

THE WORLD TODAY – A GLOBAL MACRO-ECONOMIC PERSPECTIVE

PRESENTATION TO HL MORRISON & CO
INFRASTRUCTURE CONFERENCE 2016

MILLBROOK RESORT, QUEENSTOWN, NEW ZEALAND – 15TH SEPTEMBER 2016

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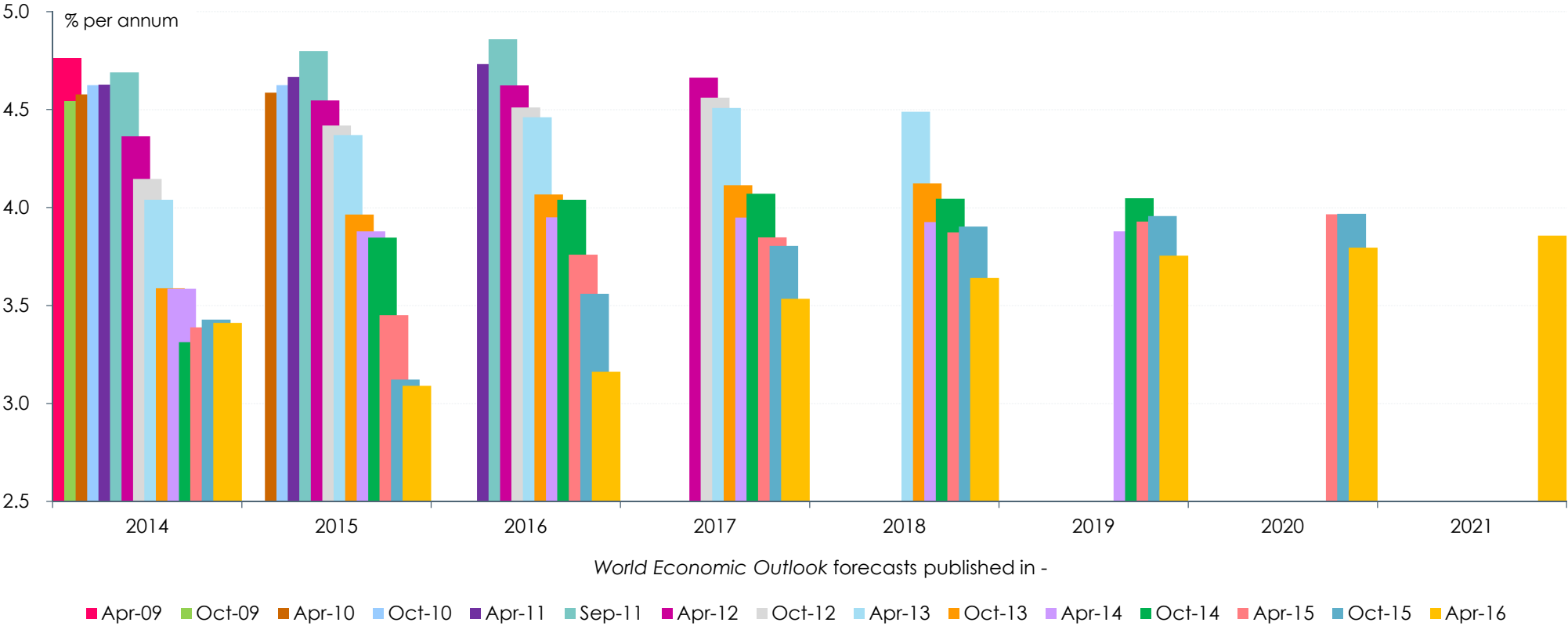
Agenda

1. Actual and potential growth in 'advanced' economies, inflation and monetary policy
2. Economic and financial risks in China
3. Insurgent politics in the Western world

Actual and potential growth in 'advanced' economies, inflation and monetary policy

Forecasts of growth in the world economy continue to be revised lower

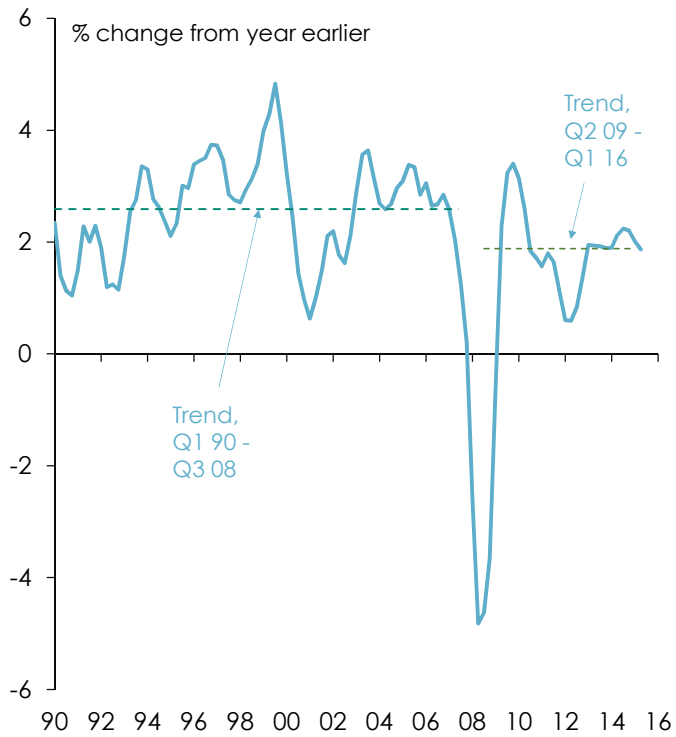
Successive IMF World Economic Outlook forecasts for world economic growth



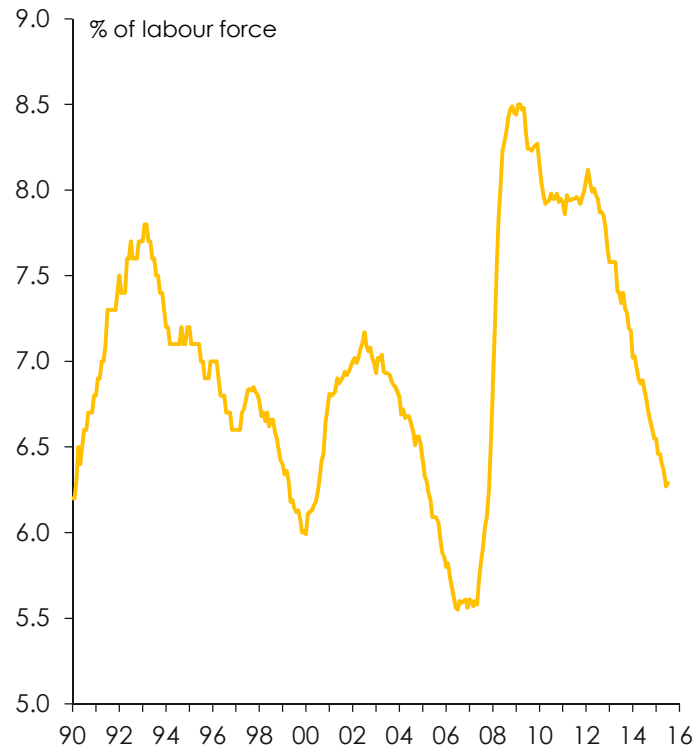
Source: International Monetary Fund, World Economic Outlook, published in April and October each year.

