DISRUPTIVE ECONOMIC FORCES

PRESENTATION TO UDIA (QLD) ANNUAL DEVELOPERS' CONFERENCE SANCTUARY COVE, GOLD COAST – 6TH NOVEMBER 2015

SAUL ESLAKE

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'Disruption': a 21st century word for something that actually isn't all that new

'Change is happening ten times faster and at 300 times the scale [of the Industrial Revolution], or roughly 3,000 times the impact'

— McKinsey Global Institute, April 2015

'The one certainty about the future is that the pace of change will only quicken' — *Entrepreneur* magazine, January 2015

'The hurricane of change we're going currently going through is not some seismic, cyclical thing but rather the "new normal" we all need to get used to. And fast'

— Kim Williams (former CEO of Foxtel and News Corp), May 2015

'We are suffering ... from the growing pains over-rapid changes ... the increase of technical efficiency has been taking place faster than we can deal with ... technical improvements in manufacture and transport have been proceeding at a greater rate in the last ten years than ever before in history'

— John Maynard Keynes, *Economic Possibilities for our Grandchildren*, June 1930

'Four global forces breaking all the trends', according to McKinseys

1. The age of urbanization

'Nearly half of global GDP growth between 2010 and 2025 will come from 440 cities in emerging markets, 95% of them small and medium-size cities that many Western executives may not even have heard of and couldn't point to on a map'

2. Accelerating technological change

Exponential growth in processing power and connectivity combined with the 'data revolution' and the proliferation of technology-enabled business models will enable 'economic progress for billions in emerging economies at a speed unimaginable without the mobile internet' while 'shortening the life cycle of companies and forcing executives to make decisions and commit resources much more quickly'

3. Population ageing

'A smaller workforce will place a greater onus on productivity for driving growth and may cause us to rethink the economy's potential' while 'caring for large numbers of elderly people will put severe pressure on government finances'

4. Greater global connections

'A dynamic new phase of globalization, creating unmatched opportunities, and fomenting unexpected volatility'

Twelve potentially economically disruptive technologies

connectivity

judgments

optimization

Increasingly inexpensive and capable

mobile computing devices and Internet

Intelligent software systems that can

unstructured commands and subtle

Networks of low-cost sensors and

decision making, and process

perform knowledge work tasks involving

actuators for data collection, monitoring,

Use of computer hardware and software

resources delivered over a network or the Internet, often as a service



Automation of knowledge work



Mobile Internet



Cloud technology

The Internet of Things



Advanced robotics

Increasingly capable robots with enhanced senses, dexterity, and intelligence used to automate tasks or

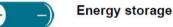
augment humans



Autonomous and near-autonomous vehicles

Vehicles that can navigate and operate with reduced or no human intervention





3D printing

Advanced materials



Advanced oil and gas exploration and recovery

Next-generation genomics

Renewable energy

Fast, low-cost gene sequencing, advanced big data analytics, and synthetic biology ("writing" DNA)

Devices or systems that store energy for later use, including batteries

Additive manufacturing techniques to create objects by printing layers of material based on digital models

Materials designed to have superior characteristics (e.g., strength, weight, conductivity) or functionality

Exploration and recovery techniques that make extraction of unconventional oil and gas economical

Generation of electricity from renewable sources with reduced harmful climate impact

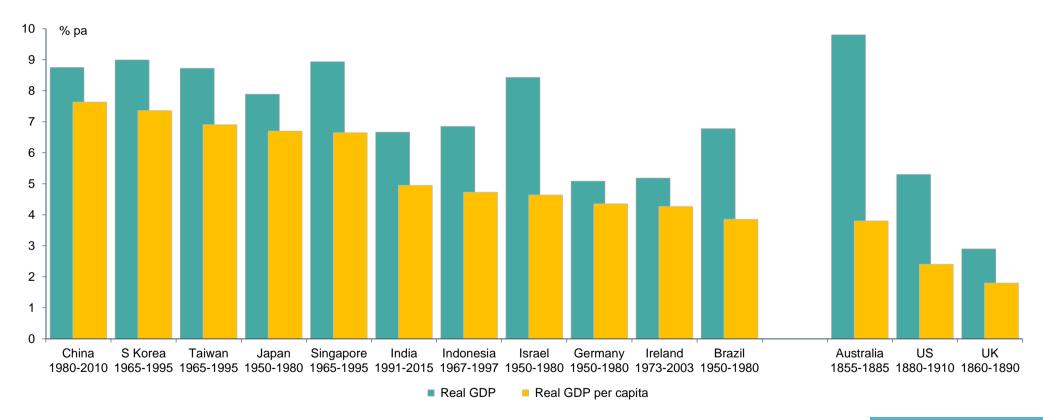
Source: James Manyika, Michael Chui, et al, Disruptive technologies: Advances that will transform life, business and the global economy, McKinsey Global Institute, May 2013.

Some plausible 'disruptive' scenarios for the Australian economy

- The end of the 'China boom'
 - even if China avoids a 'hard landing', slower growth driven by different sectors will significantly alter the impact that China has on Australia's economic fortunes
- India replicating China's economic performance
 - India will have a larger population than China's in 10-15 years: if it could replicate China's growth performance of the past 30 years Australia would likely derive significant benefits – but how likely is that?
- Rising geo-political tensions and changing balance of military power in the Western Pacific
 - will Australia have to make unpleasant (and unprecedented) choices between its economic and security interests?
- An Australian 'housing bust'
 - often predicted but so far not happened what would be the consequences?
- Australia's public finances
 - how fragile (or robust) are they?
- Tax reform
 - what shape could they take and how likely are they

China's economic growth over the three decades 1980 to 2010 is (almost) without precedent

ECONOMIC GROWTH RATES OVER 30-YEAR INTERVALS – SELECTED COUNTRIES AND PERIODS



Note: Growth rates for India are over a 24-year period, 1991-2015. *Sources:* The Conference Board, *Total Economy Database*, May 2015; Groningen Growth and Development Centre, *The Maddison Project*, 2013; author's calculations.

