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# The Australian Economy and Financial Markets

Chart Pack August 2016



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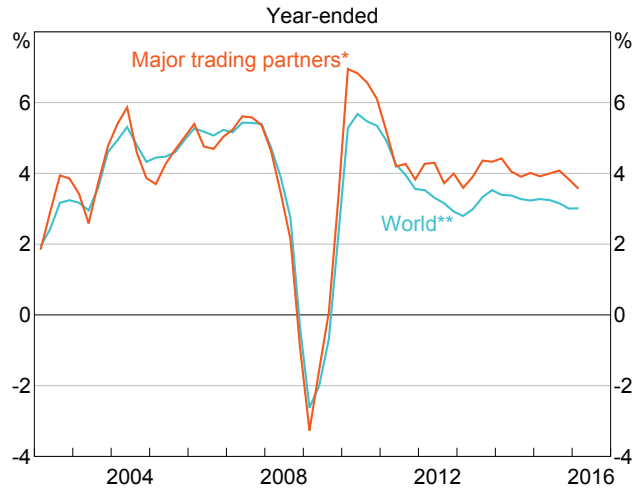
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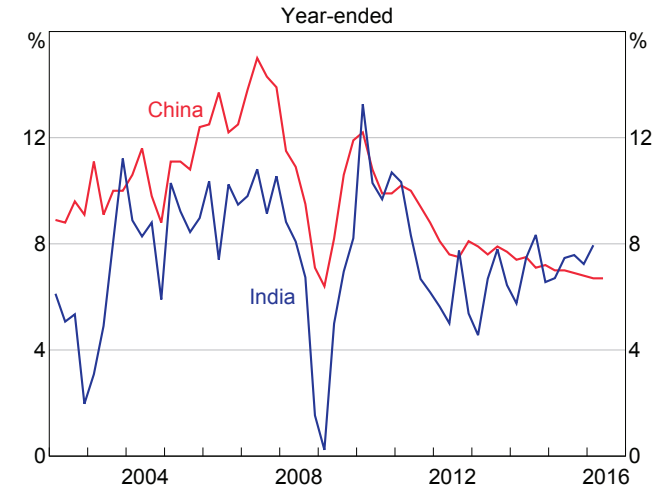


**GDP Growth – World**



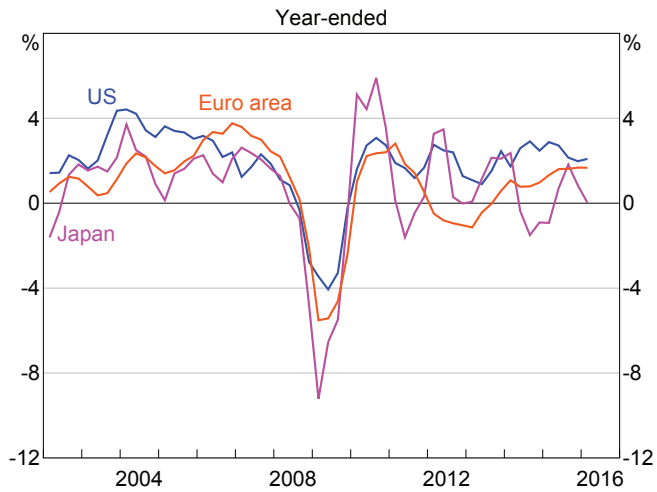
\* Weighted using Australian export shares  
 \*\* PPP-weighted; accounts for 85 per cent of world GDP  
 Sources: ABS; CEIC Data; IMF; RBA; Thomson Reuters

**GDP Growth – China and India**



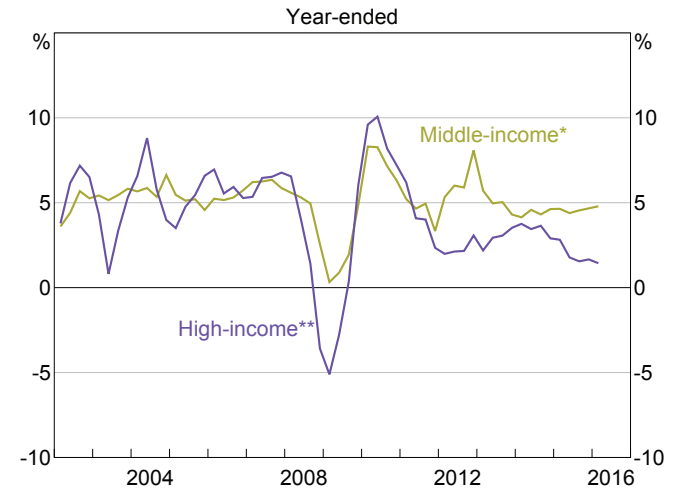
Sources: CEIC Data; RBA

**GDP Growth – Advanced Economies**



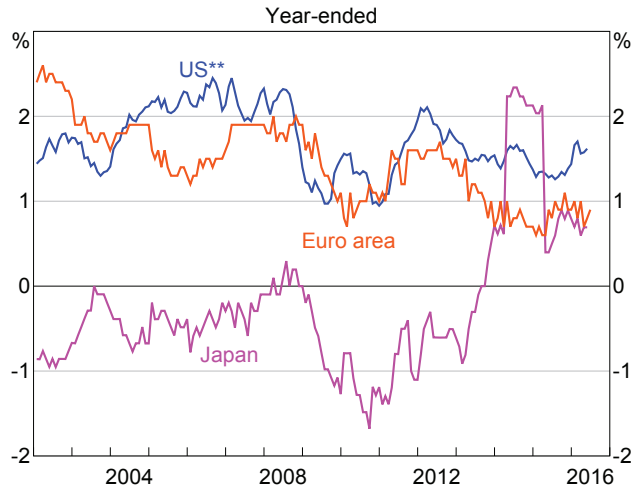
Source: Thomson Reuters

**GDP Growth – East Asia**



\* Indonesia, Malaysia, Philippines and Thailand; PPP-weighted  
 \*\* Hong Kong, Singapore, South Korea and Taiwan; PPP-weighted  
 Sources: CEIC Data; IMF; RBA

**Core Inflation\* – Advanced Economies**



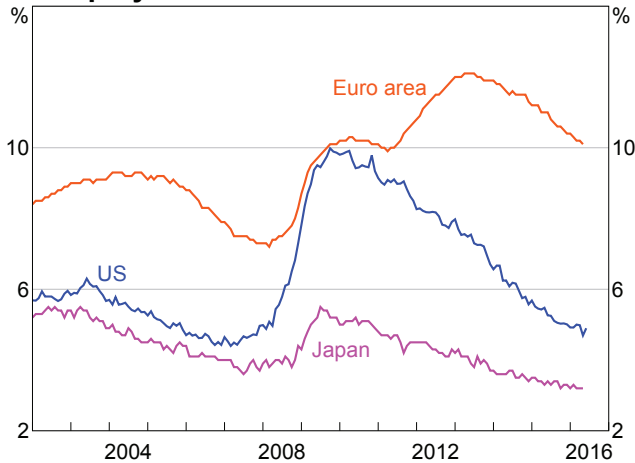
\* Excluding food and energy, and for the euro area also excluding alcohol and tobacco  
 \*\* Core price index for personal consumption expenditures  
 Source: Thomson Reuters

**Inflation – China and India**



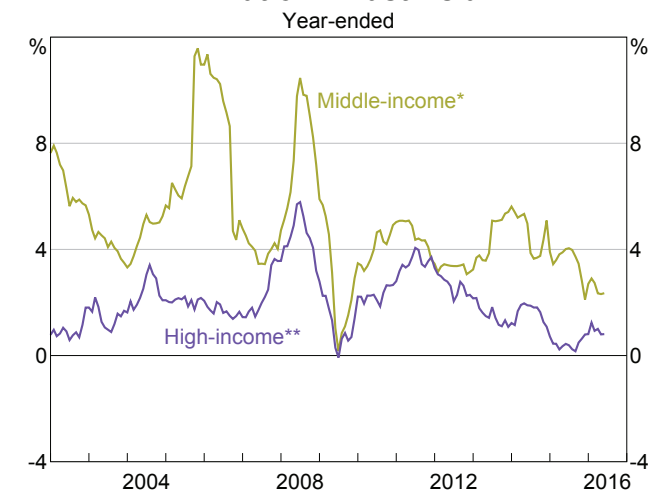
Source: CEIC Data

**Unemployment Rate – Advanced Economies**



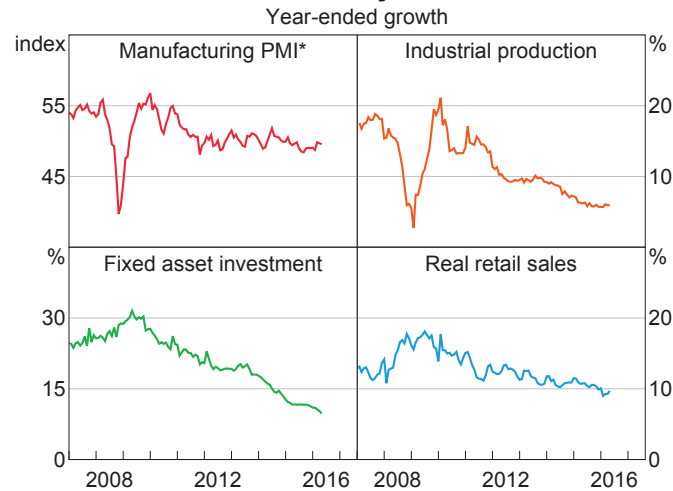
Source: Thomson Reuters

**Inflation – East Asia**



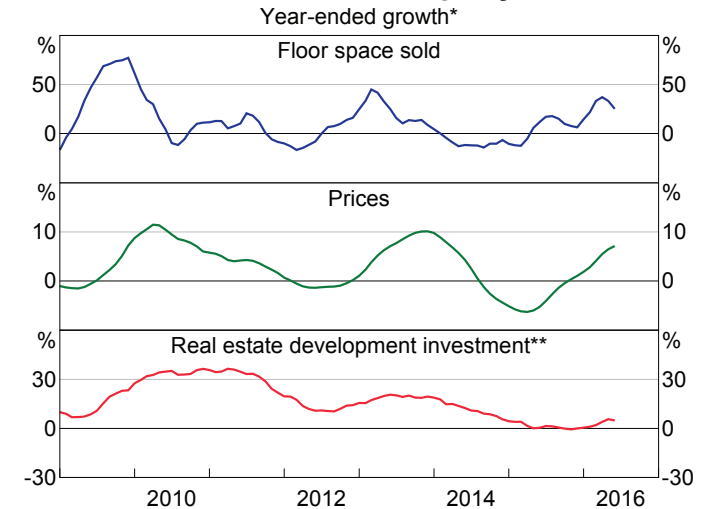
\* Indonesia, Malaysia, Philippines and Thailand; PPP-weighted  
 \*\* Hong Kong, Singapore, South Korea and Taiwan; PPP-weighted  
 Sources: CEIC Data; IMF; RBA; Thomson Reuters

### China – Activity Indicators



\* Diffusion index; average of the official and Caixin  
Sources: CEIC Data; Markit Economics; RBA

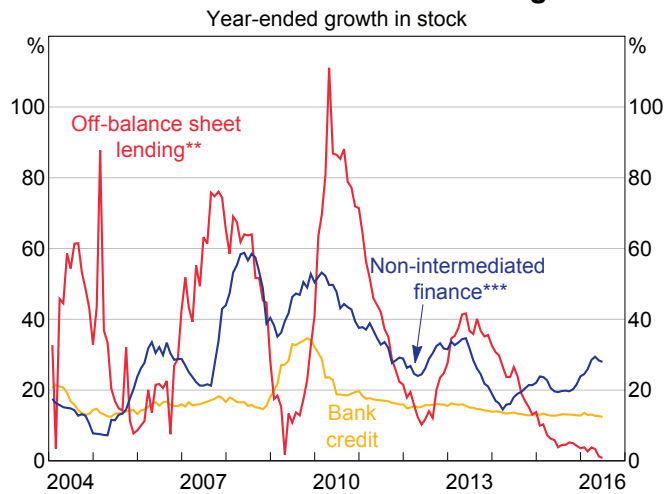
### China – Residential Property Market



\* For sales and investment, a three-month moving average of the seasonally adjusted series is used to calculate growth  
\*\* Investment by developers and other construction companies in the development of residential property, includes land purchases

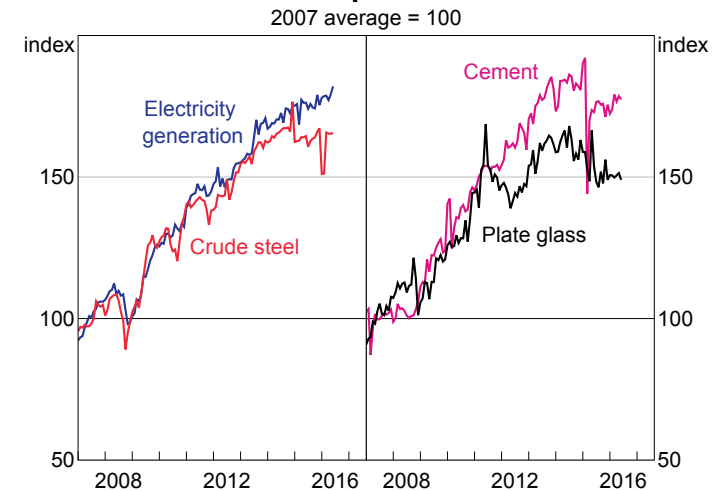
Sources: CEIC Data; RBA

### China – Total Social Financing\*



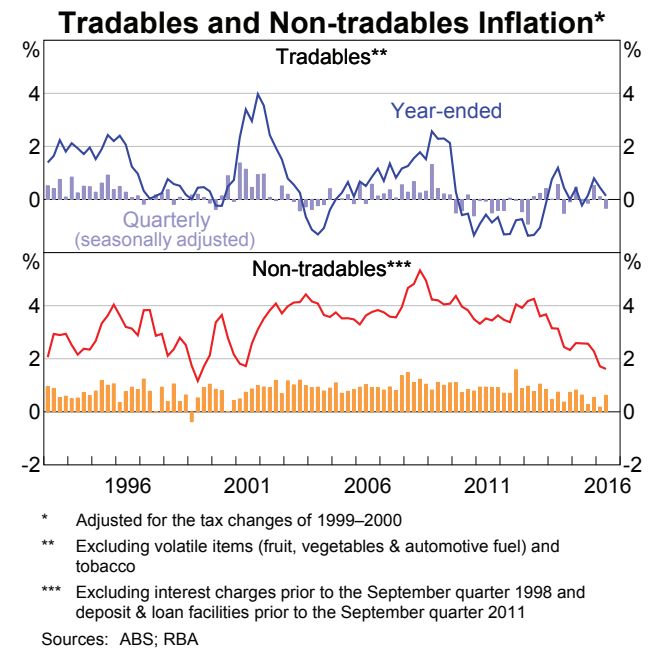
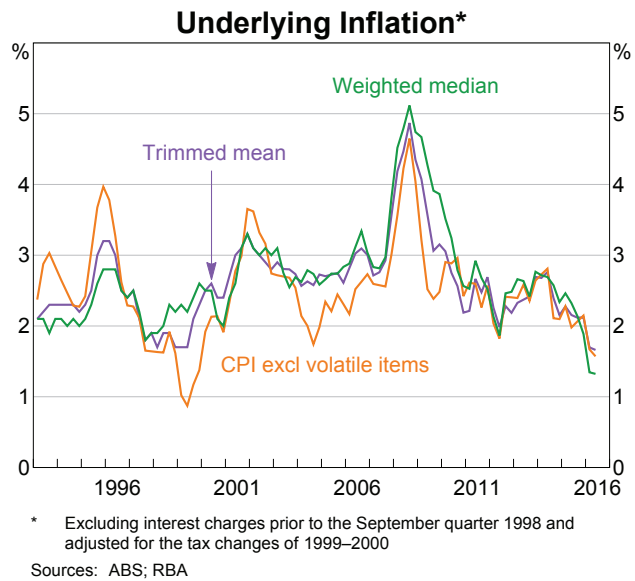
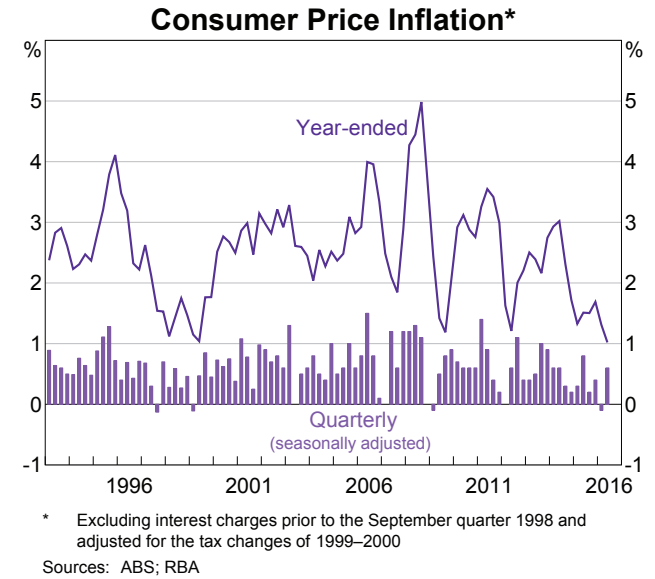
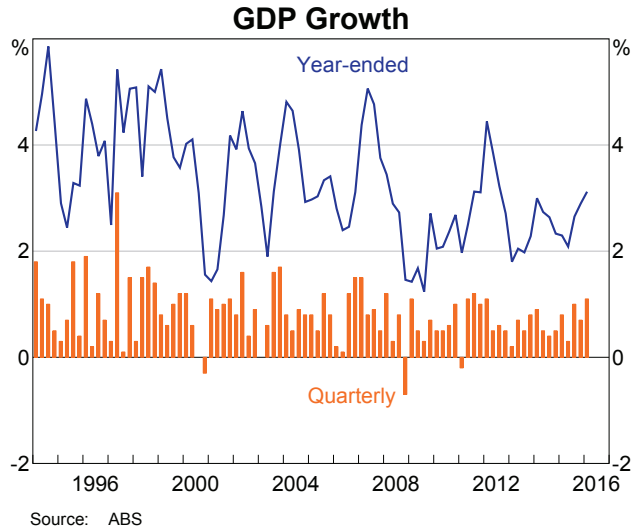
\* Non-seasonally adjusted  
\*\* Entrusted loans, trust loans and undiscounted bank acceptance bill issuance  
\*\*\* Corporate bond and non-financial corporate equity issuance  
Sources: CEIC Data; People's Bank of China; RBA