Economic growth across 'advanced' economies has been consistently weaker than expected - yet unemployment has fallen sharply

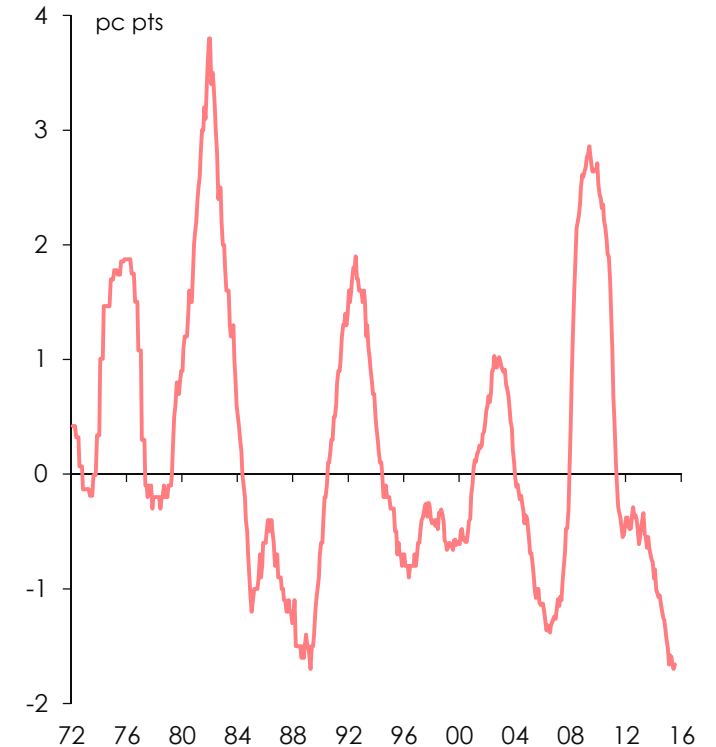
OECD area real GDP growth



OECD area unemployment rate



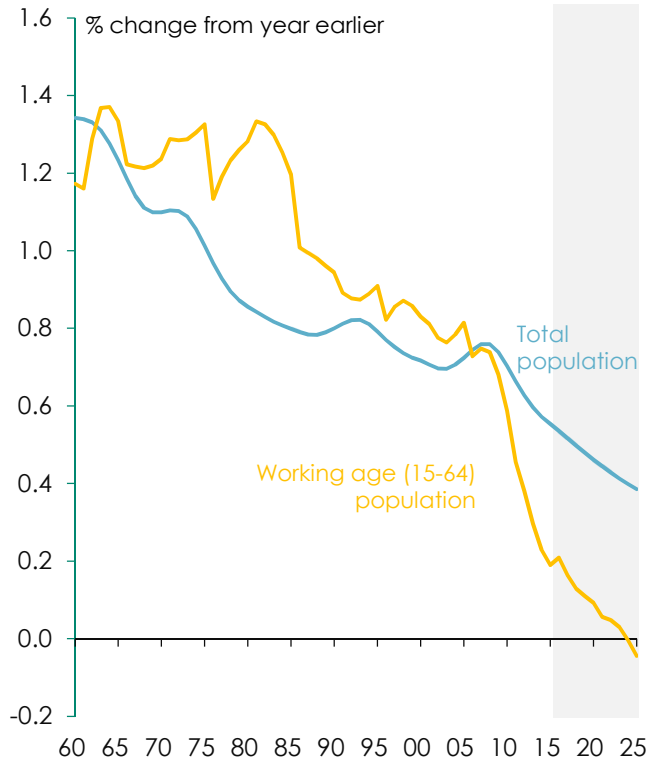
3-year change in OECD unemployment rate



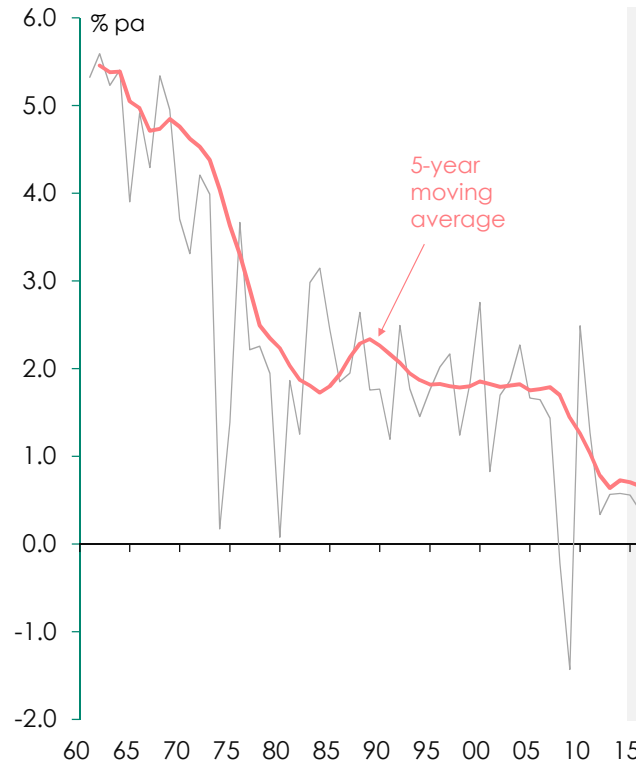
Source: Organization for Economic Co-operation & Development (OECD). The OECD comprises 34 (mostly) 'advanced' economies in North America and Europe, plus Japan, Korea, Australia, New Zealand, Mexico, Chile, Turkey & Israel.

It could be that GDP growth is being understated - or it could be that 'potential growth' has slowed