Australia benefited enormously from China's rapid growth and industrialization, especially during the first decade of this century

AVERAGE PRICES OF AUSTRALIA'S EXPORTS AND IMPORTS

2000 = 100 2000 = 100Exports Imports 02 03 06 07 08 09 10 11 12 13 14 15 13 14 15 01 02

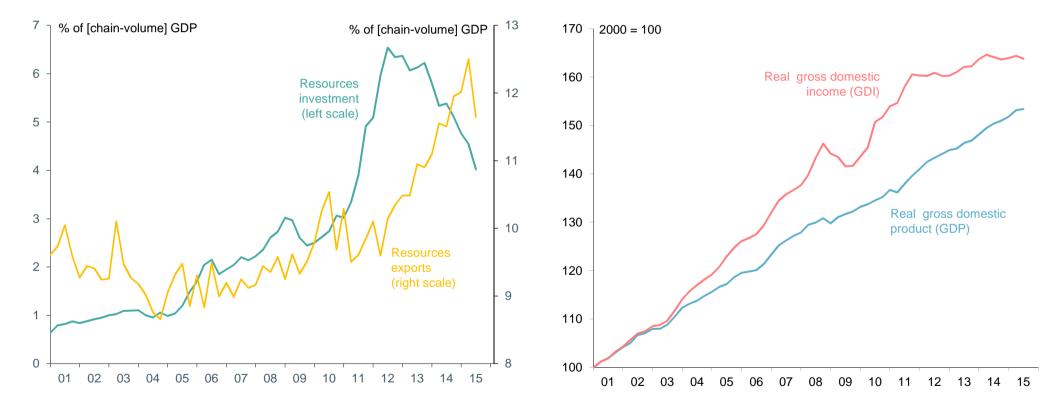
Note: The 'terms of trade' is the ratio of the implicit price deflator of exports of goods and services to the implicit price deflator of imports of goods and services. Source: ABS.

AUSTRALIA'S 'TERMS OF TRADE'

China's demand for Australian resources substantially boosted Australia's output and income

AUSTRALIA'S RESOURCES INVESTMENT AND EXPORTS

AUSTRALIA'S REAL GROSS DOMESTIC PRODUCT AND INCOME

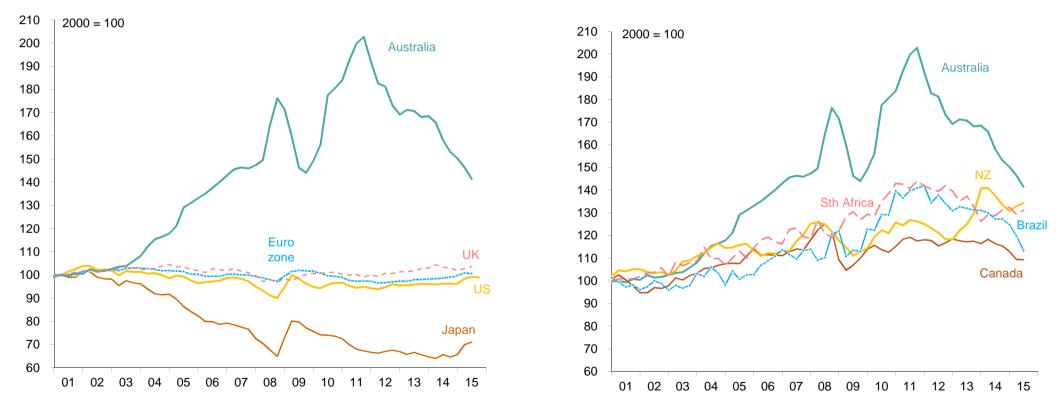


Note: Resources investment includes exploration expenditure. Real gross domestic income (GDI) is real GDP adjusted for changes in the terms of trade. Source: ABS.

Australia probably derived more benefit from Chinese growth and industrialization than any other nation on earth

TERMS OF TRADE – AUSTRALIA vs OTHER 'ADVANCED' ECONOMIES

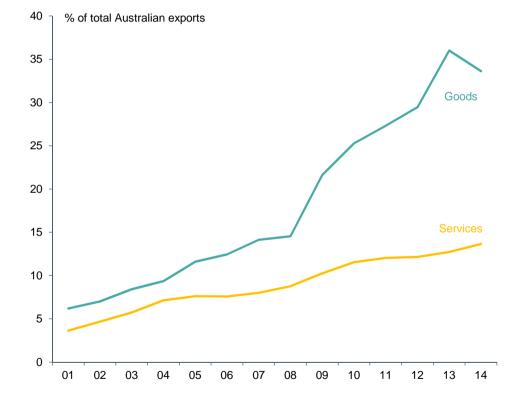
TERMS OF TRADE – AUSTRALIA vs OTHER COMMODITY-EXPORTING ECONOMIES



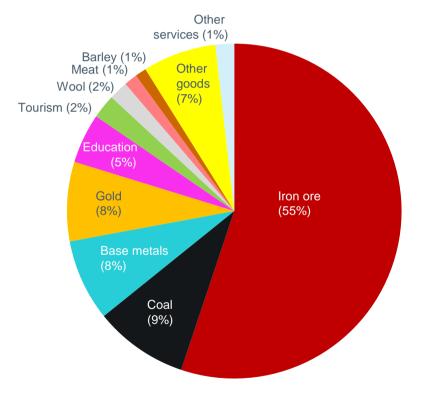
Note: The 'terms of trade' is the ratio of the implicit price deflator of exports of goods and services to the implicit price deflator of imports of goods and services. *Sources:* ABS; US Bureau of Economic Analysis; Eurostat; UK Office for National Statistics; Japan Economic & Social Research Institute; Statistics NZ; Statistics Canada; Statistics South Africa; Instituto Brasileiro de Geografia e Estatistica; author's calculations.

Australia is more dependent on trade with China than we have been on any other single country since the 1950s – and our China trade is fairly narrowly based

AUSTRALIA'S EXPORTS TO CHINA AS A PC OF TOTAL EXPORTS



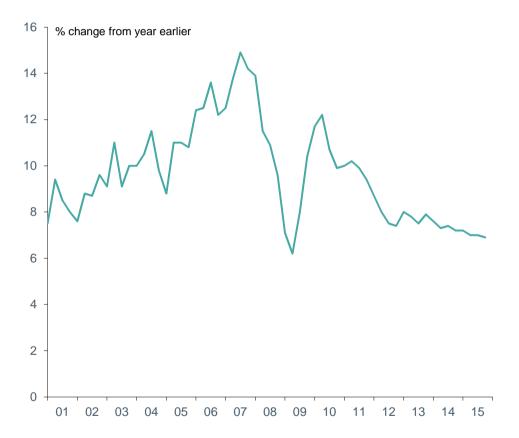
COMPOSITION OF AUSTRALIA'S EXPORTS TO CHINA, 2014



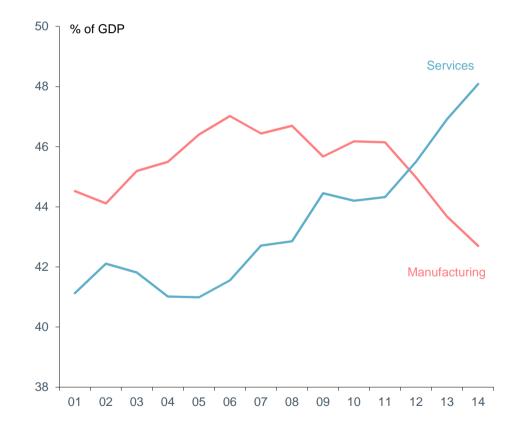
Sources: ABS; Department of Foreign Affairs & Trade.