### China – Output Indicators



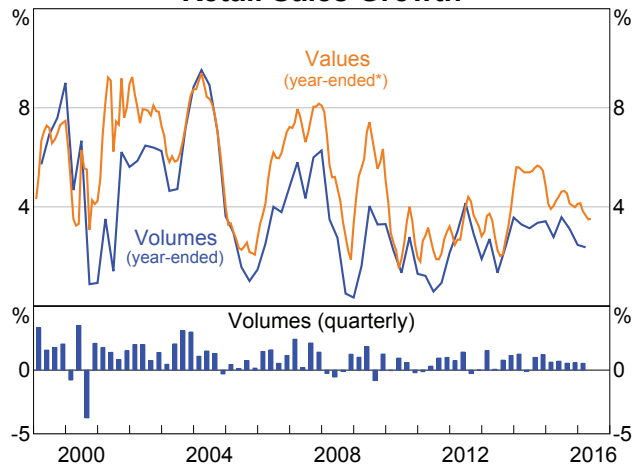
Sources: CEIC Data; RBA

# Australian GDP Growth and Inflation



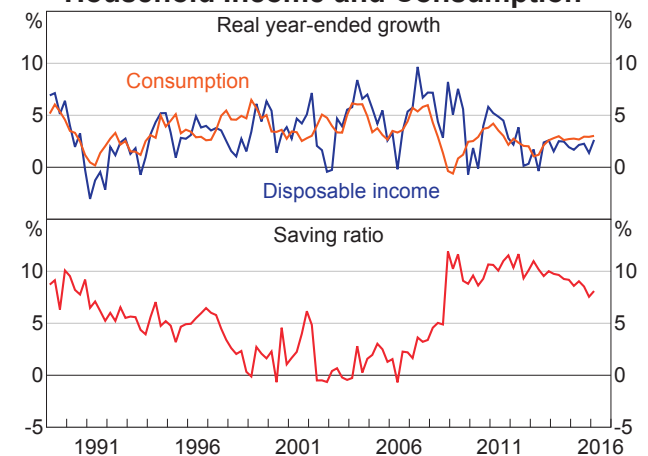


## Retail Sales Growth



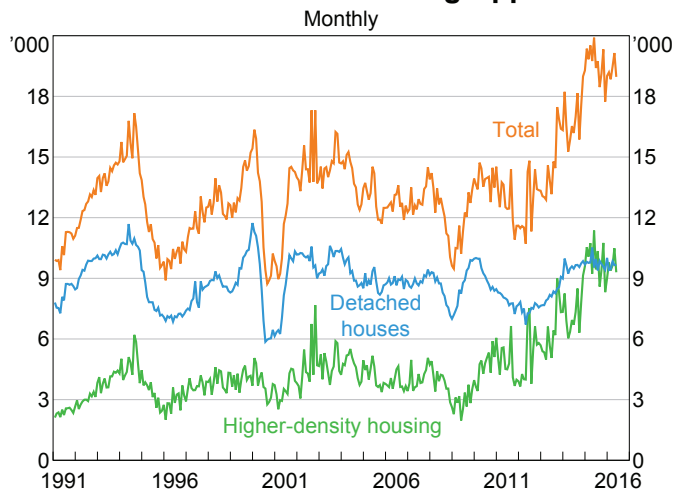
\* Percentage change over year to latest three months  
Source: ABS

## Household Income and Consumption\*



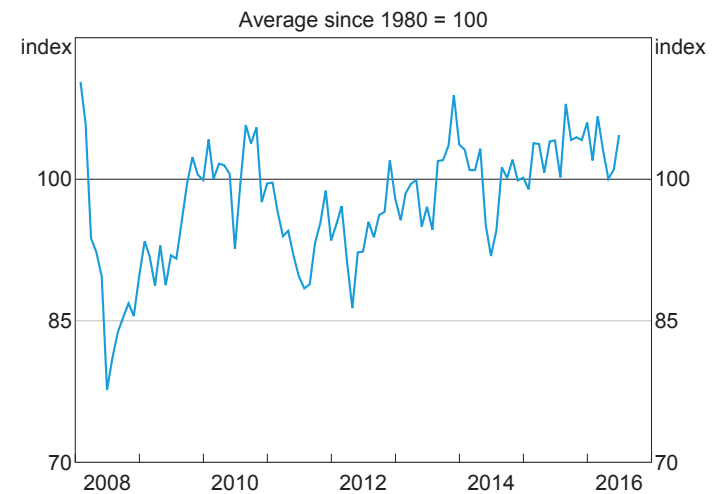
\* Household sector includes unincorporated enterprises; disposable income is after tax and interest payments; income level smoothed with a two-quarter moving average between March quarter 2000 and March quarter 2002; saving ratio is net of depreciation  
Sources: ABS; RBA

## Private Residential Building Approvals



Source: ABS

## Consumer Sentiment\*

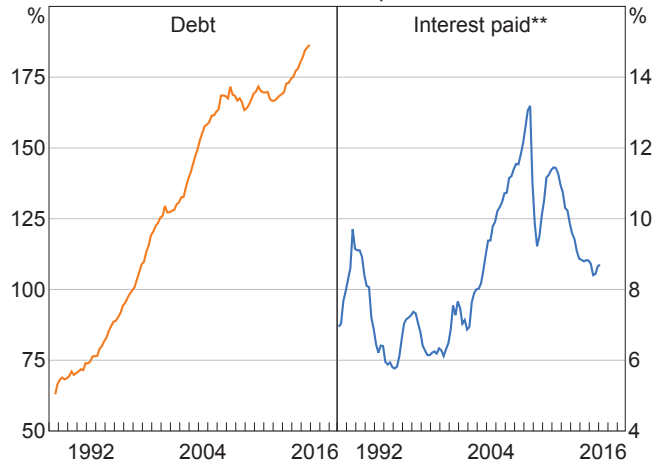


\* Average of the ANZ-Roy Morgan and Westpac-Melbourne Institute consumer sentiment measure of respondents' perceptions of their personal finances relative to the previous year; ANZ-Roy Morgan index rescaled to have the same average as the Westpac-Melbourne Institute index since 1996

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

## Household Finances

Per cent of household disposable income\*



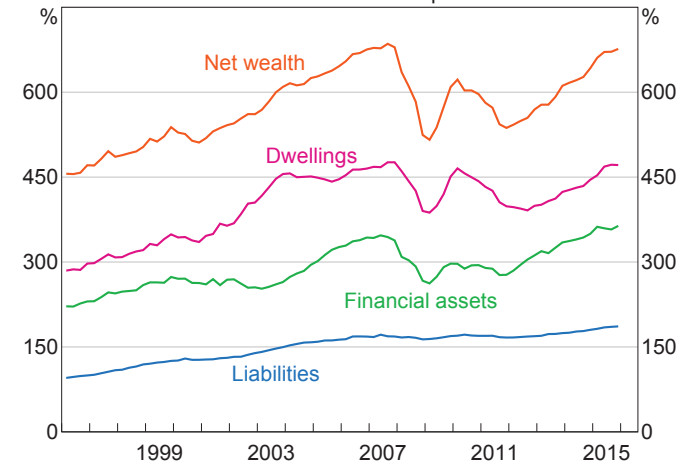
\* Disposable income is after tax and before the deduction of interest payments

\*\* Excludes unincorporated enterprises

Sources: ABS; RBA

## Household Wealth and Liabilities\*

Per cent of annual household disposable income

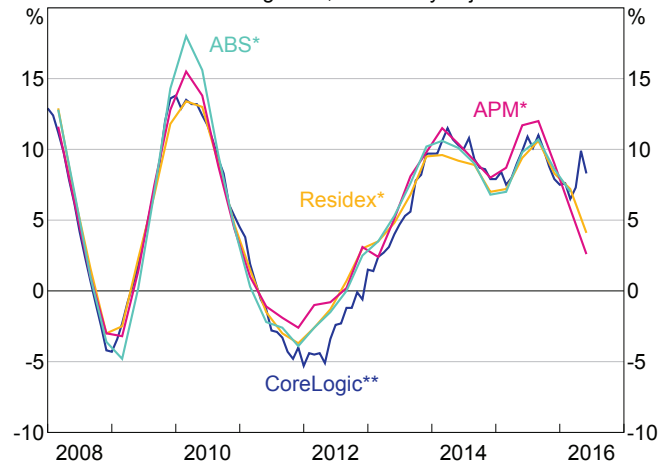


\* Disposable income is after tax and before the deduction of interest payments

Sources: ABS; RBA

## Housing Prices

Year-ended growth, seasonally adjusted

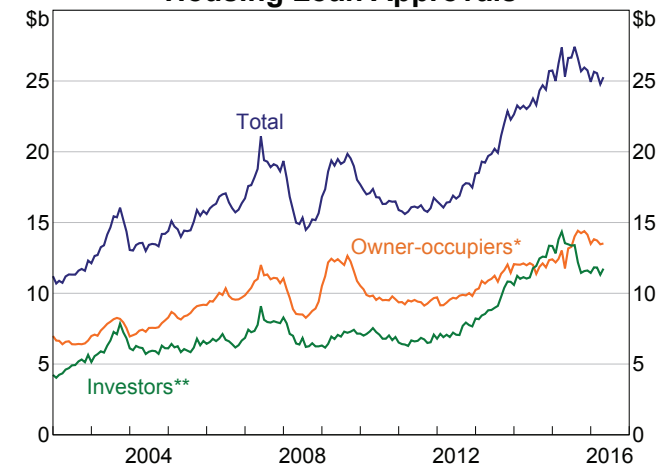


\* ABS and Australian Property Monitors (APM) are quarterly stratified median price indexes; Residex is a quarterly repeat sales price index

\*\* Monthly hedonic price index; series breaks occurred in April 2016 and May 2016 due to changes in methods used to calculate the index

Sources: ABS; APM; CoreLogic; RBA; Residex

## Housing Loan Approvals

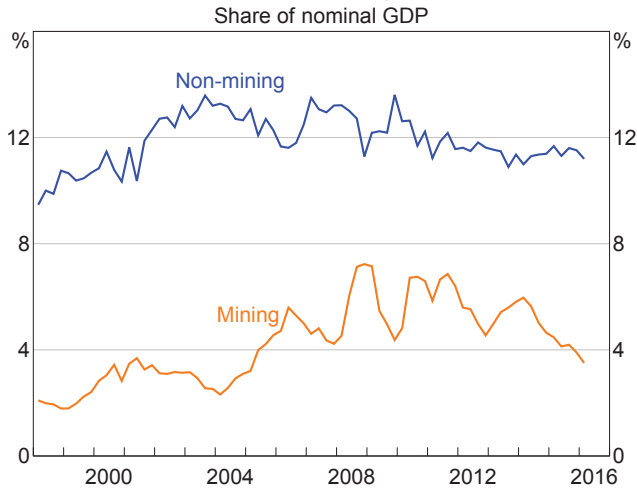


\* Excludes refinancing

\*\* Includes refinancing

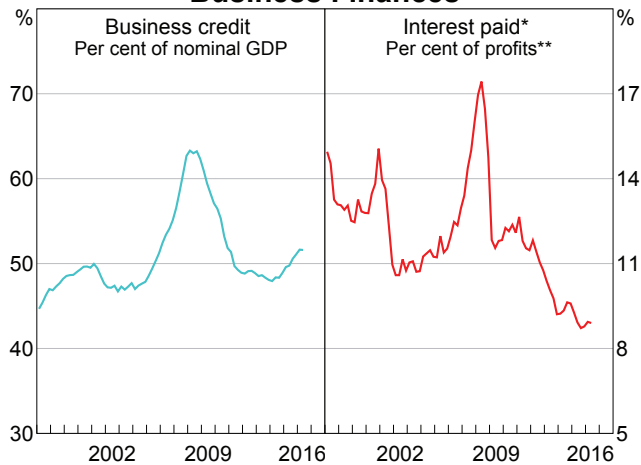
Sources: ABS; RBA

### Private Non-financial Corporation Profits\*



\* Gross operating profits; inventory valuation adjusted  
Sources: ABS; RBA

### Business Finances

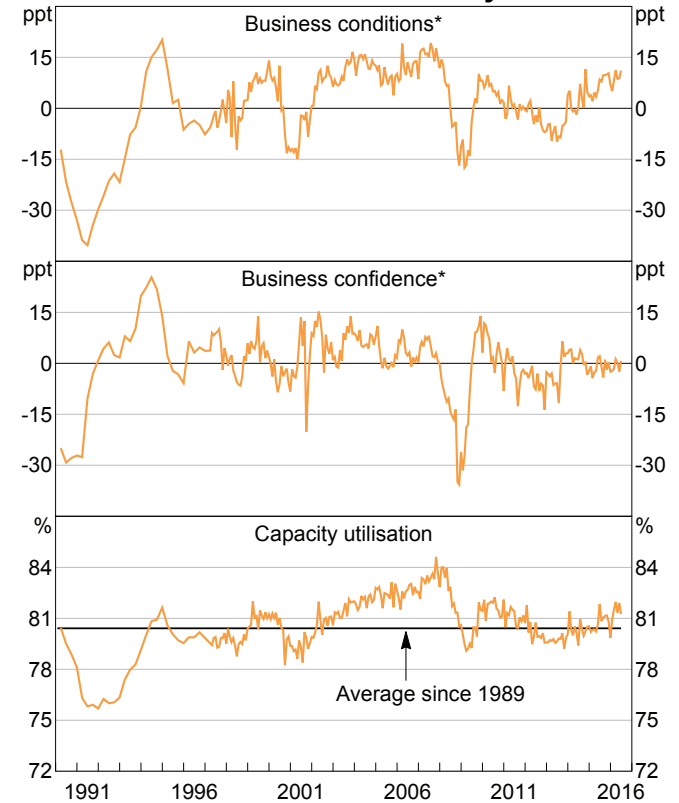


\* Interest on intermediated debt from Australian-domiciled financial institutions

\*\* Profits are private non-financial gross operating surplus (adjusted for privatisations) and gross mixed income

Sources: ABS; APRA; RBA

### NAB Business Survey

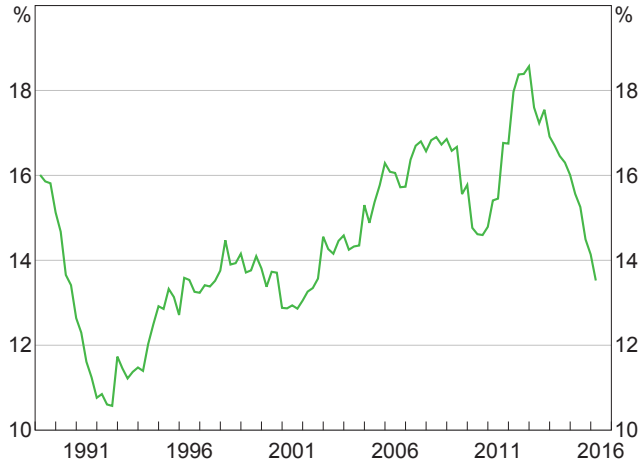


\* Net balance; deviation from average since 1989

Sources: NAB; RBA

**Business Investment\***

Share of nominal GDP

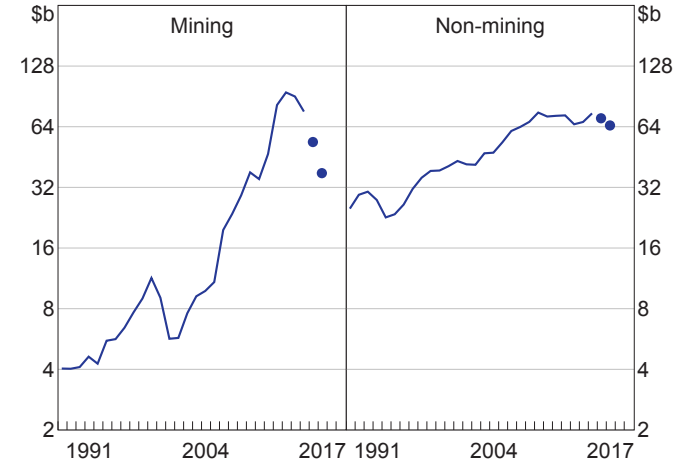


\* Adjusted for second-hand asset transfers between the private and other sectors