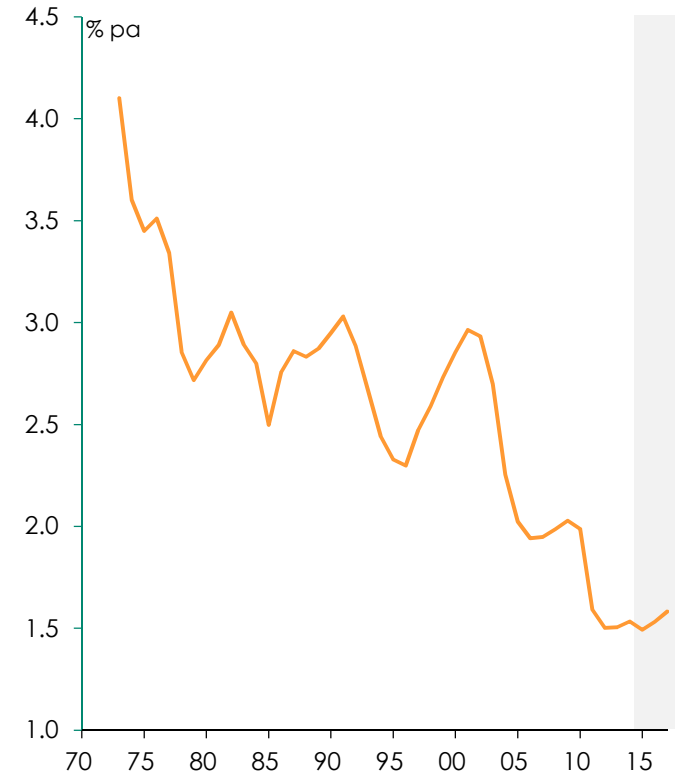
OECD area population growth



OECD area labour productivity growth



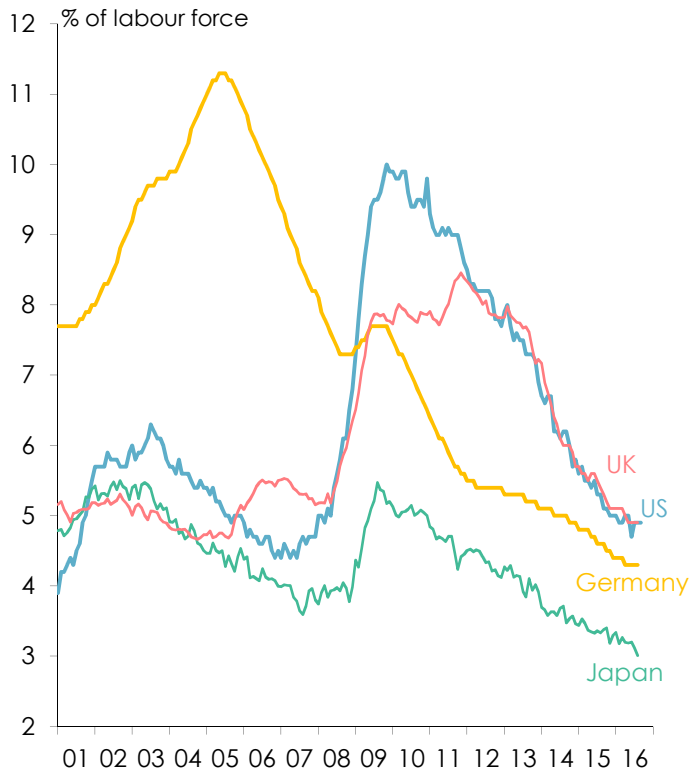
OECD area potential GDP growth



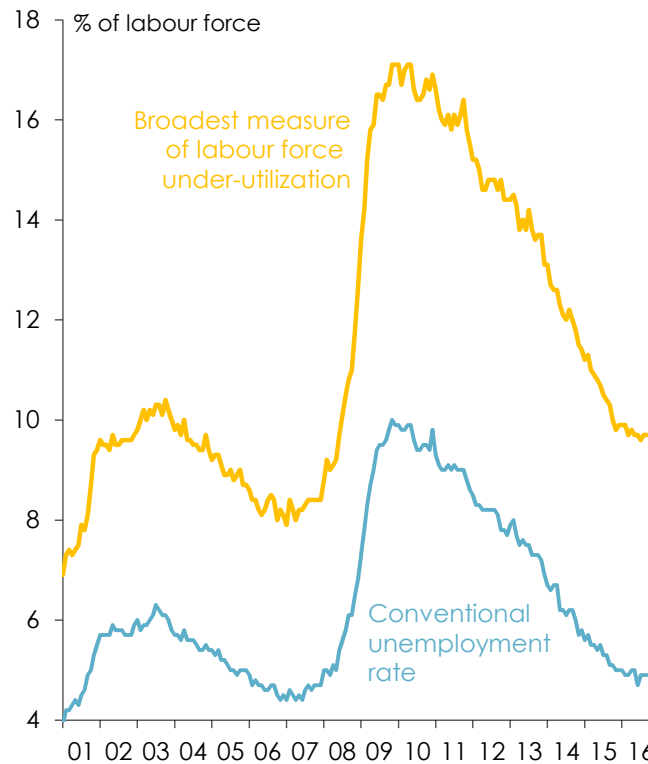
Sources: United Nations Economic & Social Affairs Division, Population Branch, *World Population Prospects – The 2015 Revision*; Organization for Economic Co-operation & Development (OECD), *Economic Outlook* database. 'Potential growth' means growth in the level of real GDP assuming full employment of the available labour force.

The four largest 'advanced' economies are now more or less at 'full employment' ...

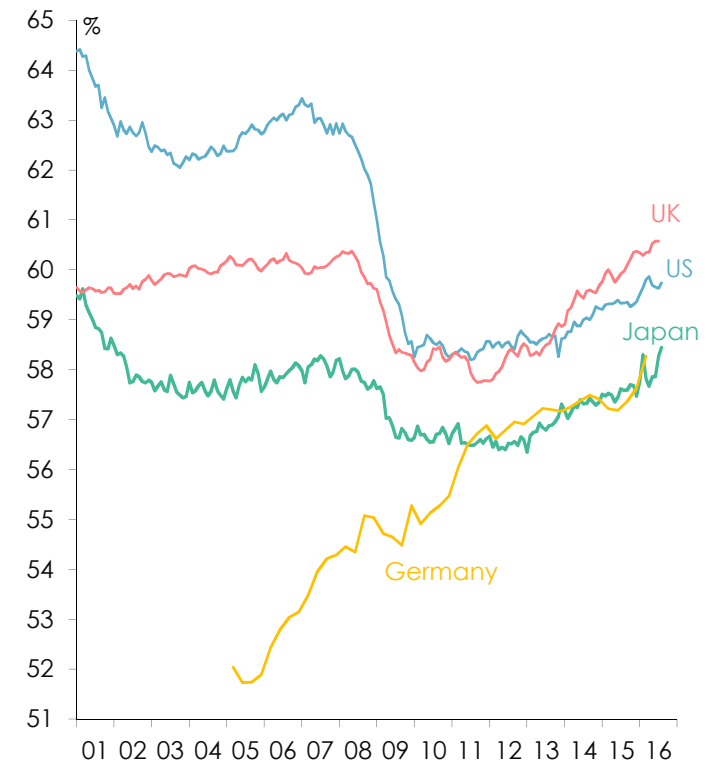
Four largest 'advanced' economies - unemployment



Broader measures of US 'under-employment'