China's economic growth rate is slowing – and the 'mix' of Chinese growth is changing

CHINESE REAL GDP



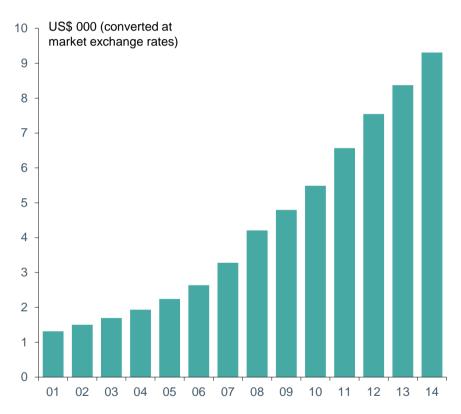
SECTOR COMPOSITION OF CHINESE GDP



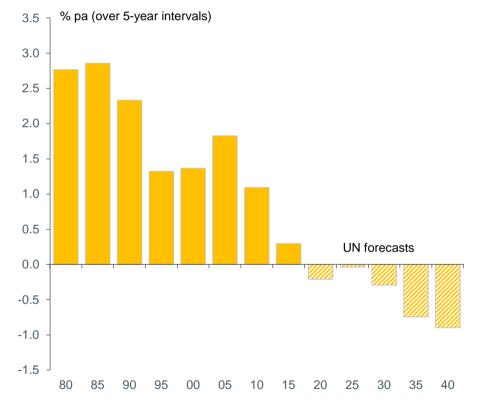
Source: China National Bureau of Statistics.

Chinese workers aren't so cheap any more: and there will be fewer of them from now on

AVERAGE WAGES OF URBAN CHINESE WORKERS IN US\$



GROWTH RATE OF CHINA'S WORKING-AGE POPULATION

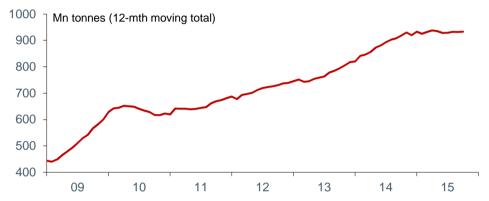


Sources: China National Bureau of Statistics; United Nations Economic & Social Affairs Division, Population Prospects; author's calculations.

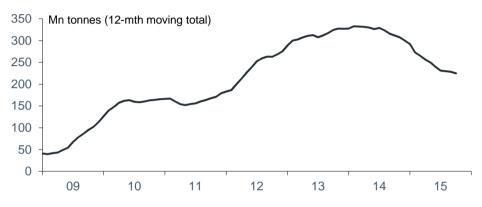
China's imports of mineral and energy commodities will grow more slowly, or fall, at a time when Australian exports are rising – with obvious implications for prices

CHINESE IRON ORE IMPORTS

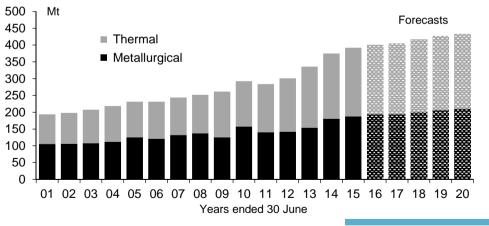
AUSTRALIAN IRON ORE EXPORTS



CHINESE COAL IMPORTS



AUSTRALIAN COAL EXPORTS



Sources: China Customs Information Center; Office of the Chief Economist, Australian Department of Industry, Innovation & Science.

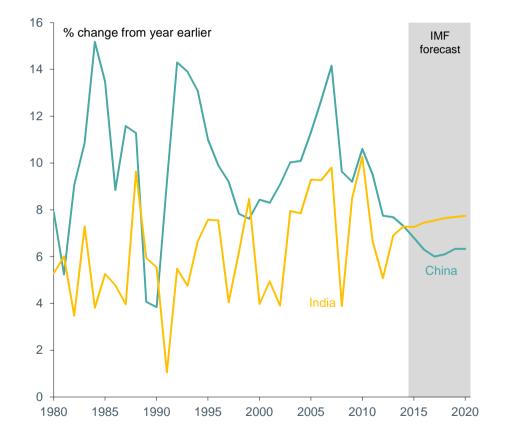
India has the potential for faster economic growth than China over the long term

US\$ per head IMF forecast China

INDIA & CHINA PER CAPITA GDP COMPARED

Source: International Monetary Fund World Economic Outlook October 2015.

INDIA & CHINA ECONOMIC GROWTH

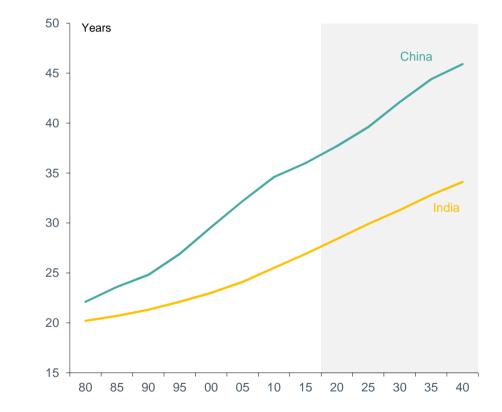


India's demographic profile is much more conducive to rapid economic growth than China's



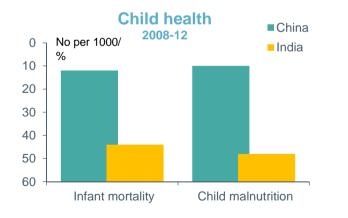
GROWTH RATE OF THE WORKING AGE

MEDIAN AGE

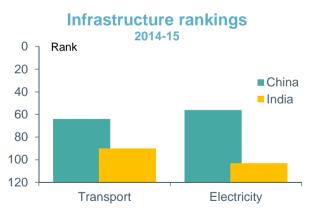


Source: United Nations Economic & Social Affairs Division, Population Prospects.