Source: ABS

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

Nominal, financial year, log scale

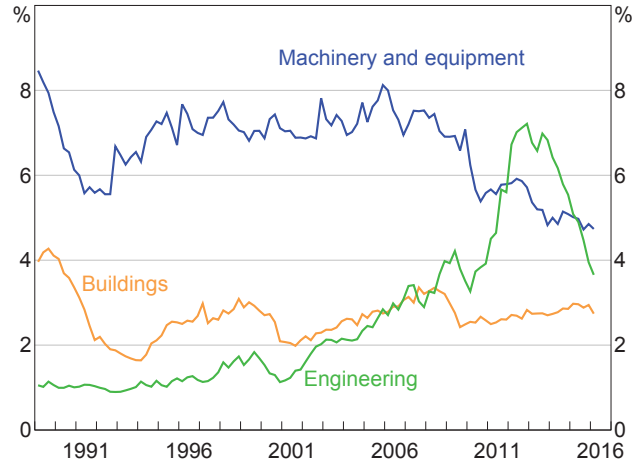


\* Sample of firms' spending plans; dots represent the survey's most recent estimates for 2015/16 and 2016/17 adjusted for historical realised spending

Sources: ABS; RBA

**Business Investment Components\***

Share of nominal GDP

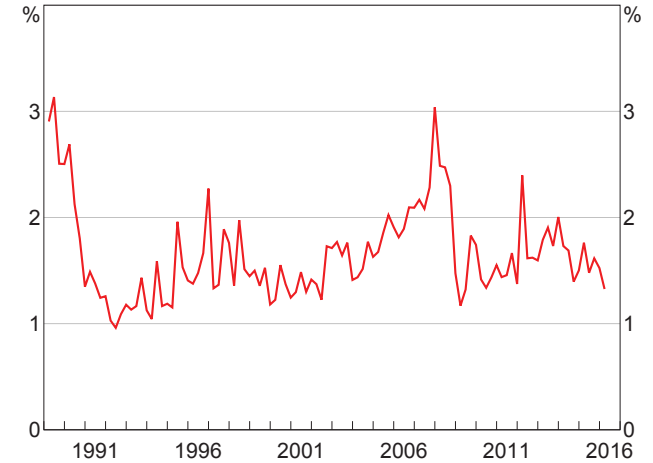


\* Adjusted for second-hand asset transfers between the private and other sectors

Source: ABS

**Private Non-residential Building Approvals**

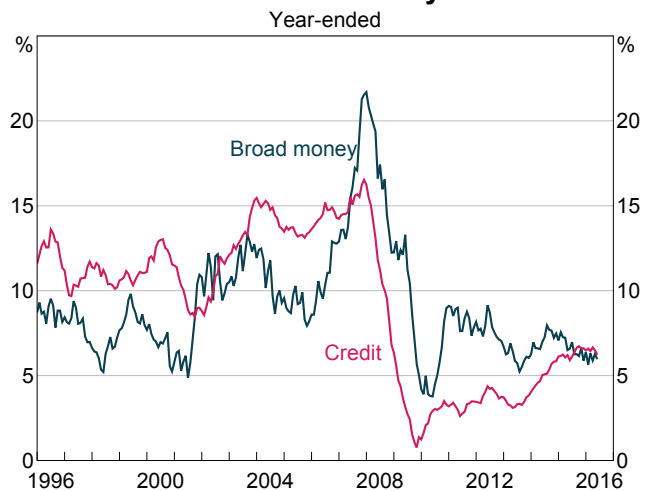
Per cent of nominal GDP



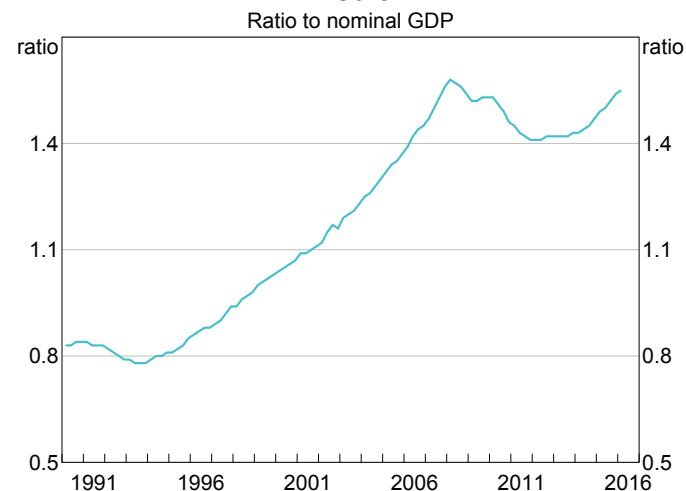
Source: ABS

# Credit and Money

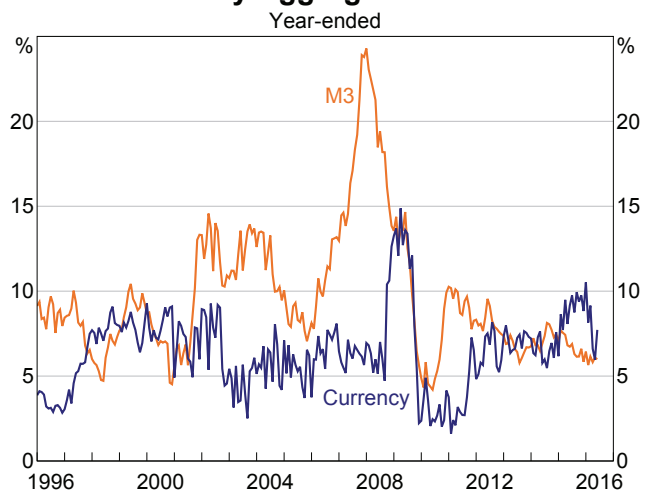
## Credit and Broad Money Growth



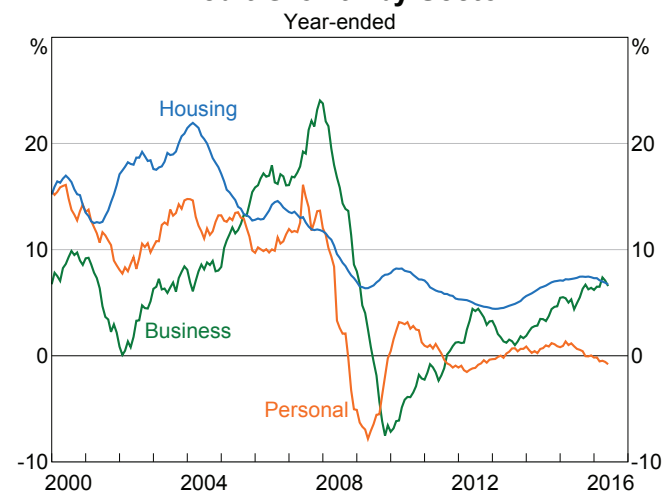
## Credit\*



## Monetary Aggregates Growth

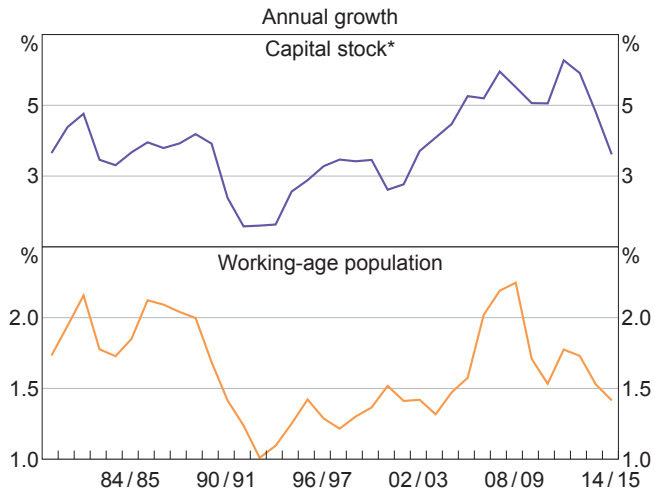


## Credit Growth by Sector



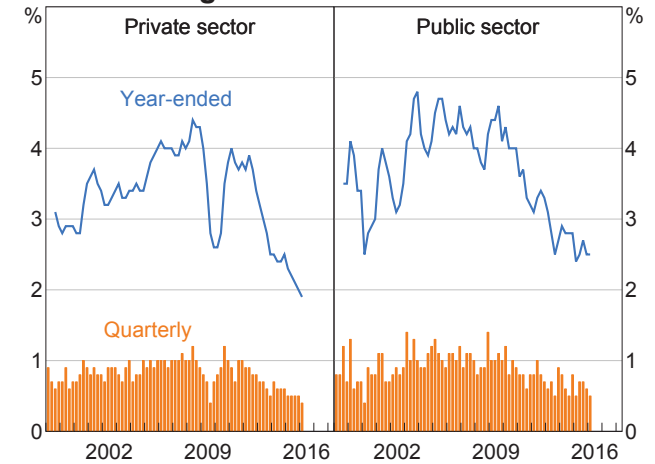
# Factors of Production and Labour Market

## Factors of Production



\* Excluding livestock & orchards, dwellings and ownership transfer costs  
Sources: ABS; RBA

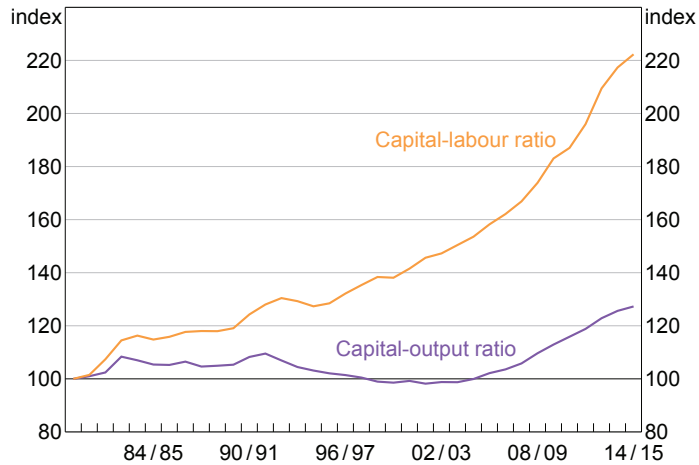
## Wage Price Index Growth



Source: ABS

## Capital Ratios\*

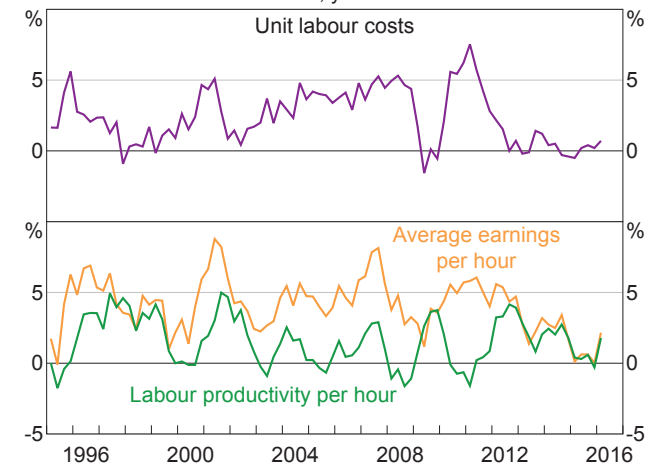
1979/80 = 100



\* Capital stock excludes livestock & orchards, dwellings and ownership transfer costs  
Sources: ABS; RBA

## Unit Labour Costs Growth

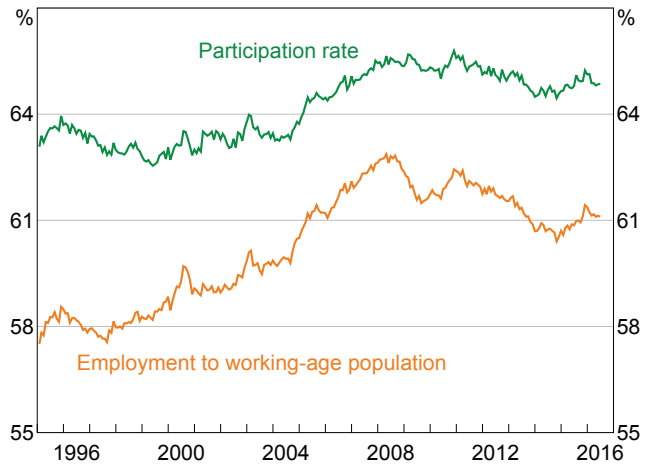
Non-farm, year-ended



Sources: ABS; RBA

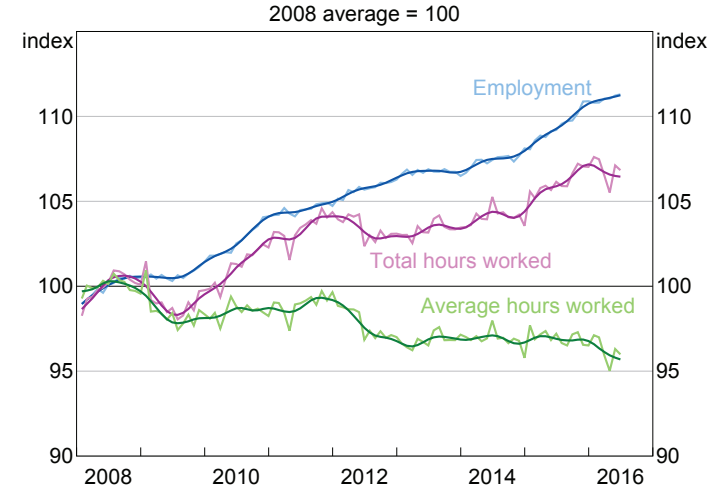
# Factors of Production and Labour Market

## Employment and Participation Rates



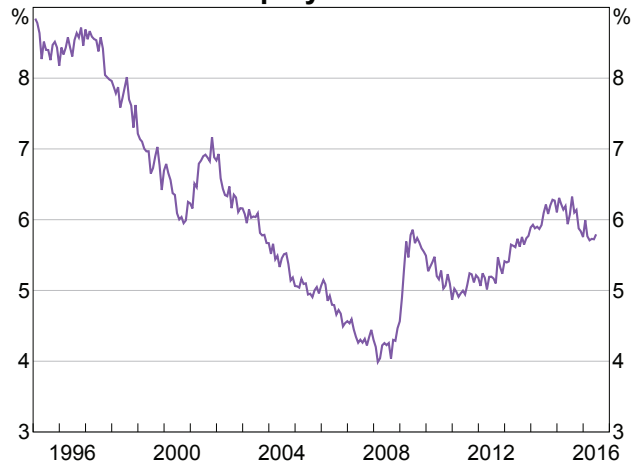
Source: ABS

## Employment and Hours Worked\*



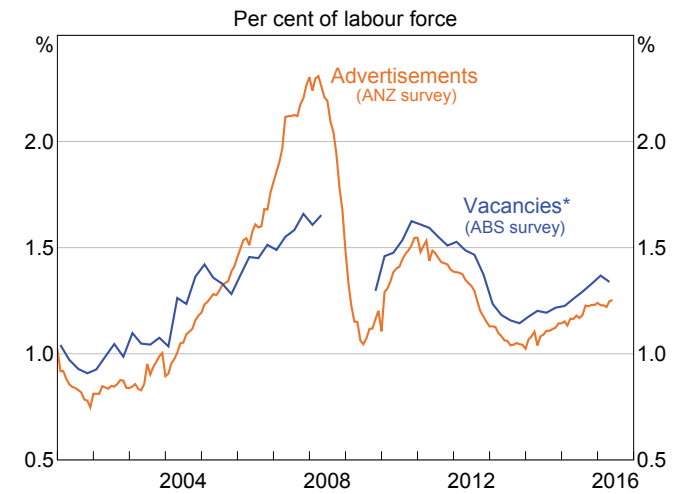
\* Smoothed lines are 13-period Henderson trends  
Sources: ABS; RBA