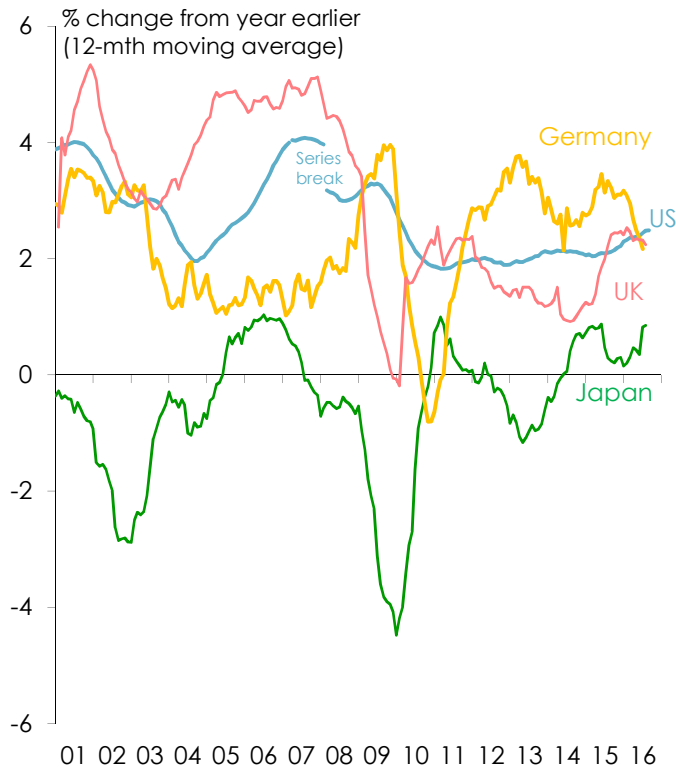
Employment-population ratios



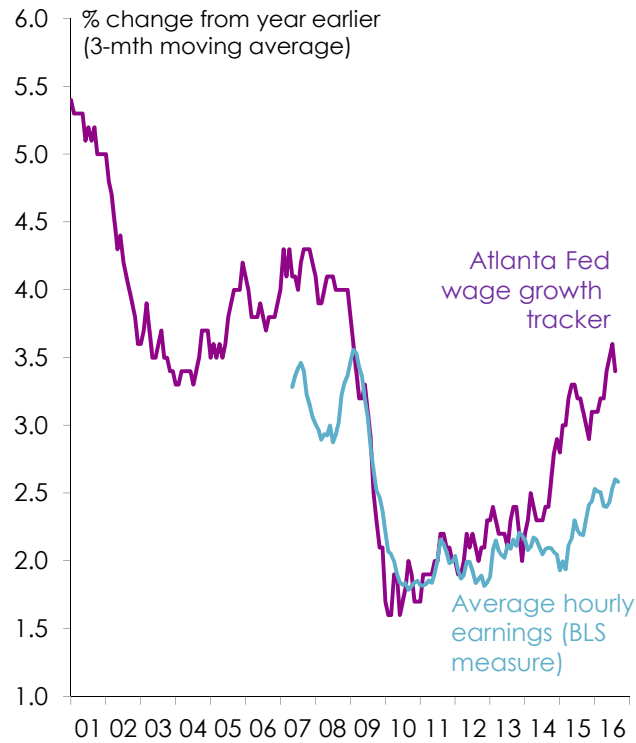
Sources: US Bureau of Labor Statistics; Japan Labour Ministry; Bundesagentur für Arbeit; UK Office of National Statistics; Thomson Reuters Datastream.

Inflation looks to have passed its low point in each of the four largest 'advanced' economies

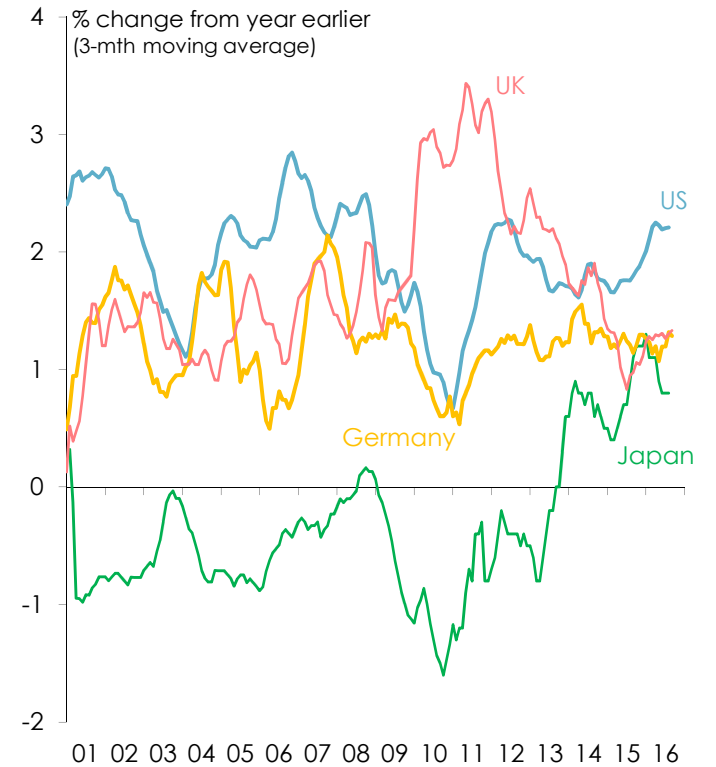
Wage inflation – four largest 'advanced' economies



US wage inflation – alternative measures



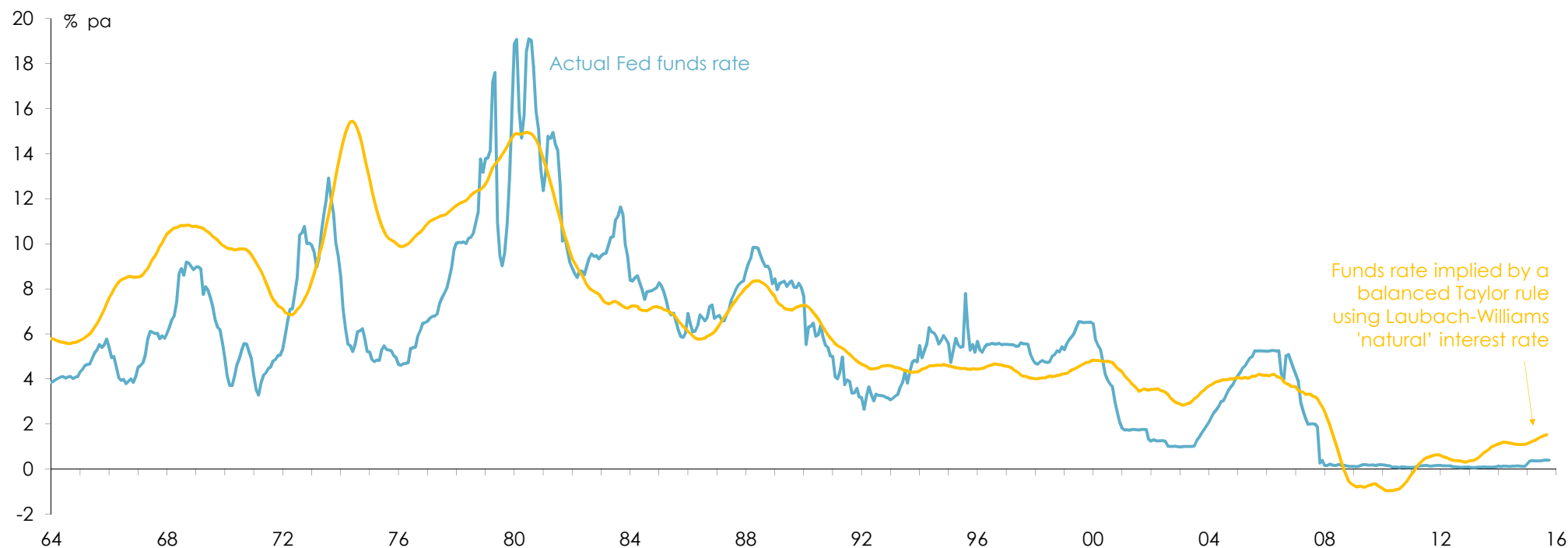
'Core' CPI inflation – four largest 'advanced' economies



Note: The Atlanta Fed wage growth tracker measures the increase in the hourly earnings of identified individuals over 12-month intervals. It excludes those with annual earnings exceeding US\$150K, and hourly earnings less than US\$2.13. 'Core' inflation figures for Japan exclude effects of GST increase in April 2014. Sources: US Bureau of Labor Statistics; Federal Reserve Bank of Atlanta; Japan Labour Ministry; Statistics Japan and Bank of Japan; Statistisches Bundesamt; UK Office of National Statistics; Thomson Reuters Datastream.