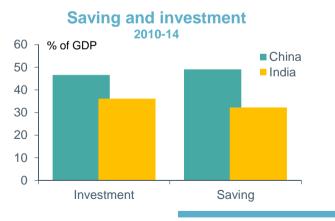
But on most other 'fundamental' indicators of development prospects, India is less well placed than China



Gender inequality 2012-13 % 70 60 China 50 India 40 30 20 10 0 Female labour force Women with some 2ndary education participation



Competitiveness rankings 2014-15 Rank China India 100 125 Competitiveness 'Ease of doing business'

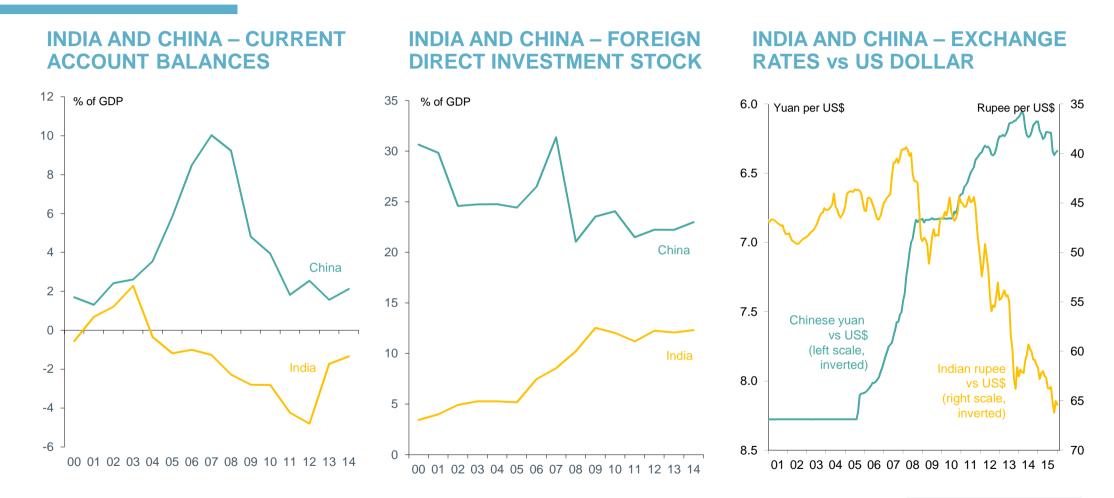


Sources: United Nations Human Development Program, Human Development Report 2014; World Economic Forum, The Global Competitiveness Report 2014-15; The World Bank, Doing Business 2015; International Monetary Fund, World Economic Outlook October 2015.

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DEVELOPMENT INDICATORS – CHINA AND INDIA COMPARED

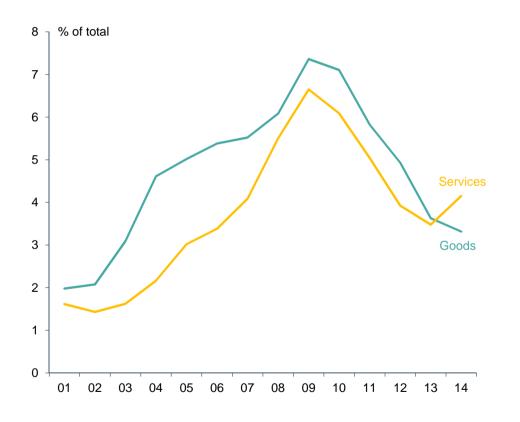
Because India runs current account deficits and is less open to foreign direct investment, it is more vulnerable to external shocks than China



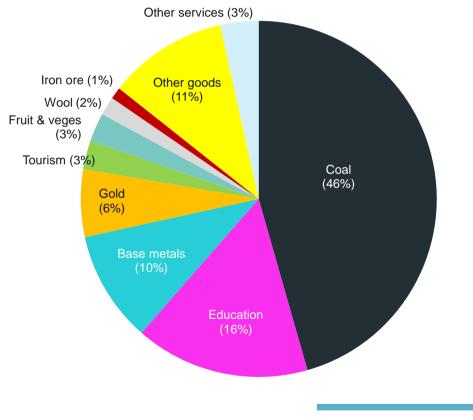
Source: International Monetary Fund, World Economic Outlook October 2015; UN Conference on Trade and Development, World Investment Report 2015; Thomson Reuters Datastream.

Australia's trade with India has been shrinking in recent years, and it too is narrowly based

AUSTRALIA'S EXPORTS TO INDIA AS A PC OF TOTAL EXPORTS



COMPOSITION OF AUSTRALIA'S EXPORTS TO INDIA, 2014



Sources: ABS; Department of Foreign Affairs & Trade.

Some key messages for Australia

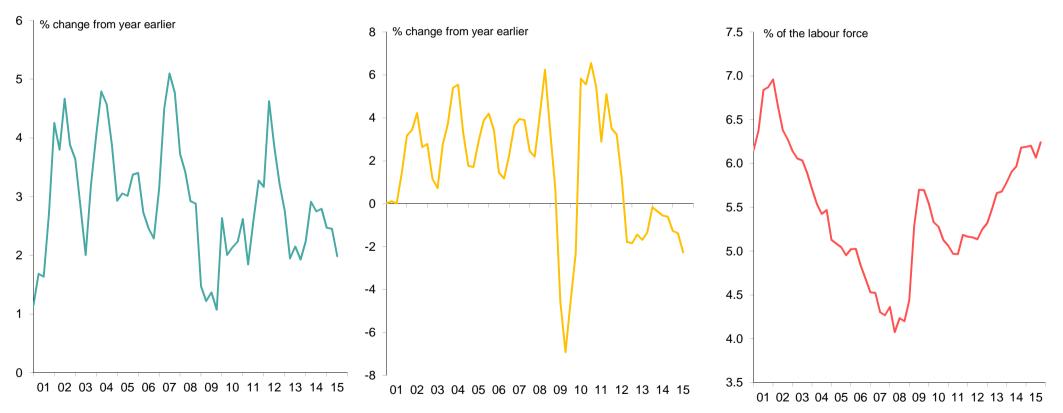
- India isn't going to be the answer to any difficulties that developments in China may pose for Australia
 - India will almost certainly not be able to match China's growth performance of the last three decades
- There are no more Chinas or Indias after China and India
 - those countries which are yet to experience anything like the sustained rapid economic growth and industrialization which China has undergone over the last thirty years are a lot smaller than China or India – and most of them aren't starting from as far behind as China was in 1978 or India in 1991
 - and most of them are more self-sufficient in commodities than China or India
- Australia needs to broaden and deepen its economic relationships with Asia
 - in particular by increasing its exports of agricultural commodities, and personal & business services
 - recognizing that we will face much more competition in these areas than we have in iron ore or coal
 - preferential trade agreements will help but are not a 'magic bullet'