## Unemployment Rate



Source: ABS

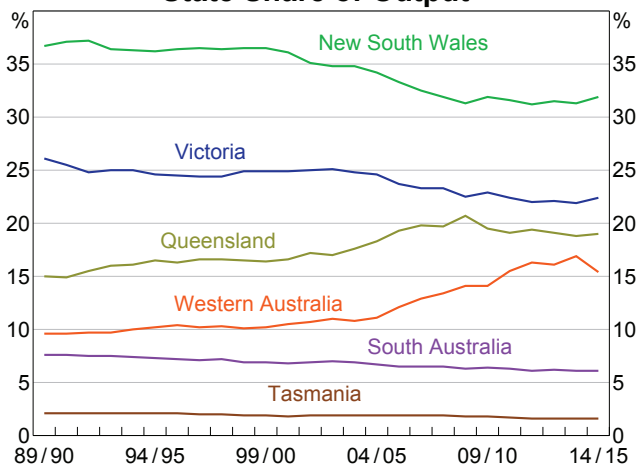
## Job Vacancies and Advertisements



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

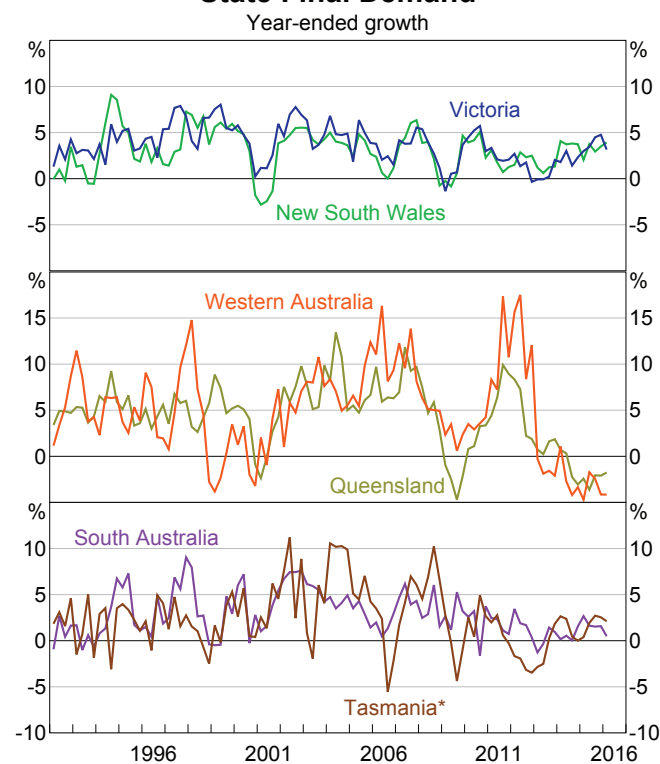
# Regions and Industry

### State Share of Output\*



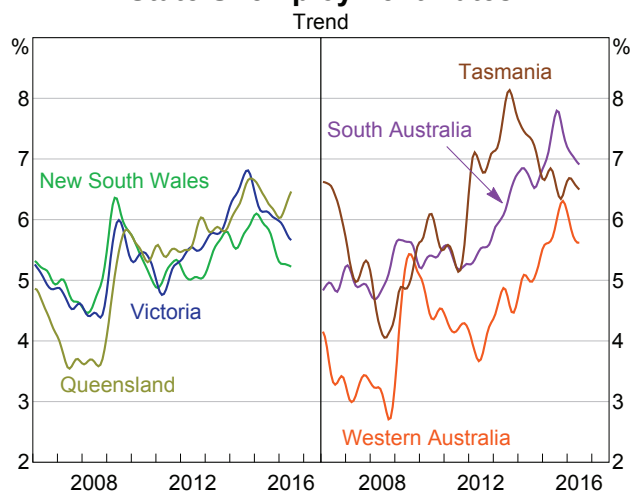
\* Nominal  
Source: ABS

### State Final Demand



\* Adjusted for the purchase and sale of ferries in 2002  
Source: ABS

### State Unemployment Rates

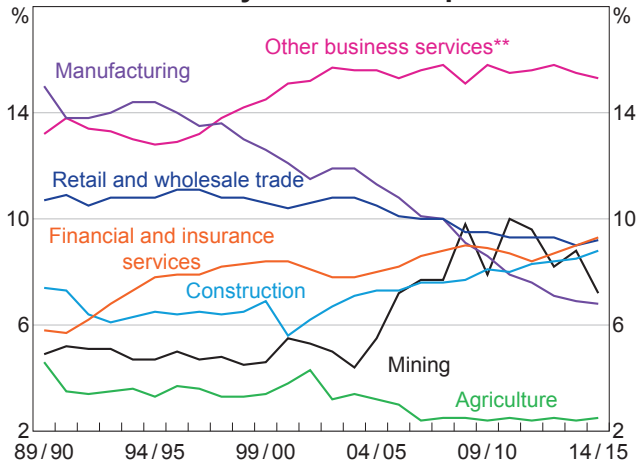


Source: ABS



# Regions and Industry

### Industry Share of Output\*

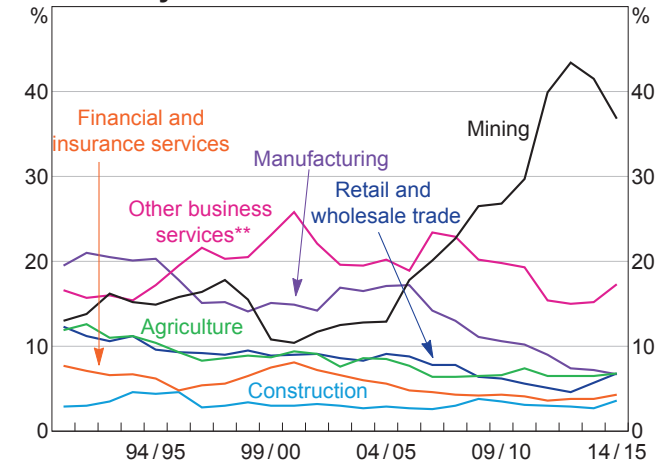


\* Nominal gross value added

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

Source: ABS

### Industry Share of Business Investment\*



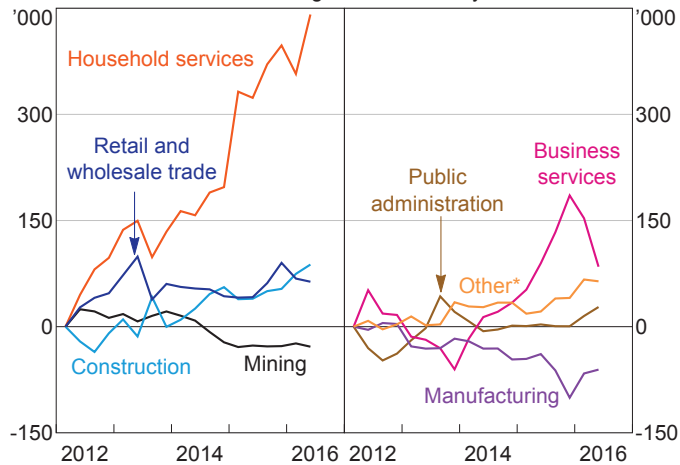
\* Nominal

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

Source: ABS

### Employment Growth by Industry

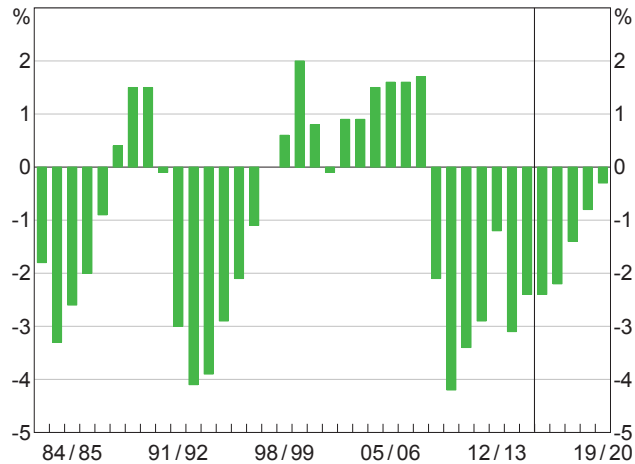
Cumulative change since February 2012



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

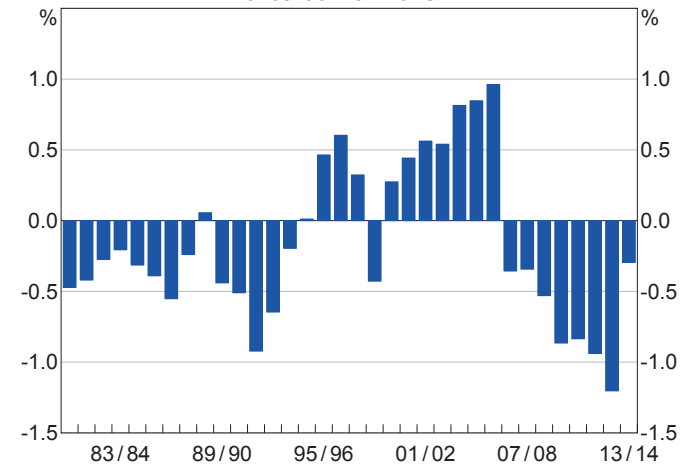
Source: ABS

**Australian Government Budget Balance\***  
Per cent of nominal GDP



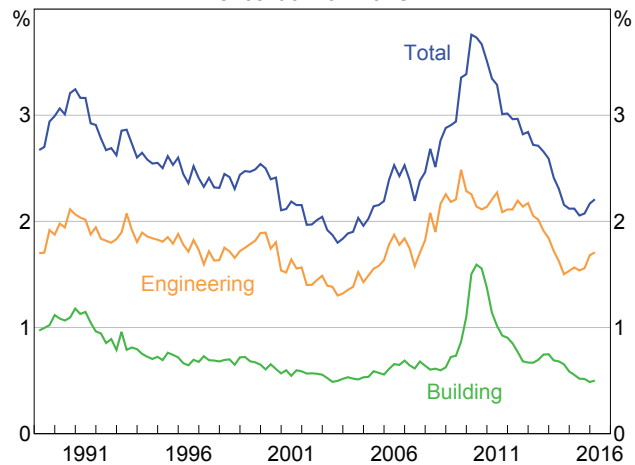
\* Underlying cash balance; 2016/17 Budget  
Source: Australian Treasury

**State Budget Balances\***  
Per cent of nominal GDP



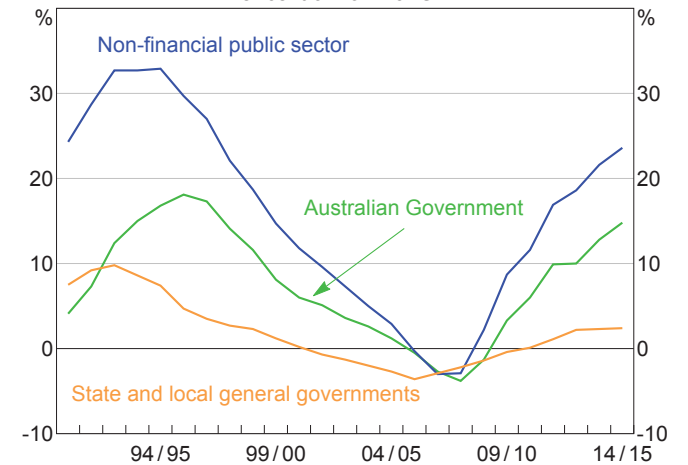
\* Underlying cash balance  
Source: ABS