The US Fed funds rate is now well below where it 'should be' according to a widely-accepted policy 'rule'

US Fed funds rate vs level implied by a 'Taylor rule'

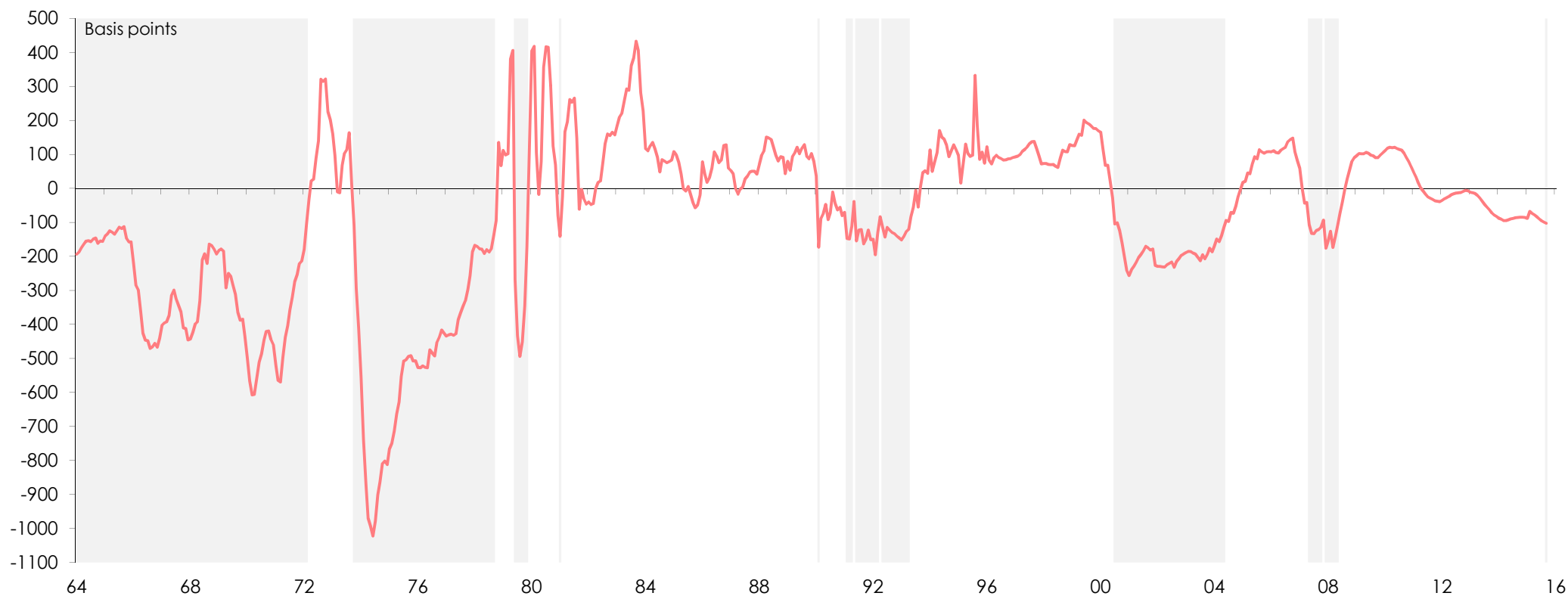


'Taylor rule' rate is $r = r^* + p + 0.5 \times (p - 2) + 0.5 \times (5 - u)$ where r^* = 'the real short-term interest rate consistent with the economy operating at its full potential once transitory shocks to aggregate supply or demand have abated', p = annual rate of 'core' inflation as measured by PCE deflator excluding food and energy, and u = unemployment rate (both expressed as 12-month moving averages)

Sources: John Taylor, 'Discretion versus Policy Rules in Practice', *Carnegie-Rochester Conference Series on Public Policy* Vol. 39 (December 1993); Thomas Laubach and John C Williams, 'Measuring the Natural Rate of Interest Redux', Federal Reserve Bank of San Francisco Working Paper 2015-16 (October 2015) and [updated dataset](#); Janet Yellen, 'The Federal Reserve's Monetary Policy Toolkit: Past, Present and Future', Speech to Federal Reserve Bank of Kansas City Jackson Hole conference (August 2016); US Bureau of Economic Analysis; US Bureau of Labor Statistics; US Federal Reserve Board.

Whenever the funds rate has been more than 100bp below the level implied by this 'rule' for any length of time ...

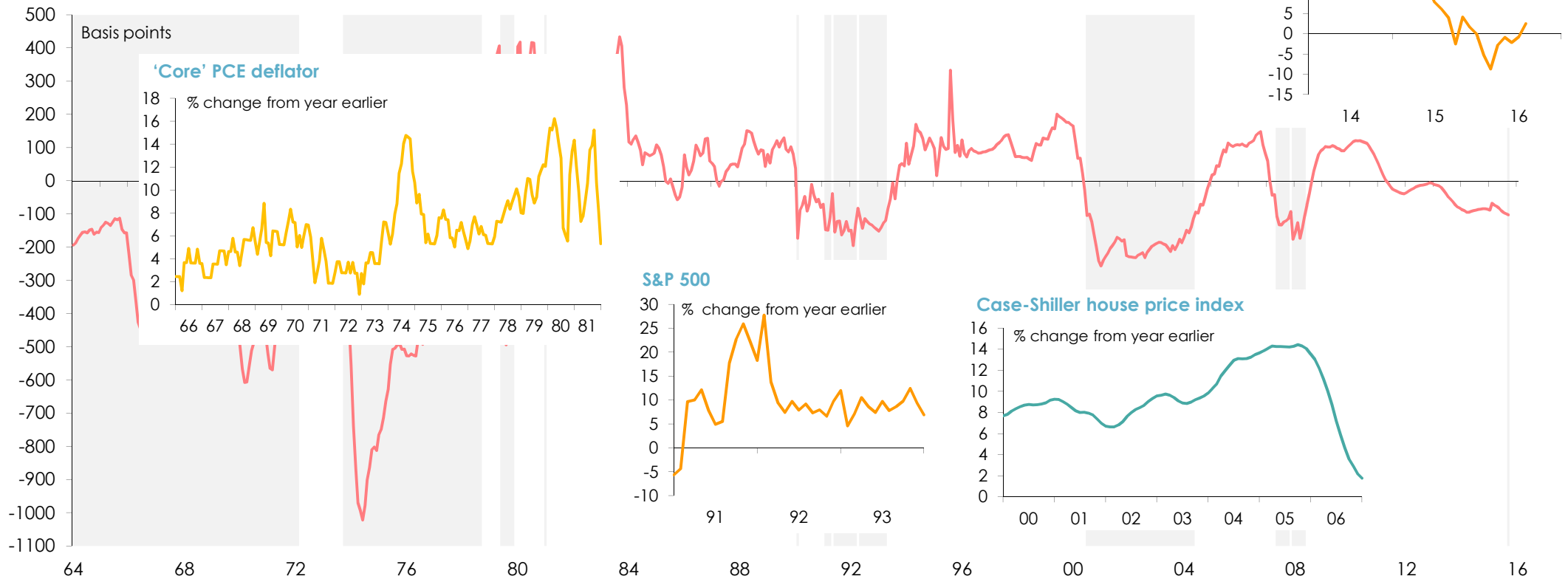
Deviation of the Fed funds rate from rate implied by 'Taylor rule'



Note: shaded areas denote months in which the Fed funds rate has been below the level implied by this version of the 'Taylor rule' by more than 100 basis points.
Sources: As for preceding chart.