Australia has experienced sub-trend growth, declining real per capita incomes and rising unemployment since commodity prices peaked in 2011

AUSTRALIA – REAL GDP GROWTH

GROWTH IN REAL NET NATIONAL DISPOSABLE INCOME PER HEAD

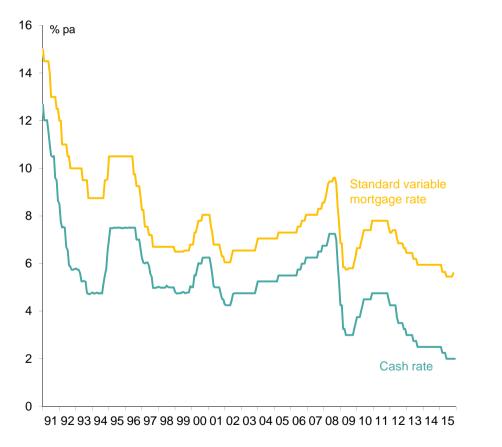
UNEMPLOYMENT RATE



Note: Real net national disposable income (NNDI) is real GDP adjusted for changes in the terms of trade, minus net factor income and transfers overseas minus depreciation. Source: ABS.

Australia is relying on record-low interest rates and a (now) below-its-long-termaverage Australian dollar to support economic growth

AUSTRALIAN INTEREST RATES



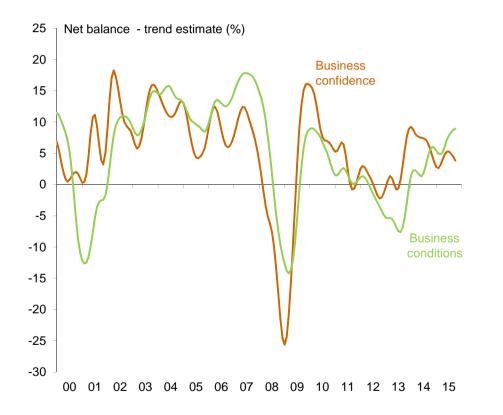
AUSTRALIAN DOLLAR



Source: Reserve Bank of Australia.

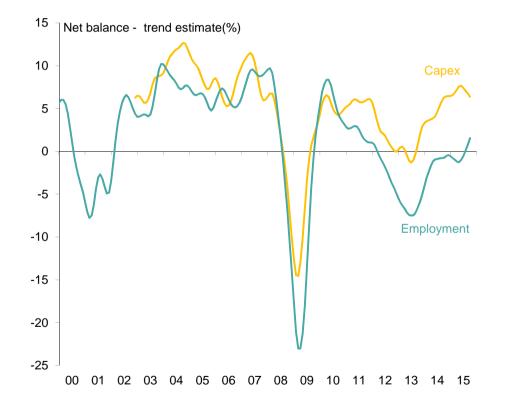
The RBA has long been frustrated by the weakness in business confidence: the change in political leadership may well have 'fixed' that problem

BUSINESS CONFIDENCE AND CONDITIONS

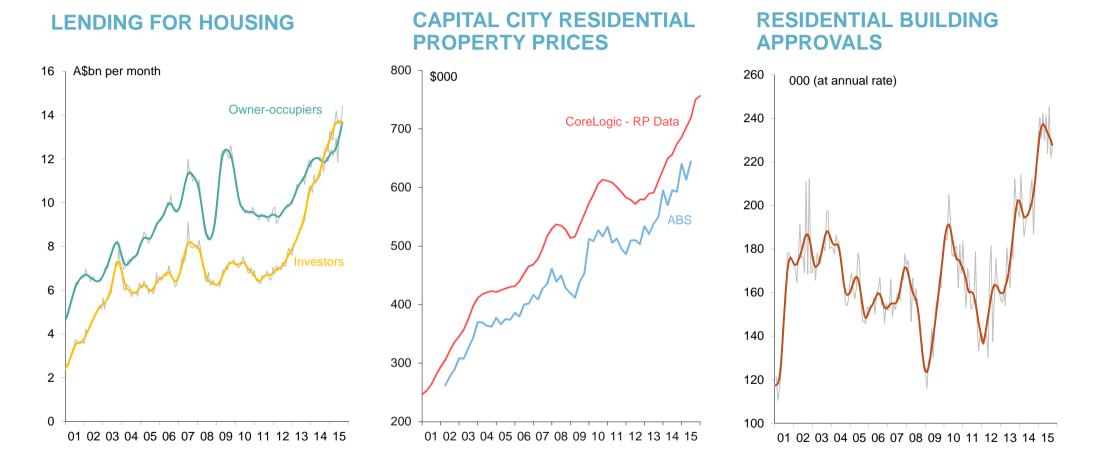


Source: National Australia Bank Monthly Business Survey; author's calculations.

EMPLOYMENT & CAPEX EXPECTATIONS



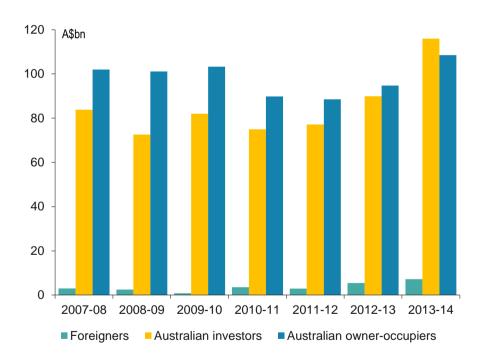
Record-low interest rates stimulated a substantial rise in housing demand, housing prices and (eventually) housing supply – but the effect now appears to have peaked



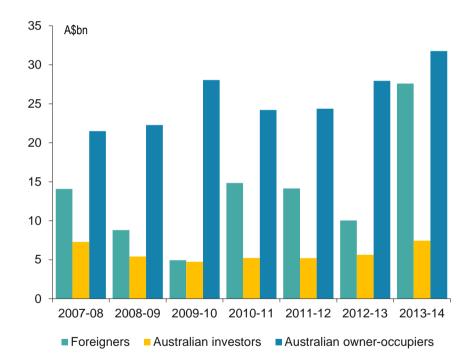
Note: grey lines in first and third charts above show seasonally adjusted data; thicker coloured lines are the ABS 'trend estimates' Sources: ABS; CoreLogic – RP Data.