**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

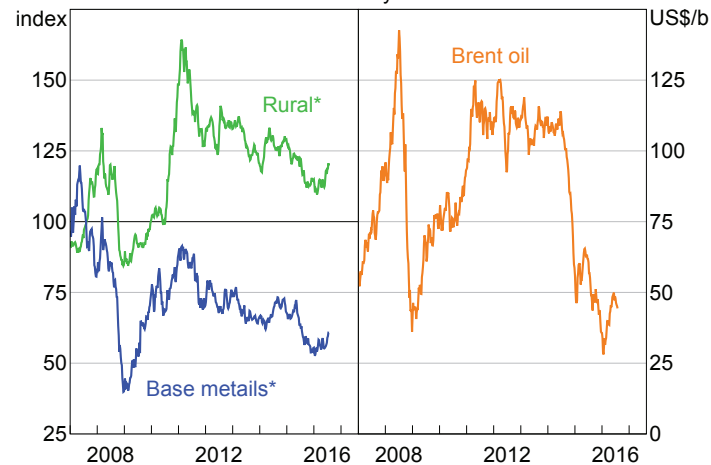
SDR, 2014/15 average = 100, log scale



Source: RBA

## Base Metals, Rural and Oil Prices

Weekly

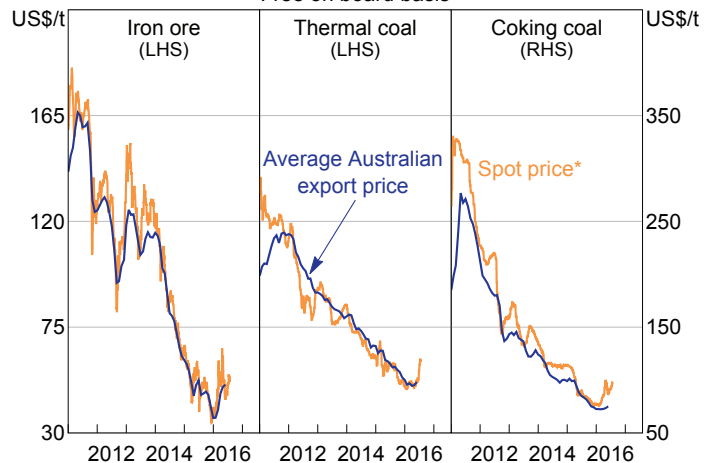


\* RBA Index of Commodity Prices sub-indices; SDR terms; 2007 average = 100

Sources: Bloomberg; RBA

## Bulk Commodity Prices

Free on board basis

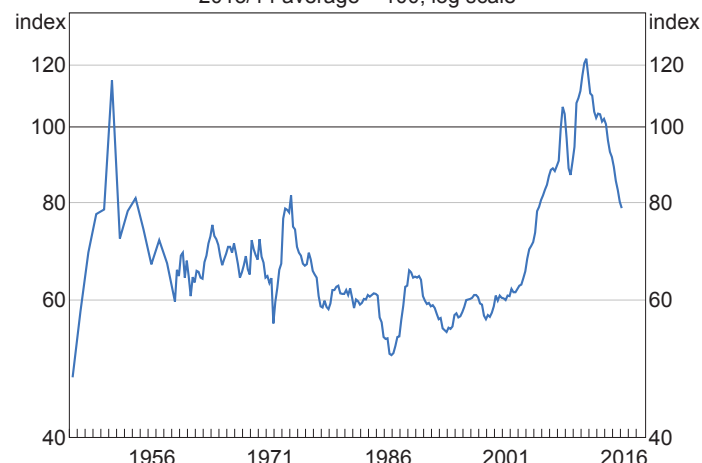


\* Iron ore fines, Newcastle thermal coal and premium hard coking coal

Sources: ABS; Bloomberg; IHS; RBA

## Terms of Trade\*

2013/14 average = 100, log scale



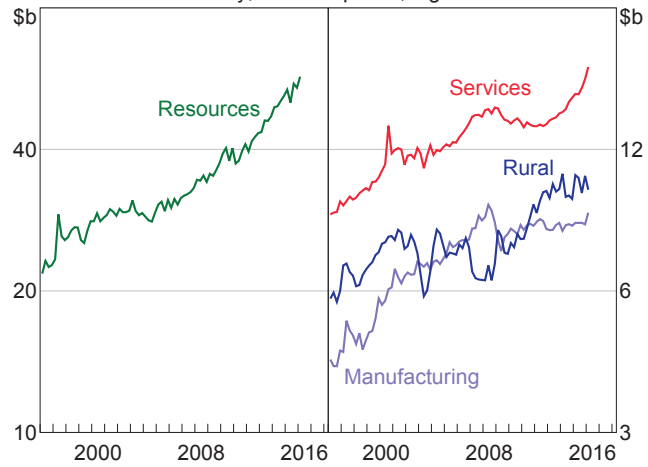
\* Annual data are used prior to 1960

Sources: ABS; RBA

# Balance of Payments and External Position

## Export Volumes

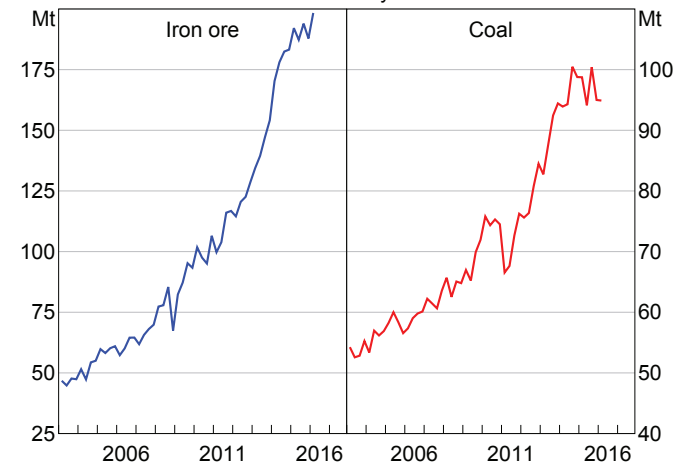
Quarterly, 2013/14 prices, log scale



Sources: ABS; RBA

## Bulk Commodity Exports

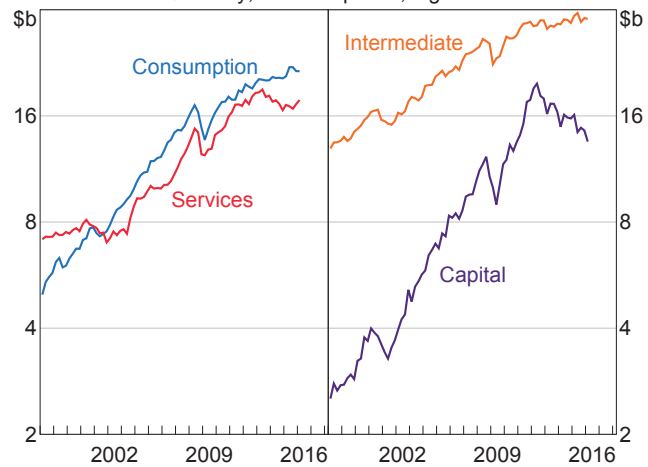
Quarterly



Sources: ABS; RBA

## Import Volumes

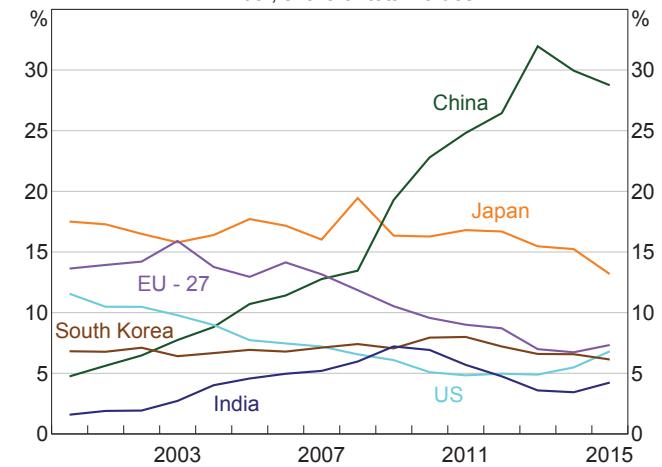
Quarterly, 2012/13 prices, log scale



Source: ABS

## Exports by Destination

Annual, share of total values

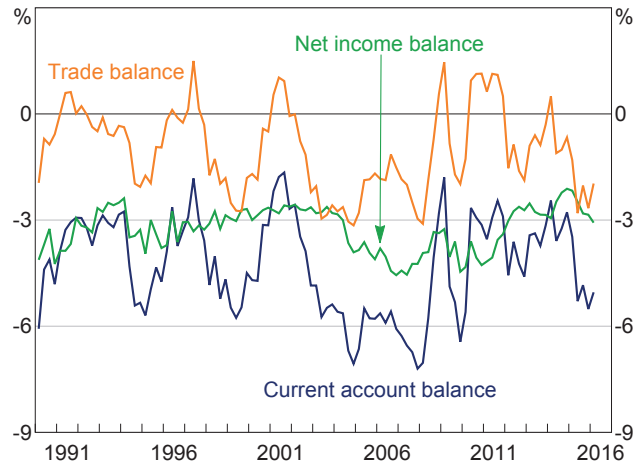


Source: ABS

# Balance of Payments and External Position

## Current Account Balance

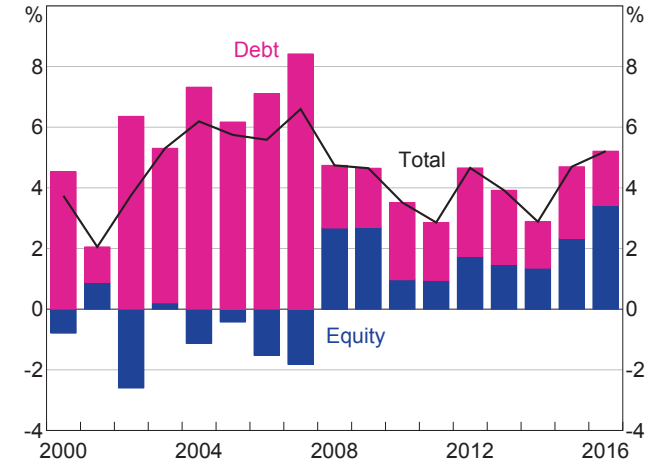
Per cent of nominal GDP



Source: ABS

## Net Capital Inflow\*

Per cent of nominal GDP

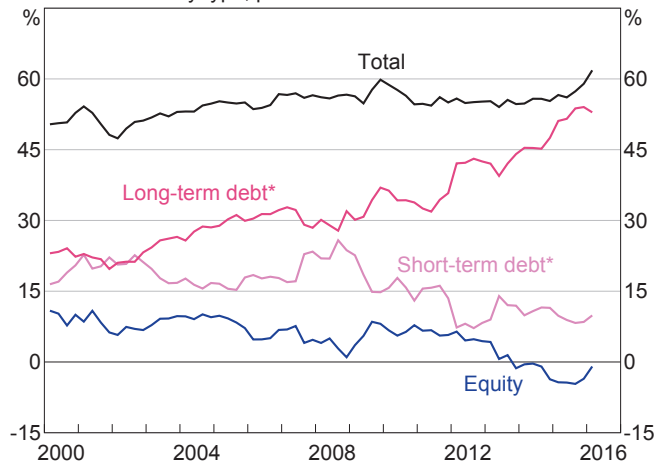


\* 2016 values include March quarter only

Source: ABS

## Net Foreign Liabilities

By type, per cent of nominal GDP

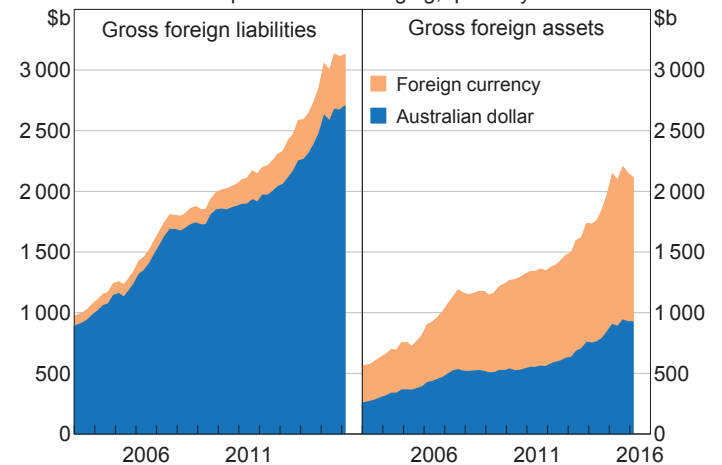


\* Short-term includes debt with residual maturity of one year or less; long-term includes all other debt

Source: ABS

## External Position

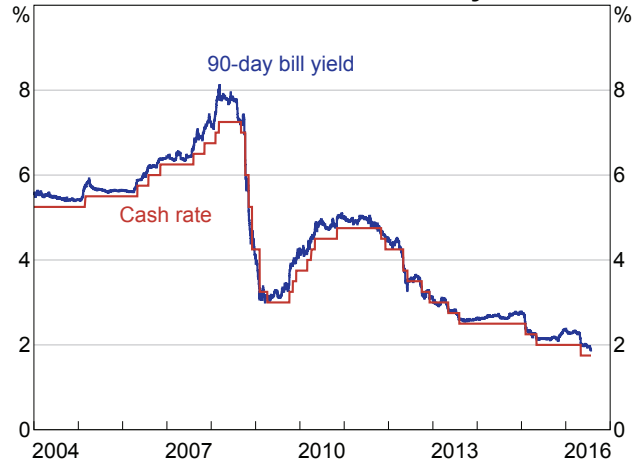
Composition after hedging, quarterly\*



\* Hedge ratios inferred from ABS Foreign Currency Exposure surveys

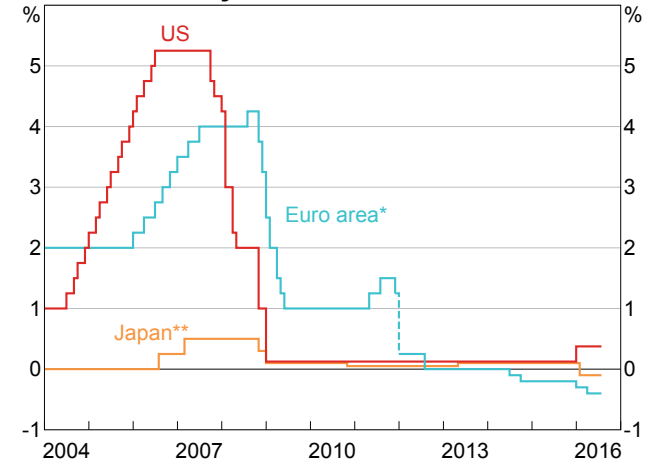
Sources: ABS; RBA

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



Sources: AFMADData; RBA

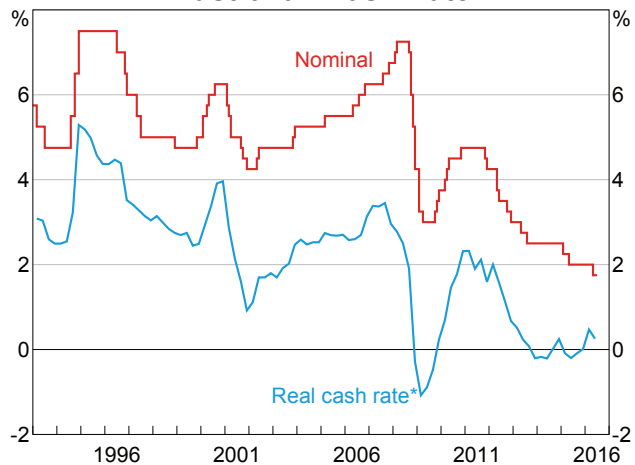
**Policy Interest Rates – G3**



\* Main refinancing rate until the introduction of 3-year LTROs in December 2011; deposit facility rate thereafter  
 \*\* Since April 2013, the Bank of Japan's main operating target has been the money base

Source: central banks

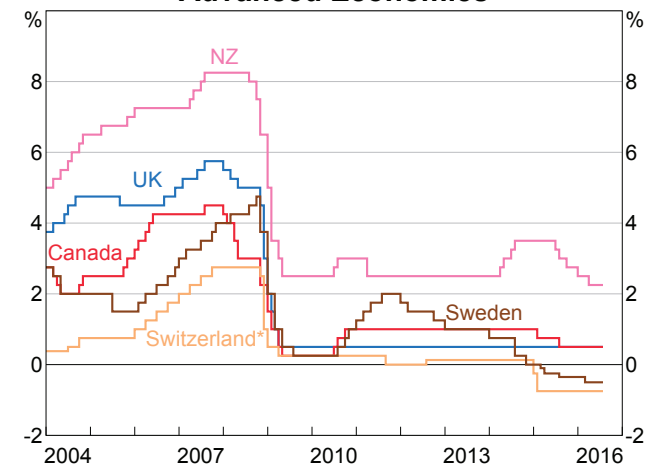
**Australian Cash Rate**



\* Calculated using average of year-ended weighted median inflation and year-ended trimmed mean inflation

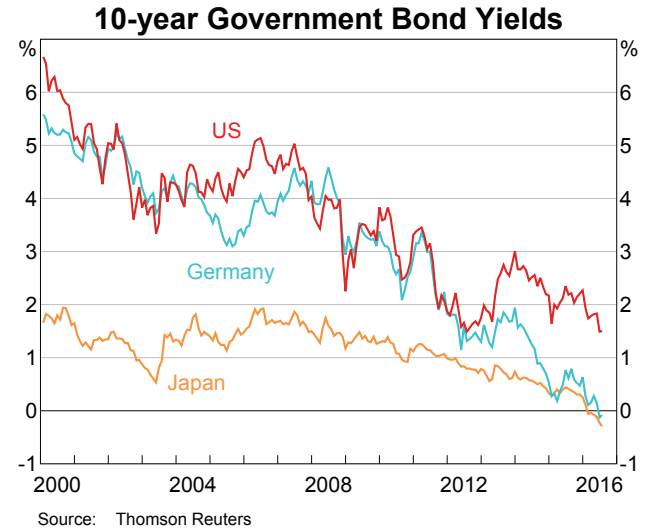
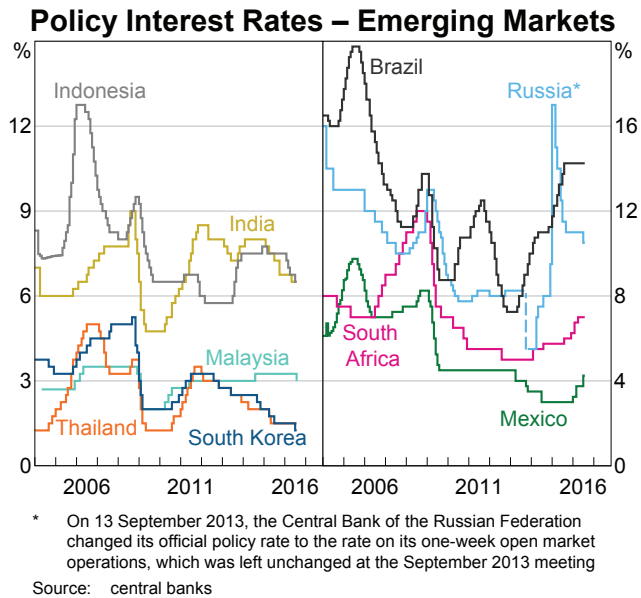
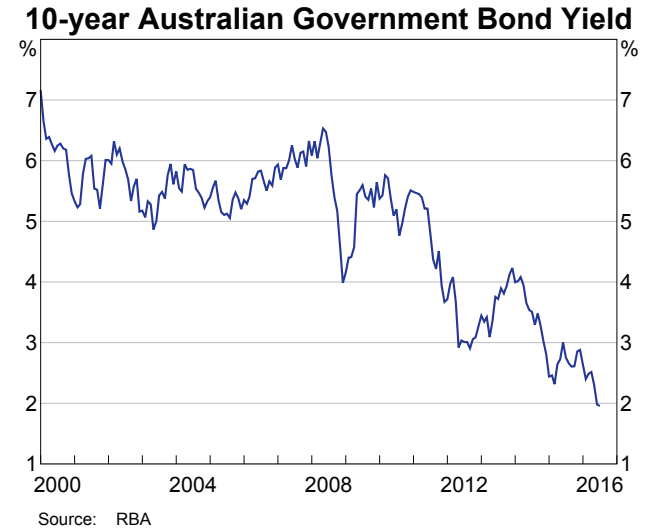
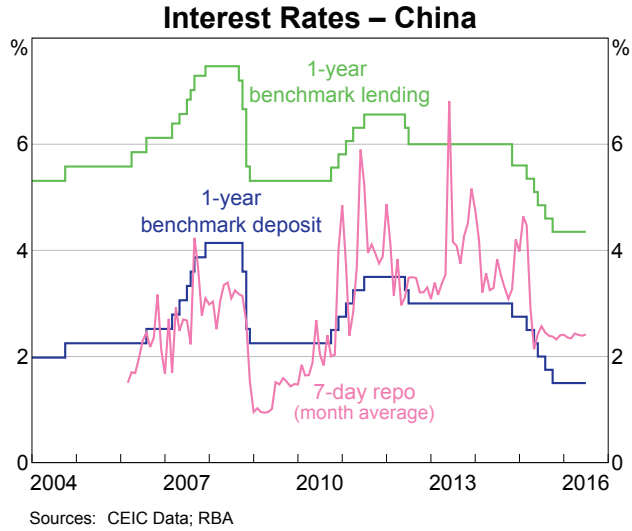
Sources: ABS; RBA