... the result has always been inflation – of something

Deviation of the Fed funds rate from rate implied by 'Taylor rule'

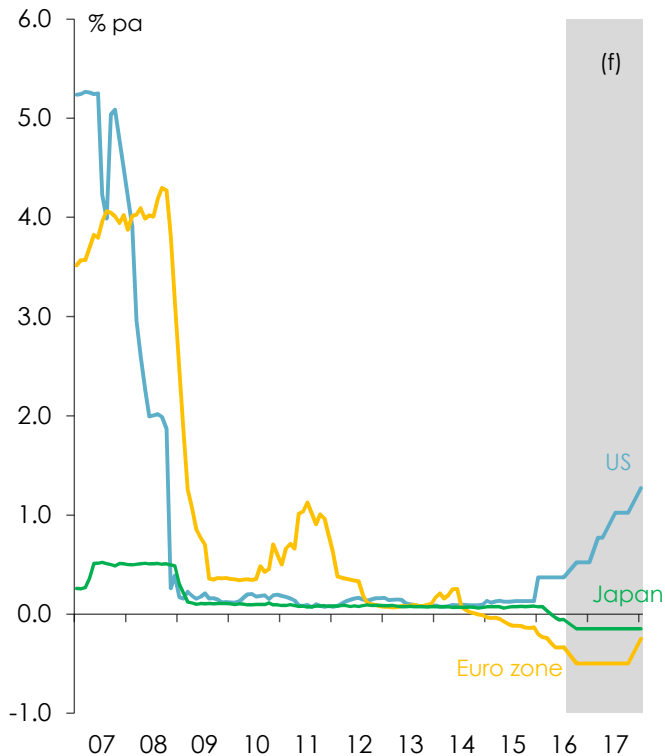


Note: shaded areas denote months in which the Fed funds rate has been below the level implied by this version of the 'Taylor rule' by more than 100 basis points.

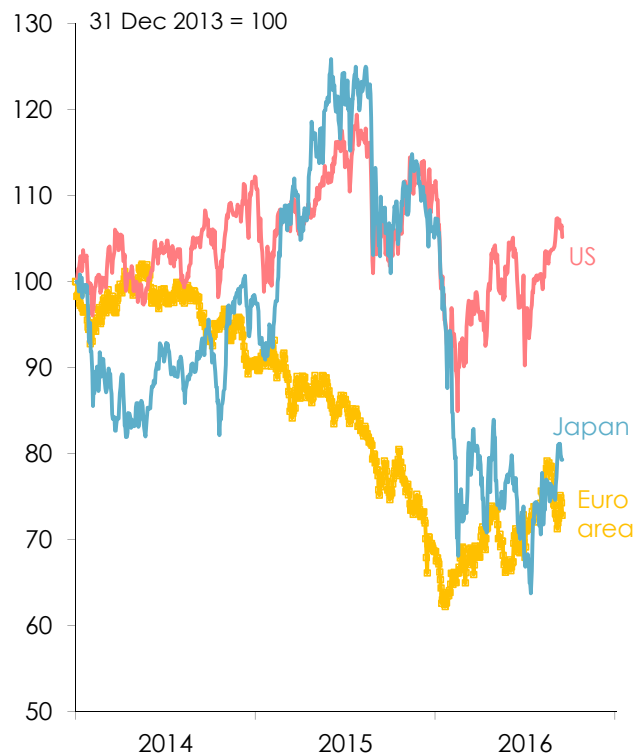
Sources: As for preceding chart; US Bureau of Economic Analysis; S&P; Thomson Reuters Datastream.

Interest rates need to go up in the US – and negative rates in Europe and Japan haven't turned out to be such a good idea

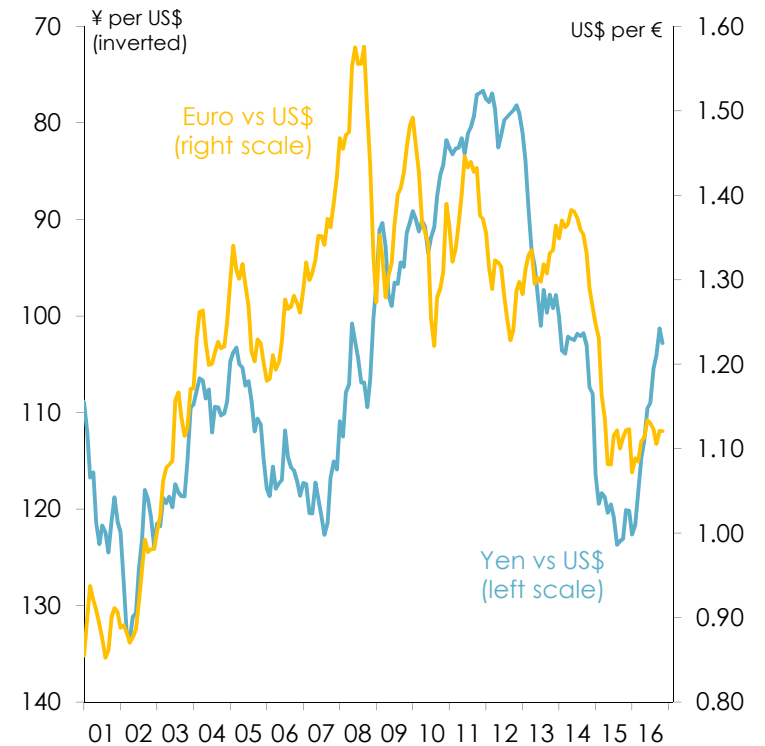
US, Euro area & Japan policy interest rates



Bank share prices



Euro and Japanese yen vs US dollar

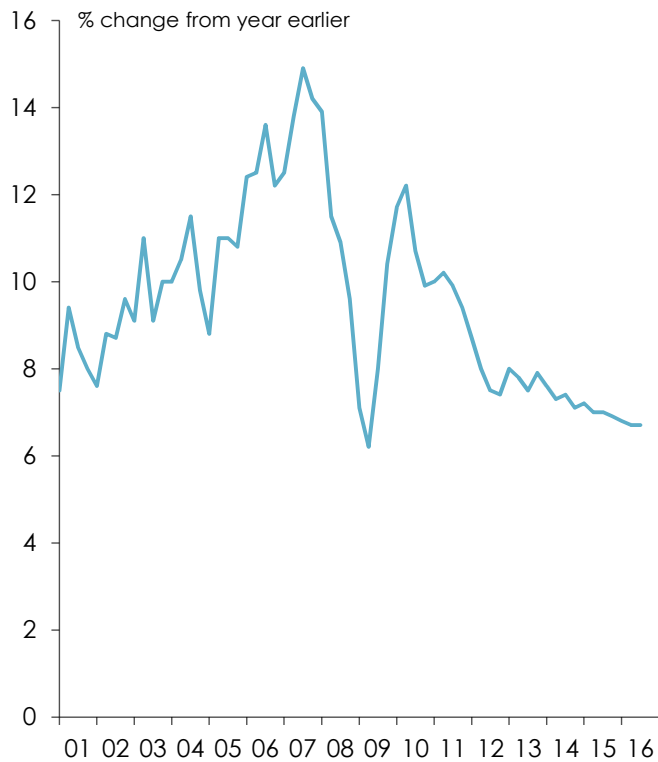


Sources: US Federal Reserve; European Central Bank; Bank of Japan; Thomson Reuters Datastream.