Foreign investors have had much less influence than Australian investors on prices of established dwellings, but are doing much more to add to the supply of housing

PURCHASES OF / BORROWING FOR PURCHASE OF ESTABLISHED DWELLINGS



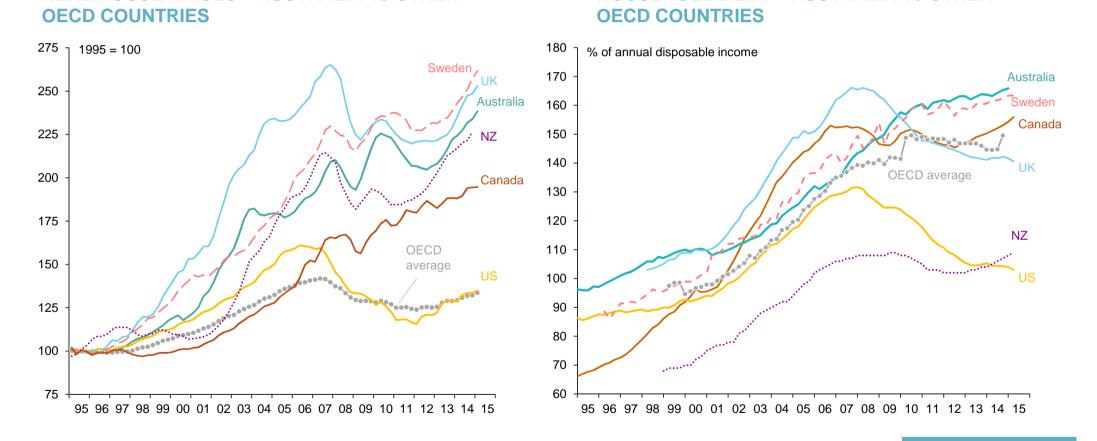
PURCHASES OF / BORROWING FOR PURCHASE OF NEW DWELLINGS



Note: data foreigners is value of purchases approved; data for Australian investors & owner-occupiers is value of loans committed (ie excludes equity component)

Sources: Foreign Investment Review Board, Annual Report; ABS, Housing Finance, Australia (cat. no. 5609.0).

Australia now has relatively high residential property prices (by international standards) and very high levels of household debt



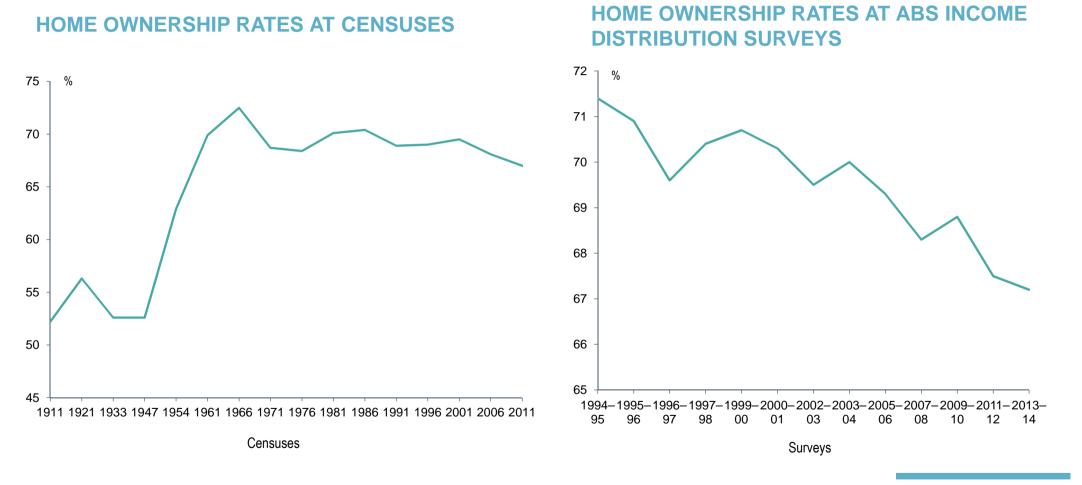
Note: OECD average for household debt to income ratio based on a limited number of countries. Source: International Monetary Fund, Australia: Selected Issues, Country Report No. 15/275 (September 2015), p. 4.

REAL HOUSE PRICES – AUSTRALIA vs OTHER

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HOUSEHOLD DEBT - AUSTRALIA vs OTHER

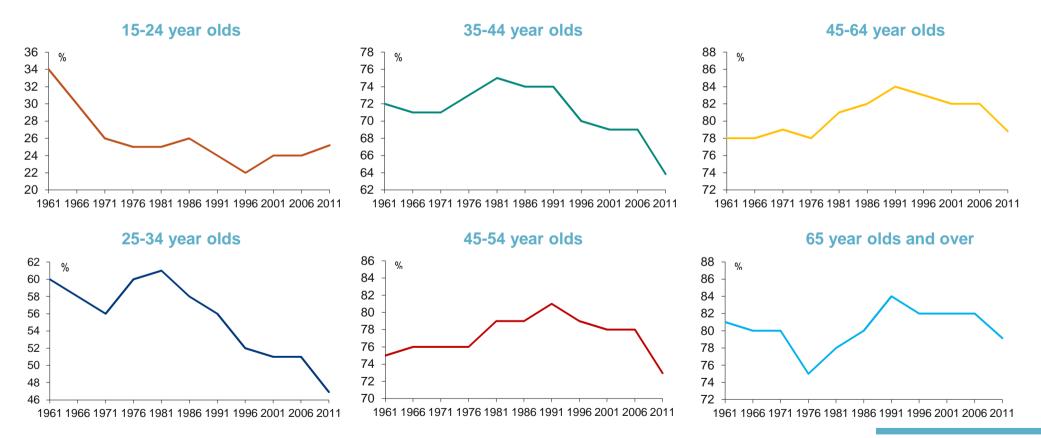
Australia's home ownership rate is now lower than at any time since the 1950s – despite two decades of low interest rates and \$billions on first home buyer assistance



Sources: ABS; Advisory Council for Intergovernment Relations, Australian Housing Policy and Intergovernmental Relations, Discussion Paper No. 14 (1982), Appendix B.

Home ownership rates among households headed by people aged 25-55 have dropped by an average of 9 pc points since 1991

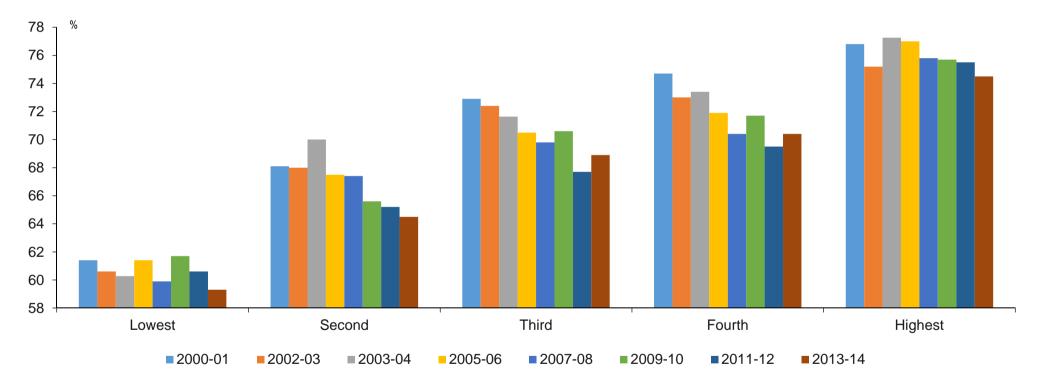
HOME OWNERSHIP RATES AT CENSUSES, BY AGE GROUP OF 'HOUSEHOLD HEAD'



Source: Professor Judith Yates, Submission to the House of Representatives Standing Committee on Economics Inquiry into Home Ownership, June 2015.