**Policy Interest Rates – Selected Advanced Economies**

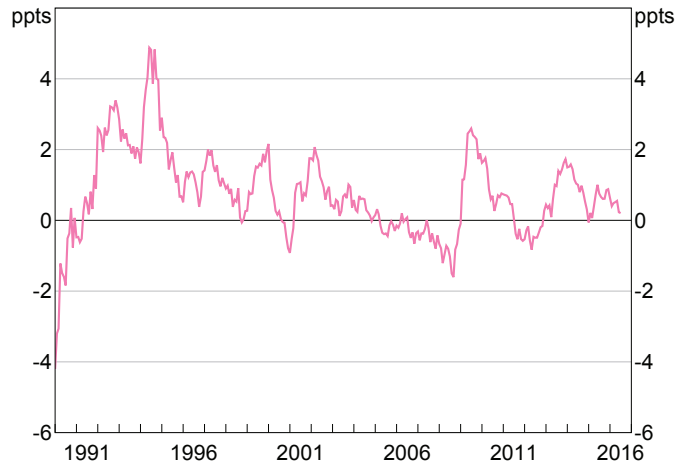


\* Policy rate is the midpoint of the 3-month LIBOR target band

Source: central banks

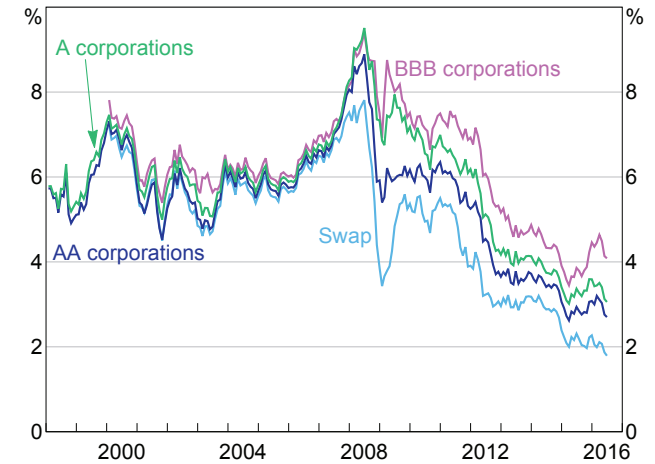


**Spread between Australian 10-year Bond Yield and the Cash Rate**



Source: RBA

**Australian Bond Yields\***



\* Swap rates are for 3-year maturity; corporate bond yields are a weighted average of senior bonds with remaining maturities of 1 to 5 years, including financial and non-financial corporations

Sources: Bloomberg; RBA; UBS AG, Australia Branch

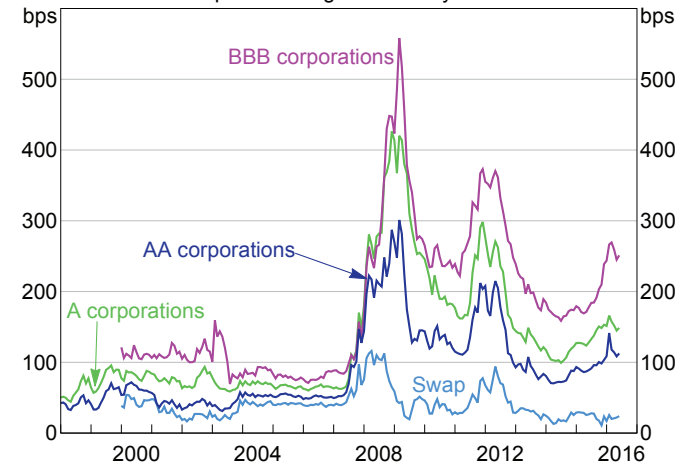
**Differential between Australian and US 10-year Government Bond Yields**



Sources: Bloomberg; RBA

**Australian Bond Spreads\***

Spread over government yields



\* Swap spreads are for 3-year maturity; corporate bond spreads are a weighted average of senior bonds with remaining maturities of 1 to 5 years, including financial and non-financial corporations

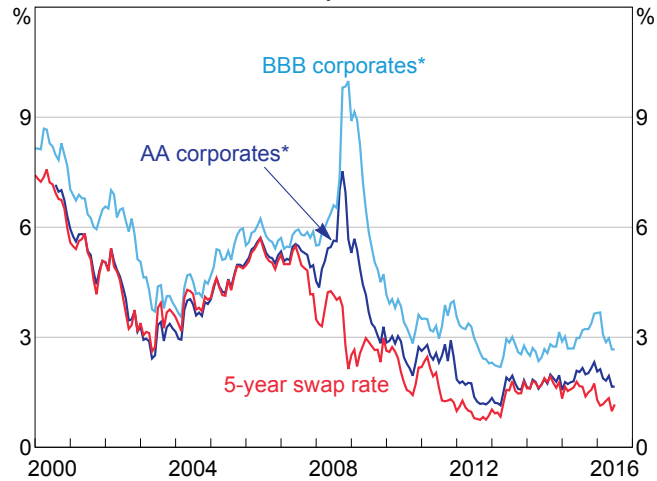
Sources: Bloomberg; RBA; UBS AG, Australia Branch



# Interest Rates

## US Bond Yields

3-5 years

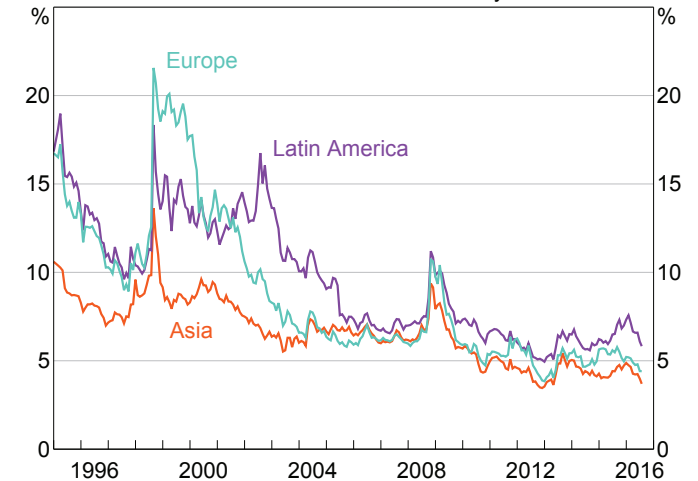


\* Includes financials and non-financials

Sources: Bank of America Merrill Lynch; Bloomberg; Thomson Reuters

## Emerging Market Bond Yields

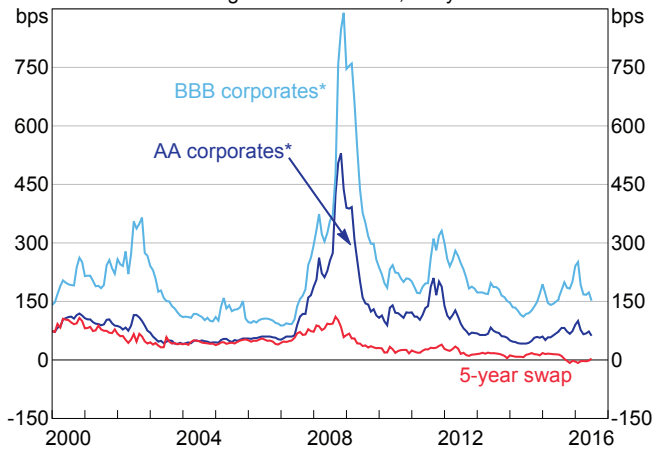
US dollar-denominated, blended yield



Sources: Bloomberg; RBA; Thomson Reuters

## US Bond Spreads

To US government bonds, 3-5 years

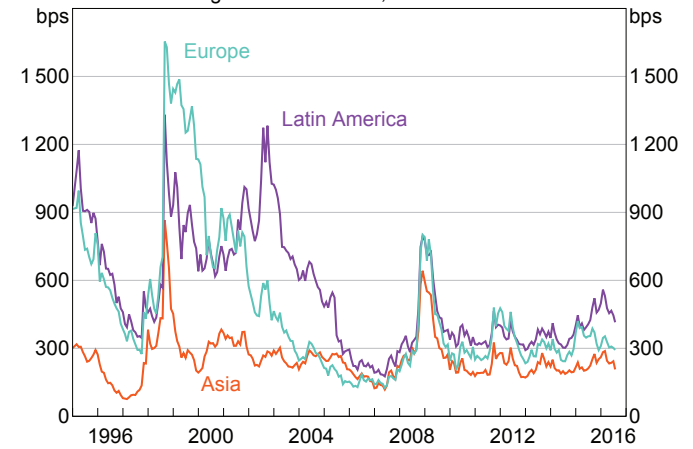


\* Includes financials and non-financials

Sources: Bank of America Merrill Lynch; Bloomberg

## Emerging Market Bond Spreads

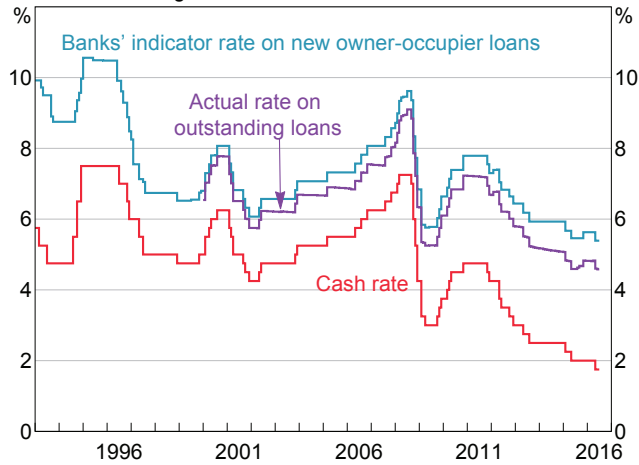
To US government bonds, duration-matched



Sources: Bloomberg; RBA; Thomson Reuters

### Australian Housing Lending Rates

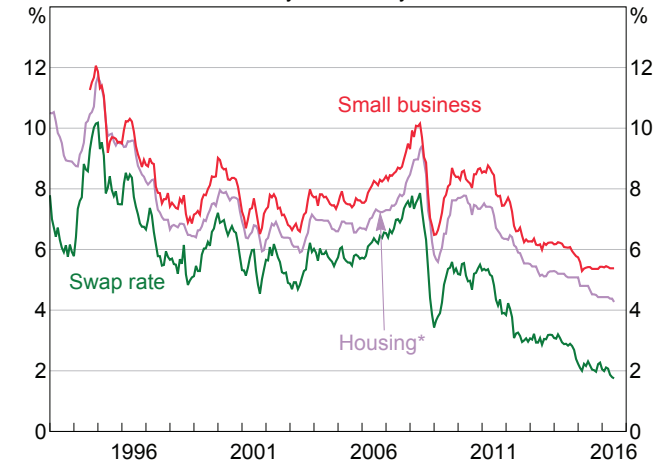
Average interest rate on variable-rate loans