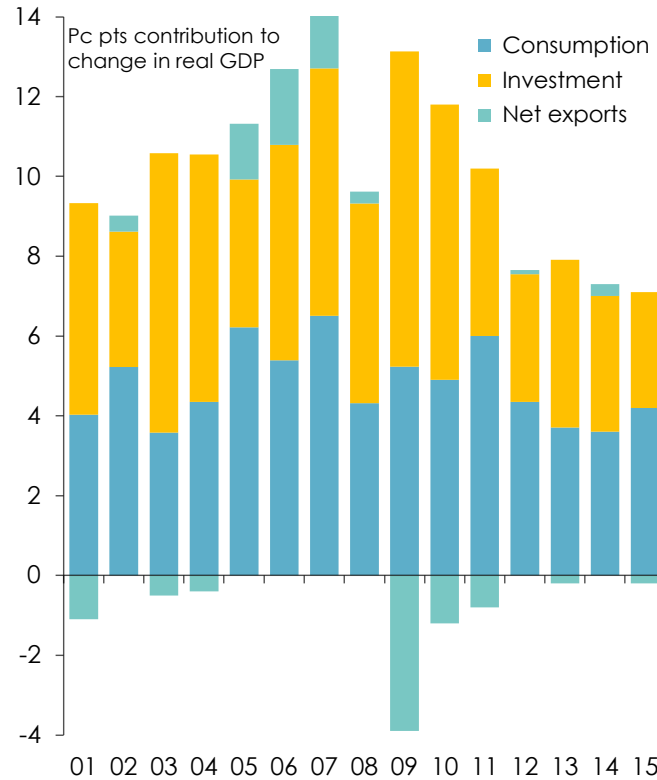
Economic and financial risks in China

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

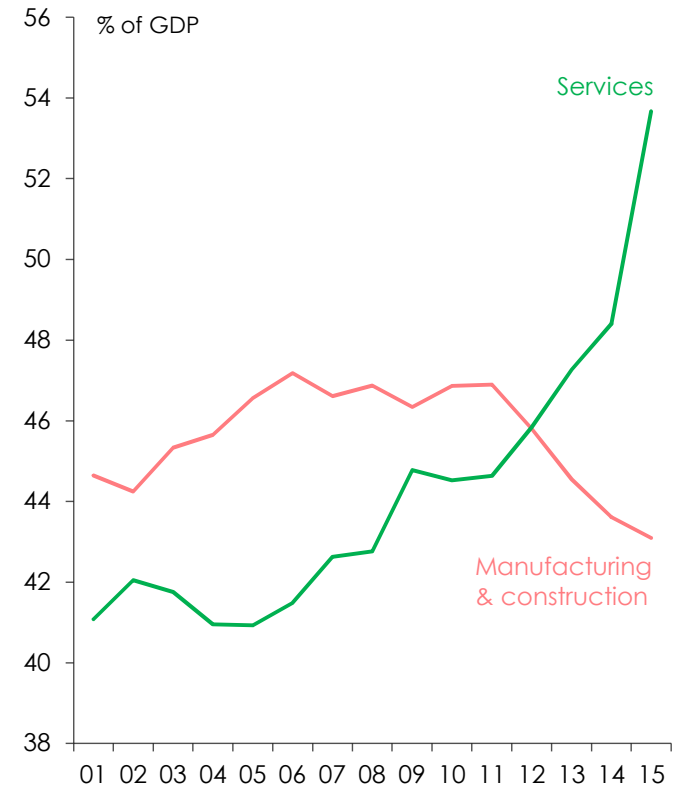
China real GDP



Contributions to annual growth in GDP



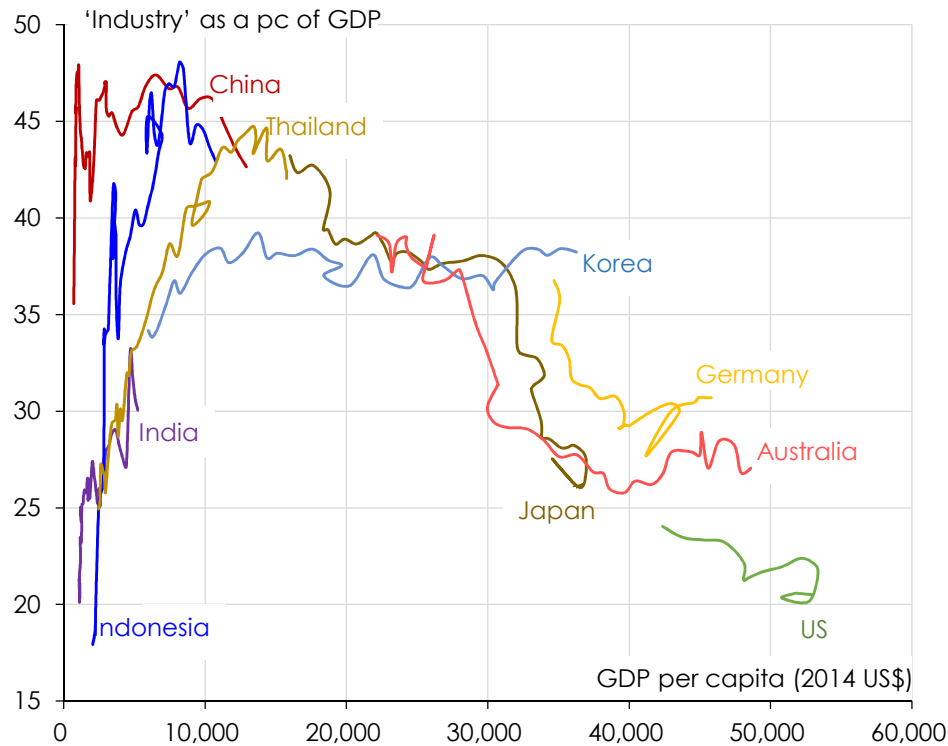
Major sector shares of GDP



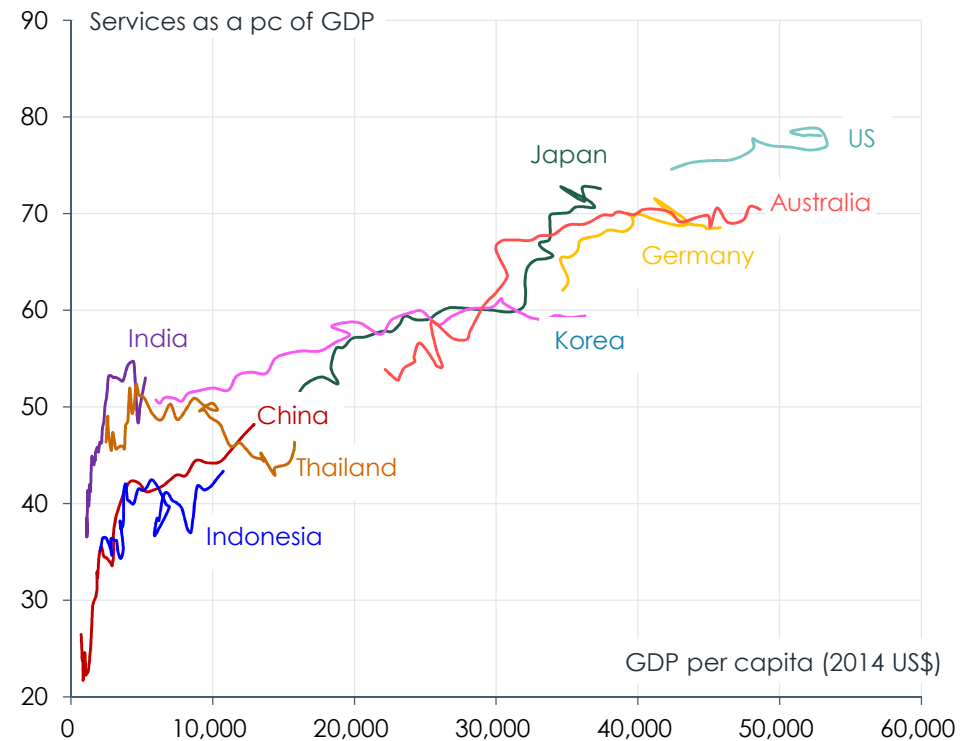
Source: China National Bureau of Statistics (NBS).