Home ownership rates have dropped by $3\frac{1}{2}-4\frac{1}{4}$ pc points among the middle-income households since the turn of the century

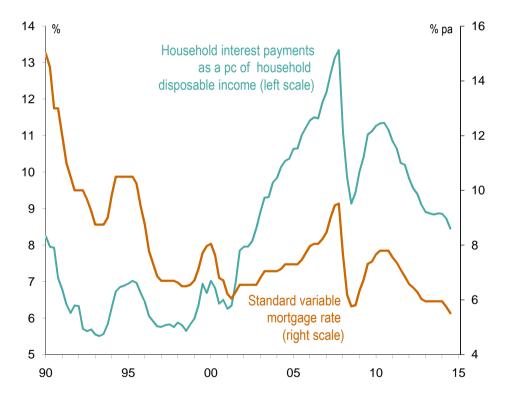
HOME OWNERSHIP RATES BY INCOME QUINTILE, 2000-01 TO 2013-14



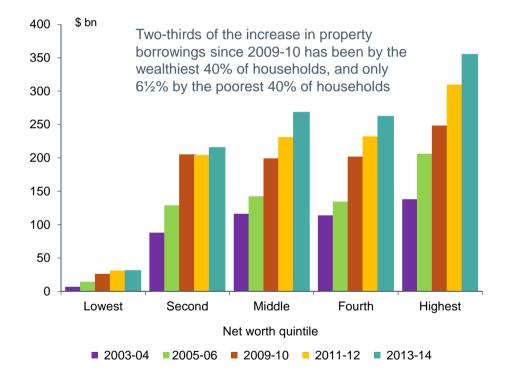
Source: ABS.

At current interest rates, households can fairly readily service their mortgage debts: and unlike the US, most of the increase in borrowing has been by rich households

MORTGAGE INTEREST BURDENS AND MORTGAGE INTEREST RATES



PROPERTY LOANS OUTSTANDING BY HOUSEHOLD NET WORTH QUINTILE

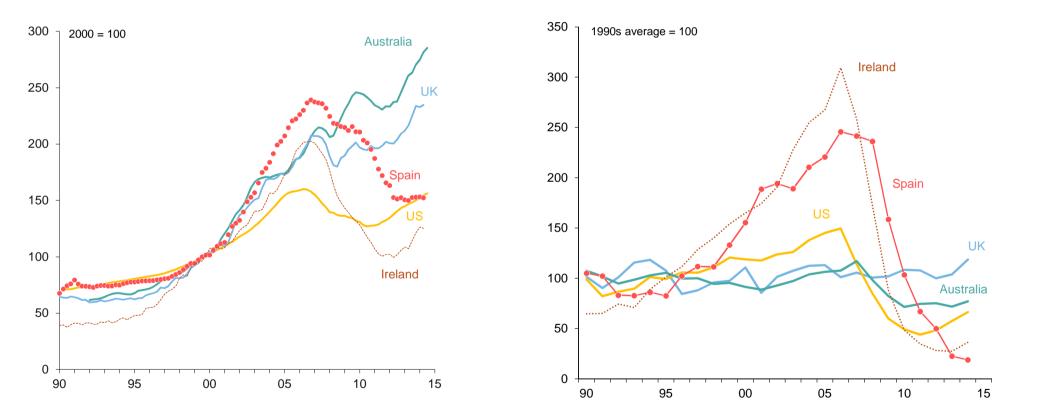


Sources: ABS; RBA; author's calculations.

Overseas experience suggests that housing price 'busts' occur when demand declines abruptly after an extended period of rapid growth in housing supply

HOUSE PRICES - AUSTRALIA AND OTHER SELECTED COUNTRIES

HOUSING COMPLETIONS – AUSTRALIA AND OTHER SELECTED COUNTRIES

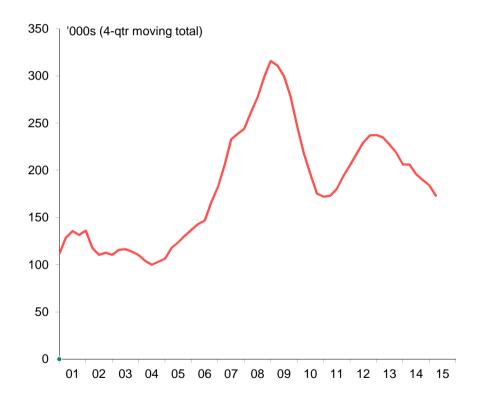


Sources: ABS; US Commerce Department; UK Office for National Statistics; Eurostat; CoreLogic; S&P; Bank for International Settlements;

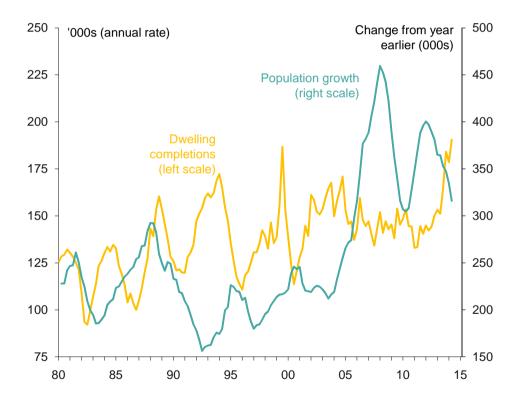
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The supply-demand balance in Australia's housing market is likely to change quite significantly over the next three years

NET IMMIGRATION TO AUSTRALIA



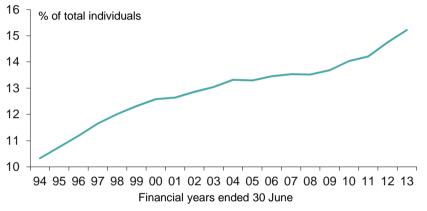
HOUSING COMPLETIONS vs POPULATION GROWTH



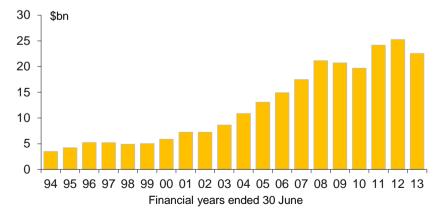
Source: ABS.