Sources: ABS; APRA; Perpetual; RBA

### Australian Fixed Interest Rates

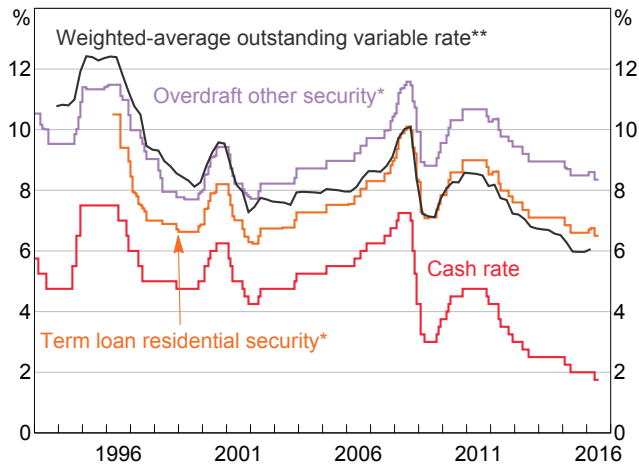
3-year maturity



\* Available to owner-occupiers

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

### Australian Small Business Interest Rates



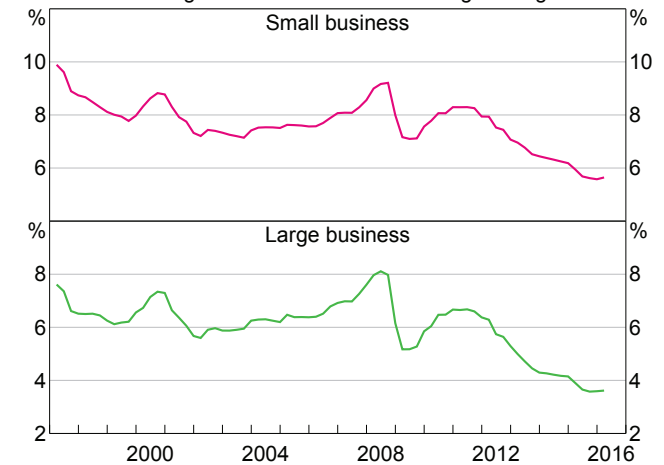
\* Indicator rates

\*\* RBA estimate; including risk margins

Sources: APRA; Canstar Cannex; RBA

### Australian Business Lending Rates\*

Average interest rate on outstanding lending

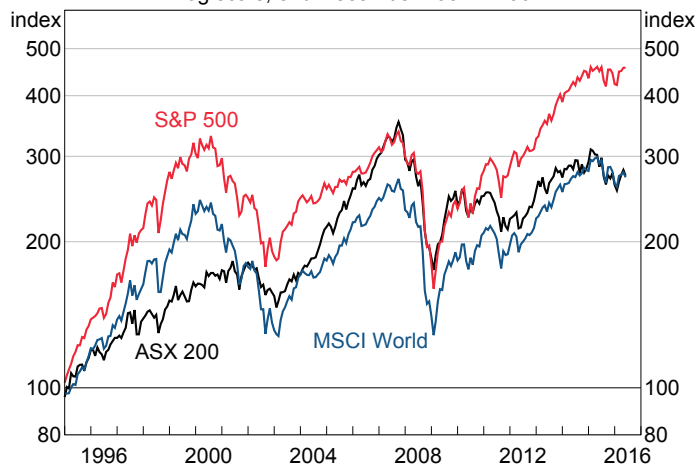


\* RBA estimates as of March 2016

Sources: APRA; RBA

**Australian and World Share Price Indices**

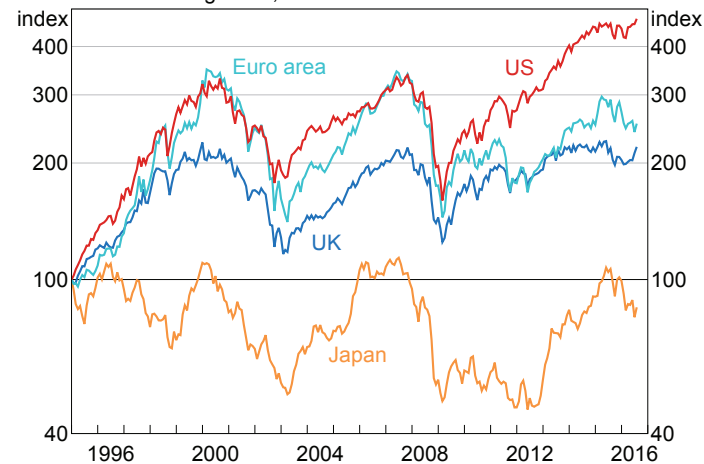
Log scale, end December 1994 = 100



Sources: Bloomberg; MSCI; RBA

**Major Economies' Share Price Indices**

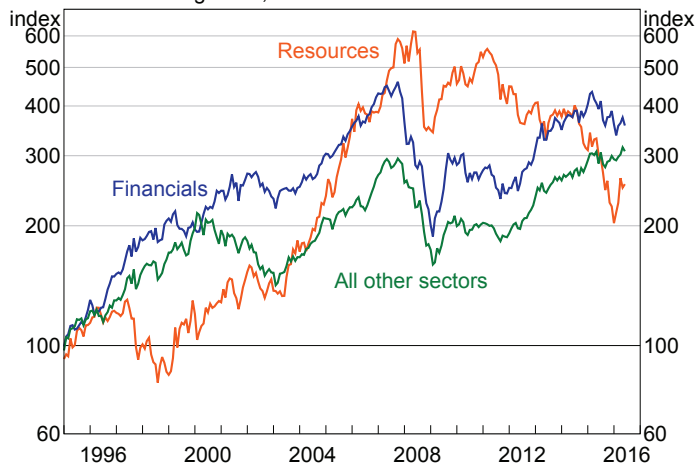
Log scale, end December 1994 = 100



Sources: Bloomberg; RBA

**Australian Share Price Indices\***

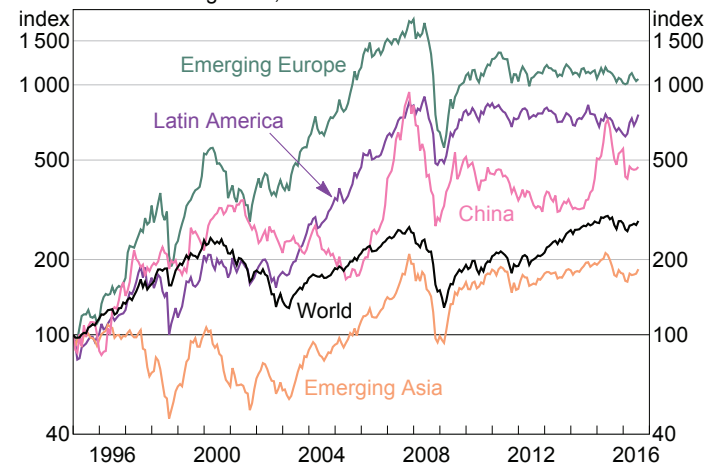
Log scale, end December 1994 = 100



\* ASX 200 companies  
Sources: Bloomberg; RBA

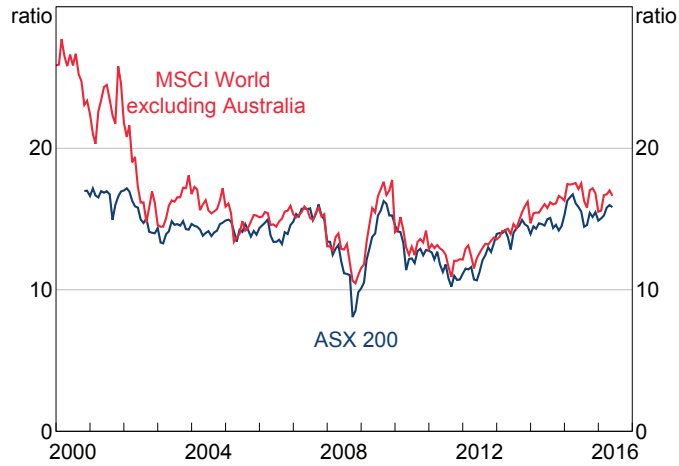
**Share Price Indices**

Log scale, end December 1994 = 100



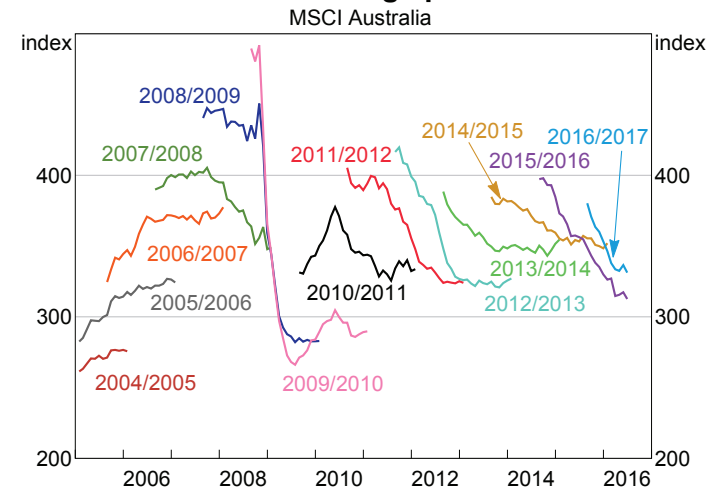
Sources: Bloomberg; MSCI; RBA

**Forward PE Ratios**



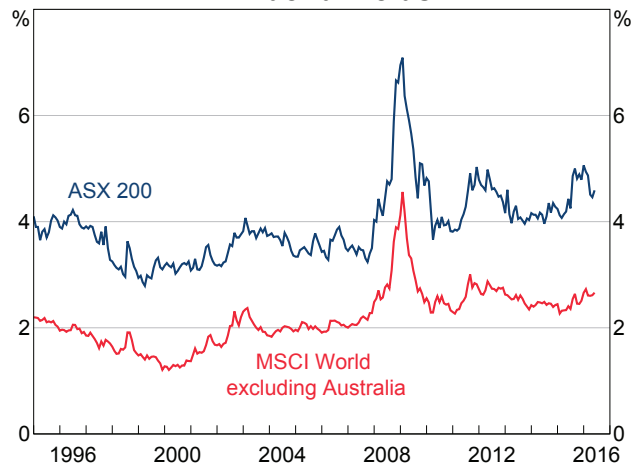
Sources: Bloomberg; MSCI; Thomson Reuters

**Forecast Earnings per Share**



Source: Thomson Reuters

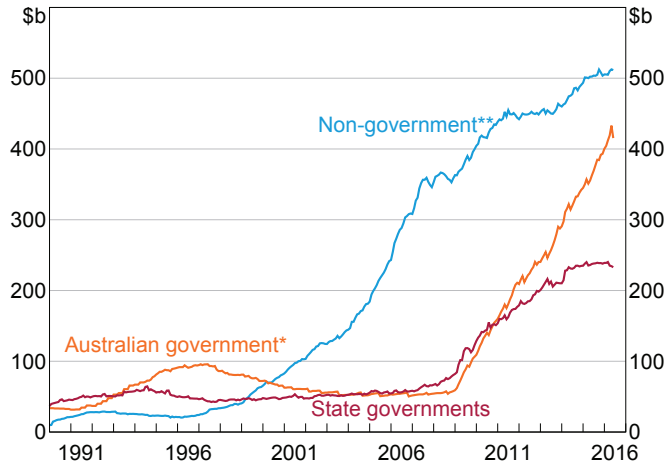
**Dividend Yields**



Sources: Bloomberg; MSCI; Thomson Reuters

# Bond Issuance

## Bonds on Issue in Australia

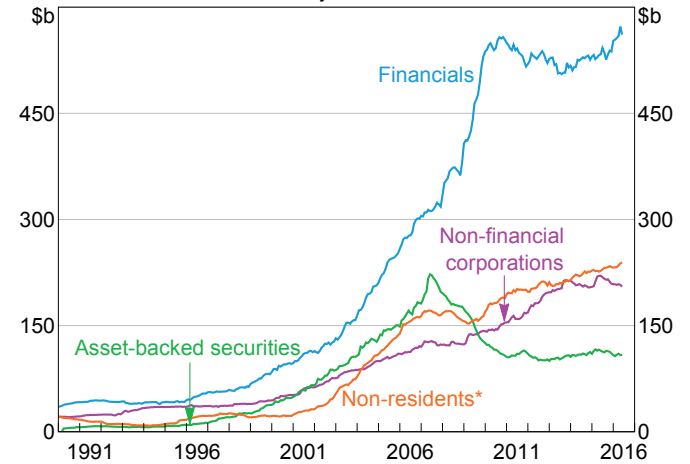


\* Excludes bonds purchased by the Australian Government  
 \*\* Excludes ADIs' self-securitisations, includes government-guaranteed bonds

Sources: ABS; AOFM; RBA; State Treasury Corporations

## Total Non-government Bonds on Issue

All currency denominations

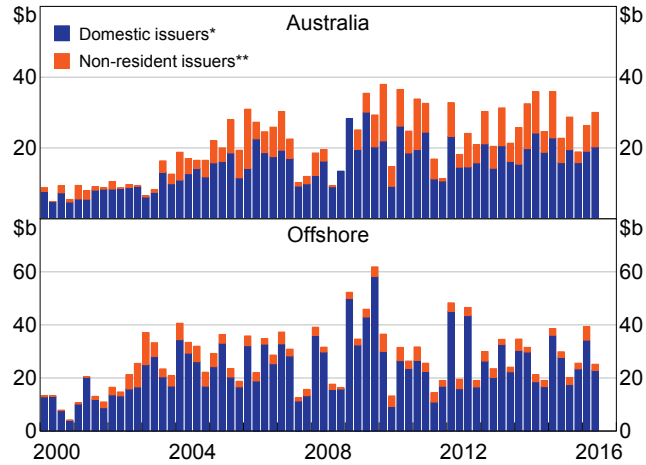


\* Australian dollar-denominated bonds only

Sources: ABS; RBA

## Non-government Bond Issuance

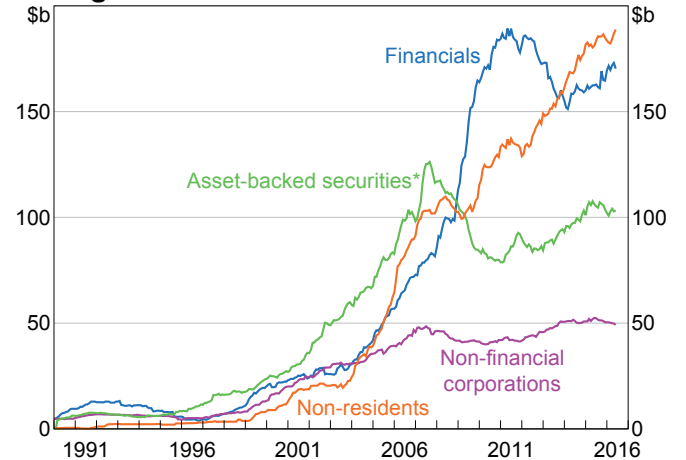
Gross issuance



\* Excludes ADIs' self-securitisations  
 \*\* Offshore non-resident issuance includes Australian dollar-denominated bonds only

Source: RBA

## Non-government Bonds on Issue in Australia

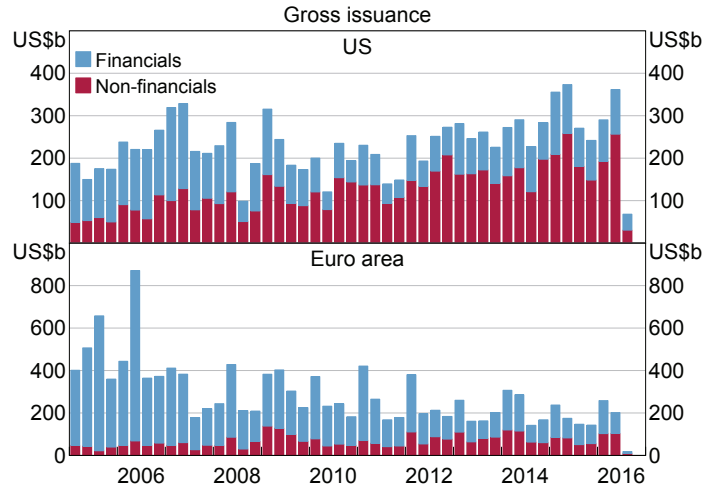


\* Excludes ADIs' self-securitisations

Sources: ABS; RBA

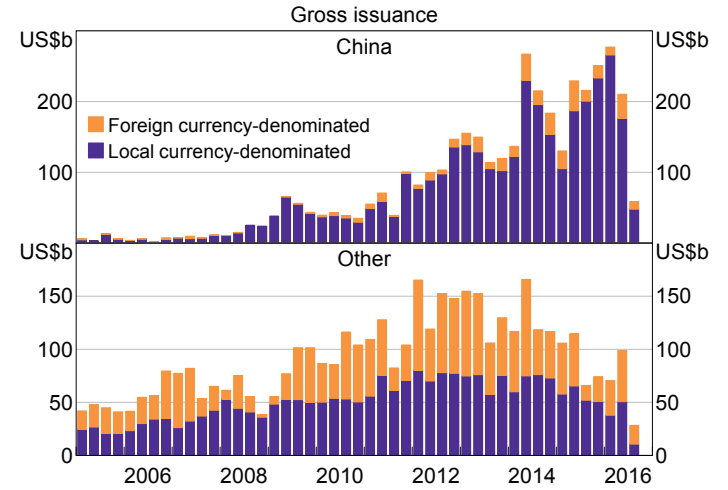
# Bond Issuance

## US and Euro Area Corporate Bond Issuance\*



\* September quarter-to-date  
Sources: Dealogic; RBA

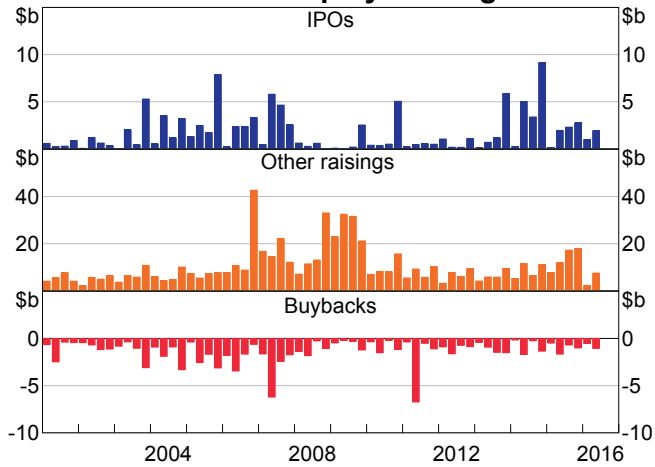
## Emerging Market Corporate Bond Issuance\*



\* September quarter-to-date  
Sources: Dealogic; RBA

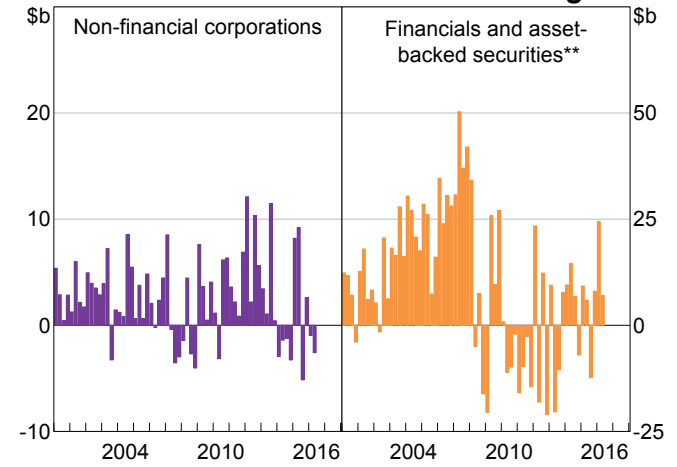
# Equity Raisings and Business Financing

### Australian Equity Raisings\*



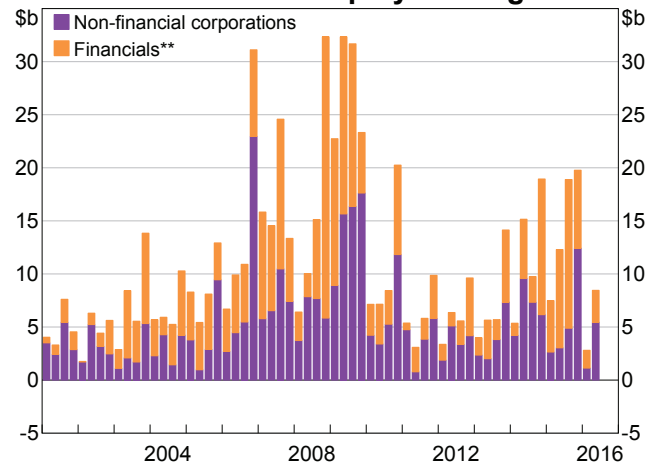
\* All listed companies  
Sources: ASX; RBA

### Net Non-intermediated Debt Raisings\*



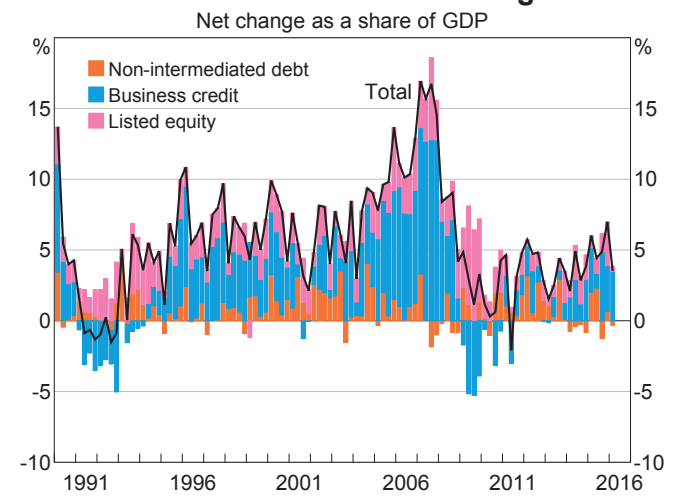
\* Includes hybrids, bonds, and short-term debt  
\*\* Excludes ADIs' self-securitisations; financials include banks and non-bank financials  
Sources: APRA; Austraclear; RBA

### Australian Net Equity Raisings\*



\* All listed companies  
\*\* Includes banks and non-bank financials  
Sources: ASX; RBA

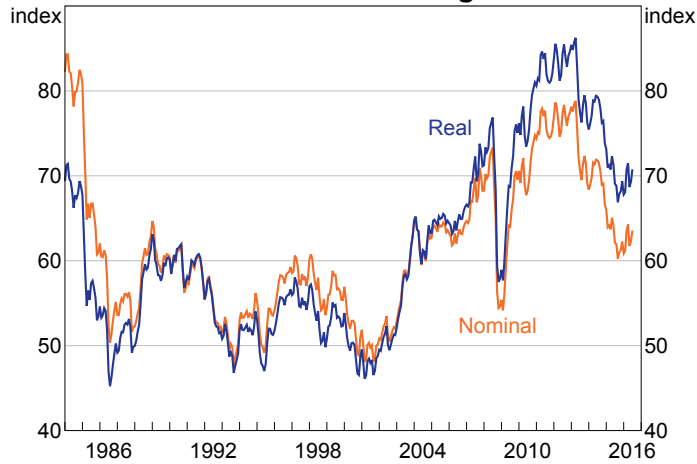
### Business External Funding



Sources: ABS; APRA; ASX; RBA

# Exchange Rates

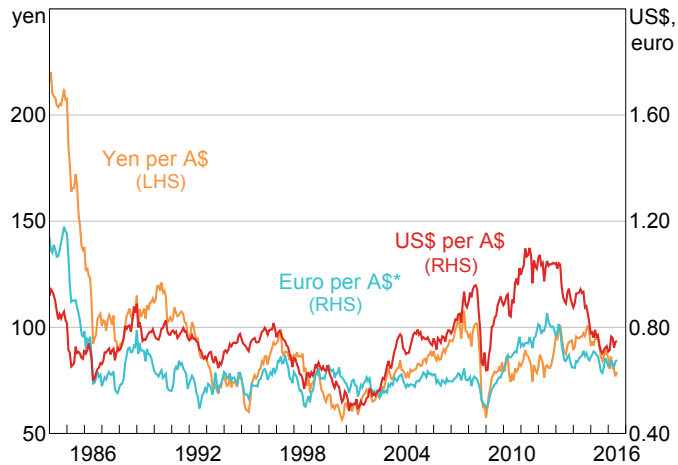
## Australian Dollar Trade-weighted Index\*



