2013 due to the introduction of Basel III for all ADIs

Source: APRA

**Funding Composition of Banks in Australia***

Share of total funding

- Domestic deposits
- Short-term debt**
- Long-term debt
- Securitisation
- Equity

* Adjusted for movements in foreign exchange rates; tenor of debt is estimated on a residual maturity basis
** Includes deposits and intragroup funding from non-residents

Sources: APRA; Bloomberg; RBA; Refinitiv; Standard & Poor’s

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**Capital Ratios***

Consolidated global operations of locally incorporated ADIs

<table>
<thead>
<tr>
<th>Banks</th>
<th>Other ADIs</th>
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<tbody>
<tr>
<td>Total</td>
<td>Building societies</td>
</tr>
<tr>
<td>Tier 1</td>
<td>Credit unions</td>
</tr>
<tr>
<td>CET1</td>
<td></td>
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<tr>
<td>Tier 2</td>
<td></td>
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**Banks’ Non-performing Assets**

Domestic books

- Share of all loans
- Share of loans by type*

* Each category’s share of total domestic lending at December 2018 is shown in parentheses; shares may not add up to 100 due to rounding

** Includes lending to financial businesses, bills, debt securities and other non-household loans

Sources: APRA; RBA

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- Domestic deposits
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** Includes deposits and intragroup funding from non-residents

Sources: APRA; Bloomberg; RBA; Refinitiv; Standard & Poor’s