Changes to 'negative gearing' or (more likely) the capital gains tax discount could be another potentially 'disruptive' influence

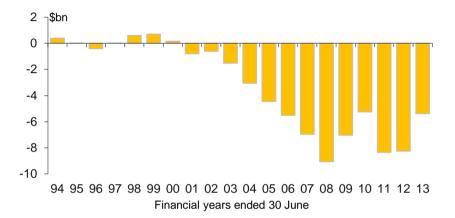
TAXPAYERS WITH RENTAL INCOME



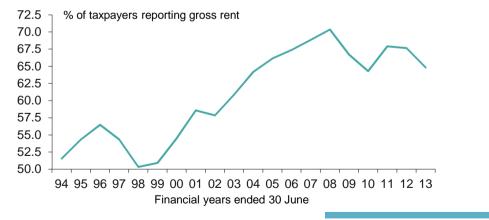
INTEREST PAID ON RENTAL BORROWINGS



NET RENTAL INCOME



LOSS-MAKING RENTAL PROPERTY INVESTORS



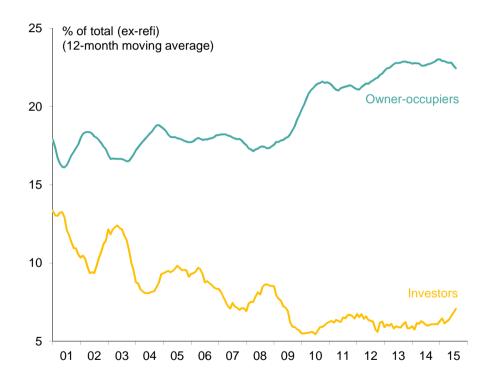
Source: Australian Taxation Office, Taxation Statistics, 2012-13.

Subsidizing property investment borrowing costs through the tax system is a very expensive way of boosting housing supply

FINANCE COMMITMENTS FOR THE PURCHASE OF HOUSING, BY TYPE OF BORROWER



LENDING FOR CONSTRUCTION OR PURCHASE OF NEW HOUSING AS PC OF TOTAL

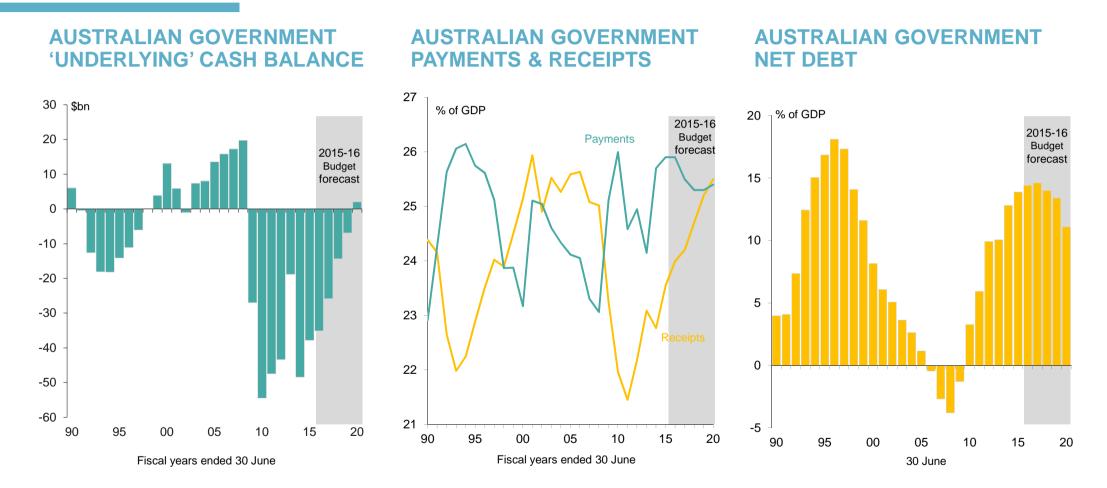


Source: ABS.

Other changes to the tax system may also be on the horizon

- The Turnbull Government appears to be positioning itself to seek a mandate for increasing the rate and/or broadening the base of the GST at next year's federal elections
 - any changes to the GST would require 'compensation' to low-income households, which would have to be funded by the Commonwealth in the first instance, either by cutting specific purpose payments to the States & Territories or out of other Commonwealth revenues
- Ideally changes to the rate or base of the GST would be part of a broader suite of tax reforms
 - including broadening of the income tax base by modifying the current preferential tax treatment of, eg, superannuation, capital gains or fringe benefits (but probably not dividends)
 - some of the revenue gain from which could be used to fund reductions in personal or company income taxes
 - but some will also likely be applied to reducing prospective budget deficits
- Changes to State taxation may also be on the agenda
 - there is growing support (albeit from a low base at the moment) for replacing stamp duties on land transfers with a more broadly-based land tax (similar to what is now being phased in in the ACT)
 - but there is unlikely to be much enthusiasm for reducing the overall tax take from property

Budget forecasts of a return to surplus by 2019-20 are based on unrealistic economic assumptions and a reliance on 'bracket creep'



Summary

- 'Disruption' itself isn't new it's just the sources of disruption that change
- 'Disruptive change' can occur gradually, before reaching a tipping point rather than just 'appearing out of nowhere' – although that doesn't necessarily make disruptive changes easier to predict
- The Australian economy is no less exposed to risks from 'disruptive changes' than any other
 - we're more exposed to potentially disruptive changes emanating from China than any other 'western' economy
 - we can't really expect India (or other 'emerging' economies) to offset downside risks associated with ongoing or sudden changes in the Chinese economy
 - we're less well placed to offset external shocks than we have been over the past two decades
- Potential 'disruptive forces' for the Australian property sector include
 - changes in the balance between the demand for and supply of housing potentially a 'tipping point' in 2-3 years' time
 - long-term changes in housing tenure preferences and capacities
 - changes in federal and state tax systems
 - technological and environmental changes
- Note that many of these changes are 'evolutionary' in their time-span, but could be 'revolutionary' in their impact

For more details...

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This document has been prepared by Saul Eslake on behalf of Corinna Economic Advisory Pty Ltd, ABN 165 668 058 69, whose registered office is located at Level 11, 114 William Street, Melbourne, Victoria 3000 Australia.

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