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

Sources: ABS; RBA; Thomson Reuters; WM/Reuters

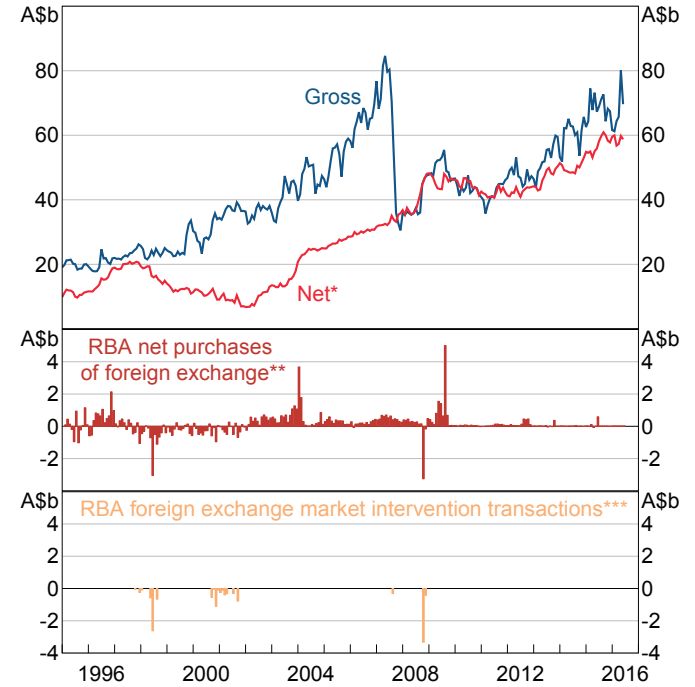
## Australian Dollar



\* ECU per A\$ until 31 December 1998

Sources: Thomson Reuters; WM/Reuters

## Official Reserve Assets



\* Excludes foreign exchange swaps

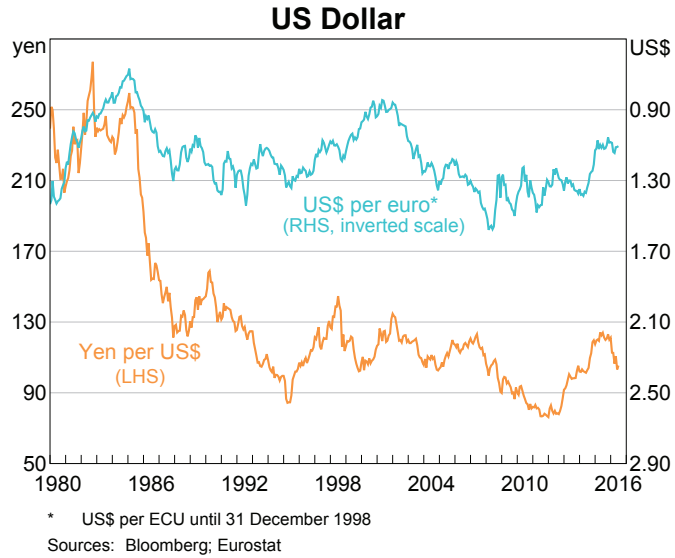
\*\* Includes market, government and other outright transactions, excludes swap deliveries

\*\*\* Data up to 30 June 2015; a positive value indicates a purchase of foreign exchange, while a negative value indicates a sale of foreign exchange

Source: RBA

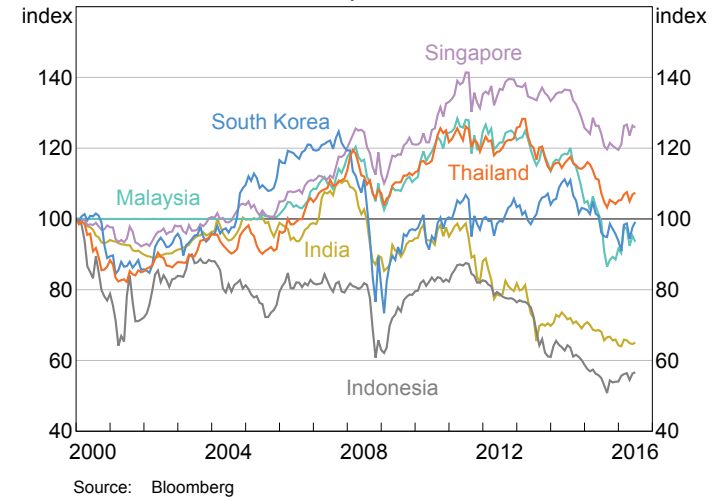


# Exchange Rates



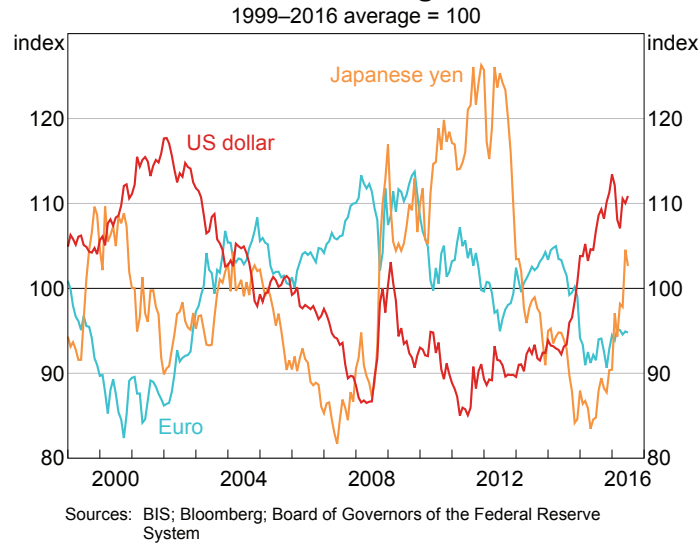
### Selected Asian Currencies against the US Dollar

31 January 2000 = 100

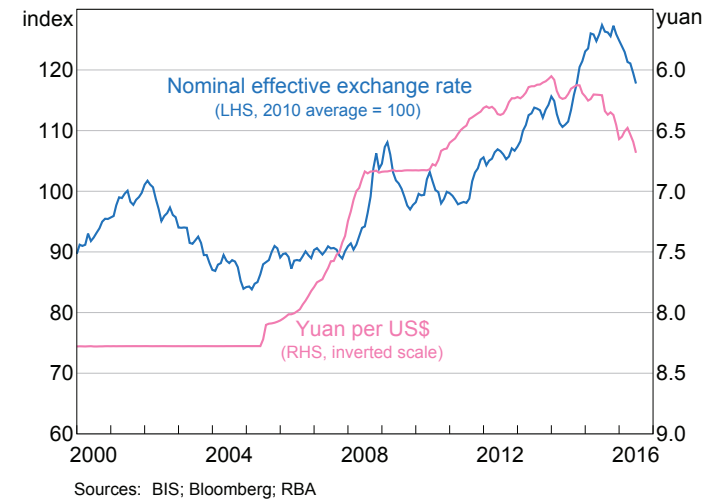


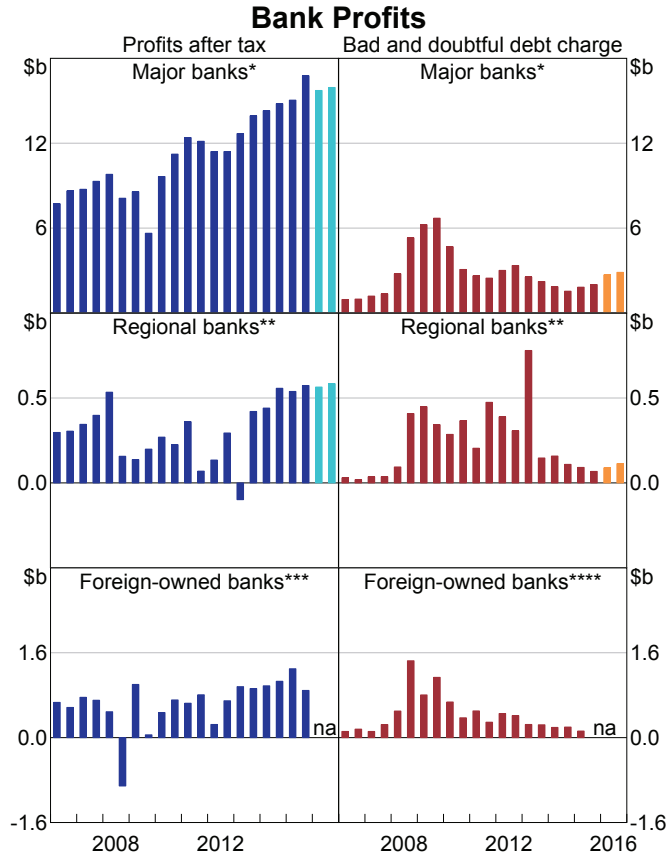
### G3 Nominal Trade-weighted Indices

1999–2016 average = 100



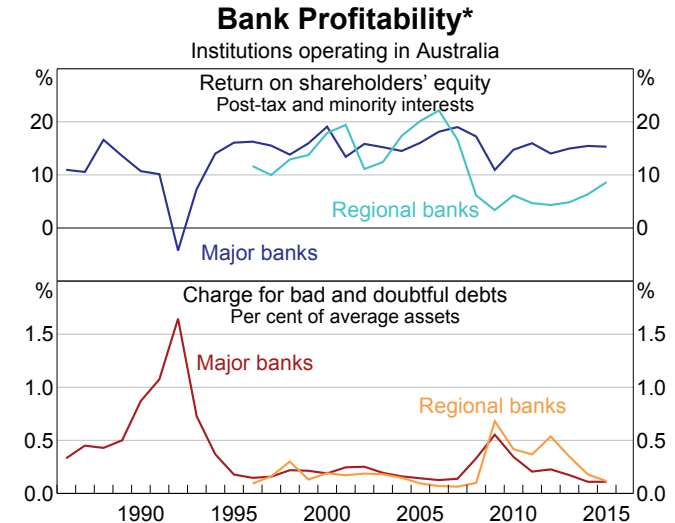
### Chinese Renminbi



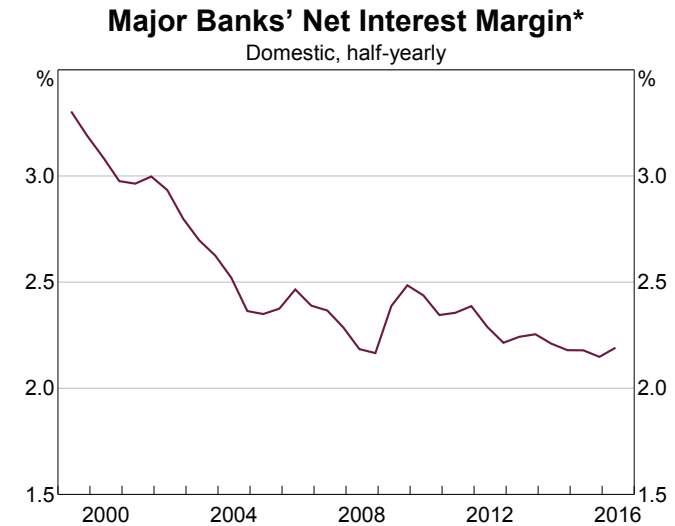


■ Actual      ■ Actual  
■ Analysts' forecasts      ■ Analysts' forecasts

\* ANZ, NAB and Westpac report half yearly to March and September, while CBA reports to June and December  
 \*\* Suncorp Bank and Bendigo and Adelaide Bank report half yearly to June and December, while Bank of Queensland reports to February and August  
 \*\*\* All results are half year to June and December  
 \*\*\*\* All results are half-year to June and December. September quarter data not reported  
 Sources: APRA; Banks' annual and interim reports; Credit Suisse; Deutsche Bank; Morgan Stanley; RBA; UBS Securities Australia



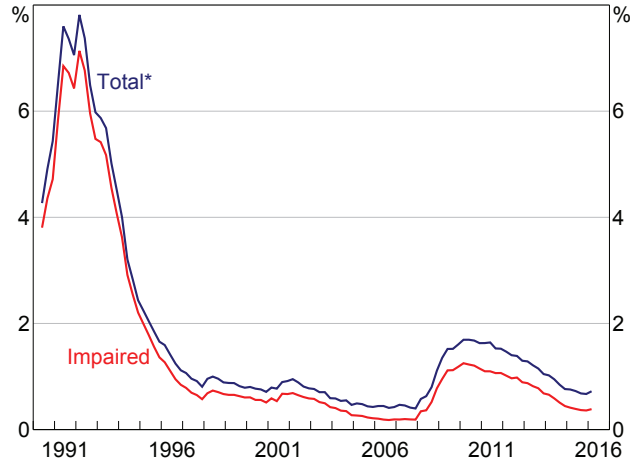
\* From 2006 data are on an IFRS basis; prior years are on an AGAAP basis; includes St. George and, from 2009, Bankwest  
 Sources: Banks' annual and interim reports; RBA



\* From 2006 data are on an IFRS basis; prior years are on AGAAP basis; excludes St George Bank and Bankwest prior to the first half of 2009  
 Sources: Banks' Financial Reports; RBA

## Banks' Non-performing Assets

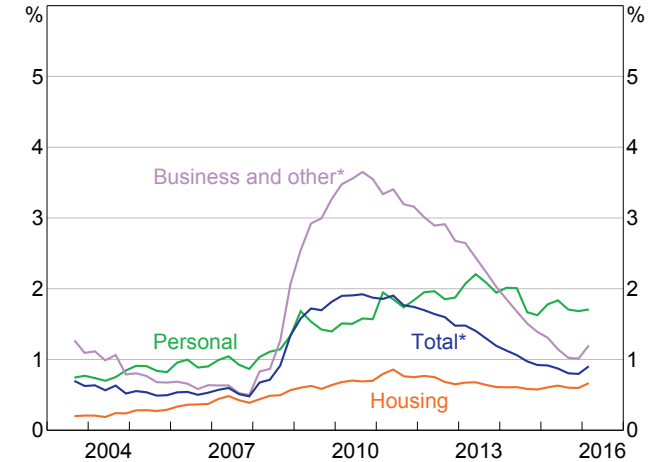
Consolidated global operations, share of on-balance sheet assets



\* Includes assets 90+ days past due that are well secured  
Source: APRA

## Banks' Non-performing Assets

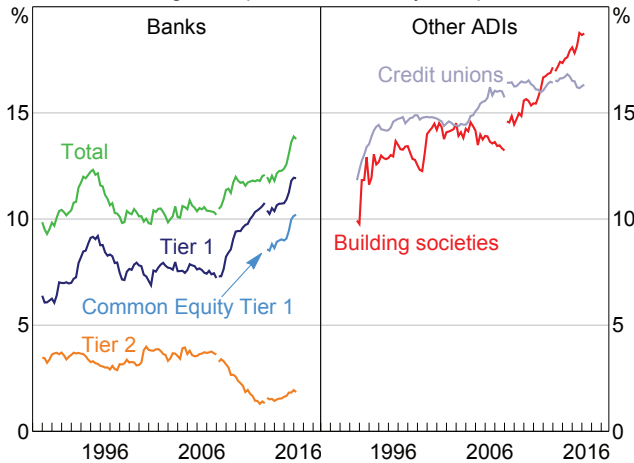
Domestic books, share of loans by type



\* Includes lending to financial businesses, bills and debt securities  
Source: APRA

## Capital Ratios\*

Consolidated global operations of locally incorporated ADIs

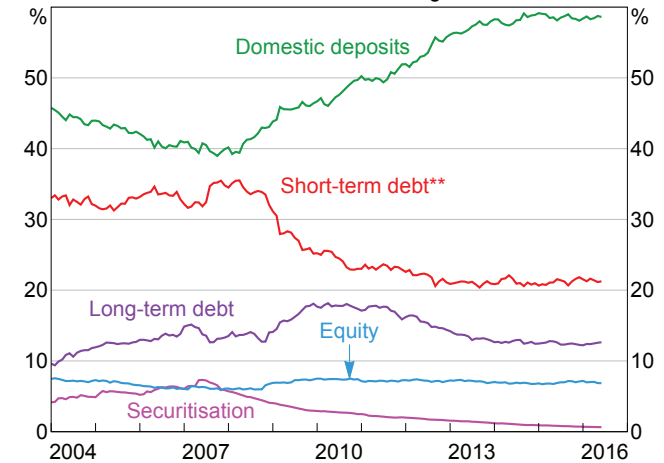


\* Per cent of risk-weighted assets; break in March 2008 due to the introduction of Basel II for most ADIs; break in March 2013 due to the introduction of Basel III for all ADIs

Source: APRA

## Funding Composition of Banks in Australia\*

Share of total funding



\* 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; RBA; Standard & Poor's