In this respect China is simply following the same path as other economies have done before it

'Industry' as a pc of GDP vs level of per capita GDP, 1969-2014



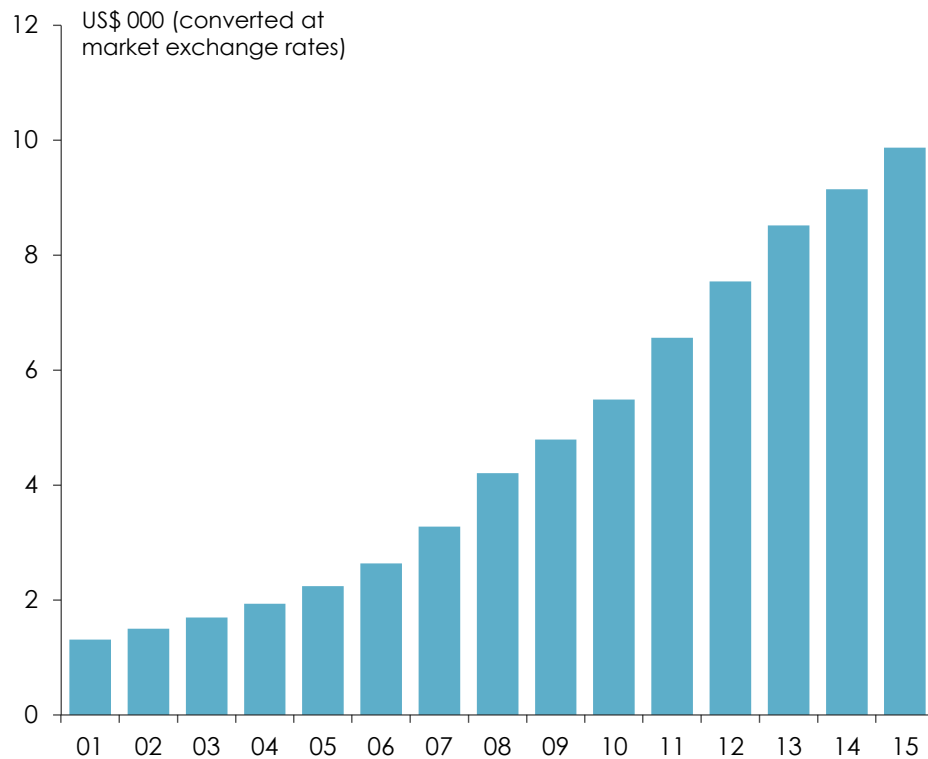
Services as a pc of GDP vs level of per capita GDP, 1969-2014



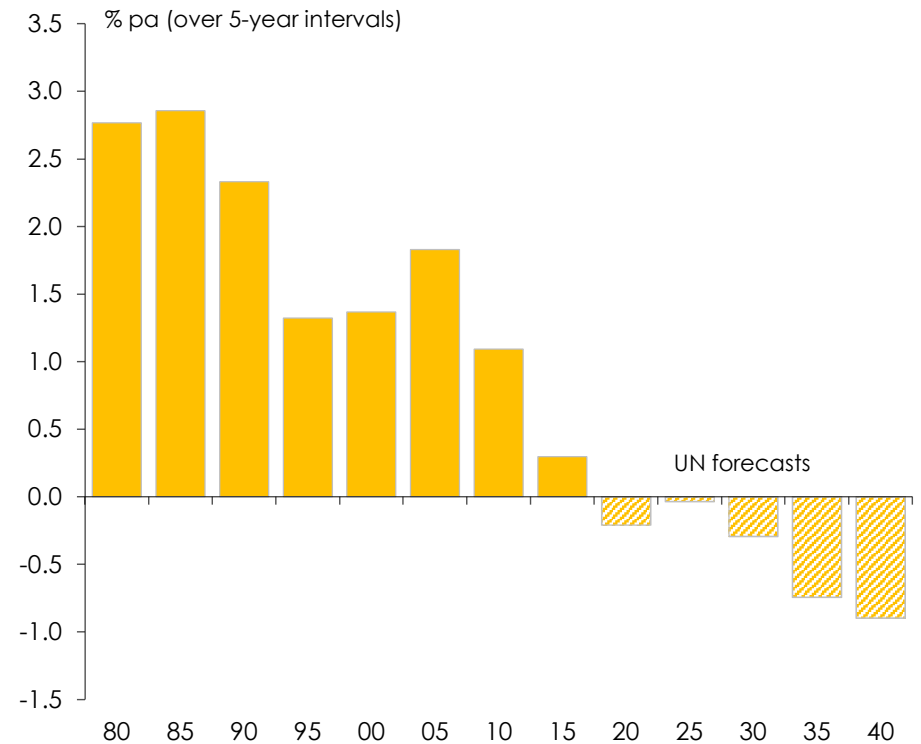
Note: 'Industry' includes mining, utilities and construction, as well as manufacturing. Data for industry shares of US GDP only available (from same source) for 1997-2014, and for Germany from 1991-2014. Sources: The World Bank; The Conference Board Total Economy Database May 2015.

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

Average wages of Chinese urban workers



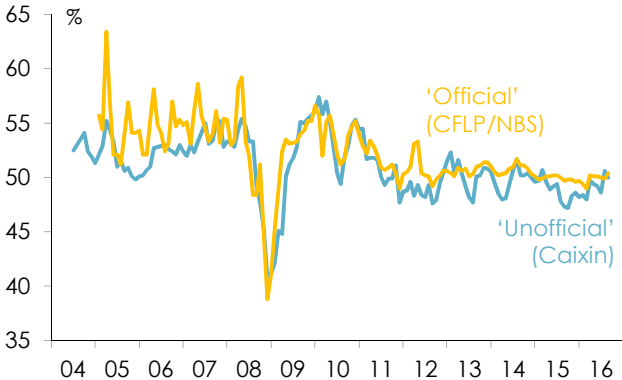
Growth rate of China's working-age population



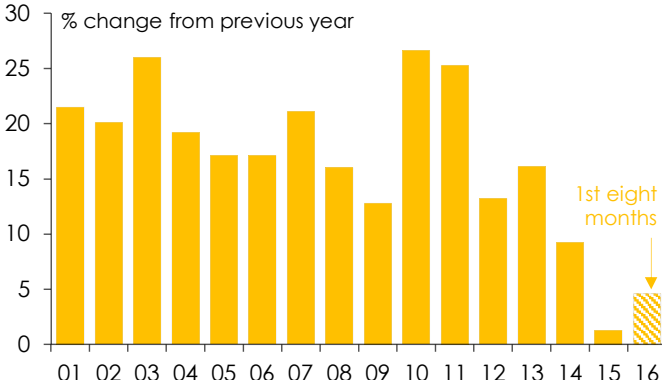
Sources: China National Bureau of Statistics; United Nations Economic & Social Affairs Division, *Population Prospects*.

Chinese authorities have succeeded in putting a floor under key areas of the economy since late last year

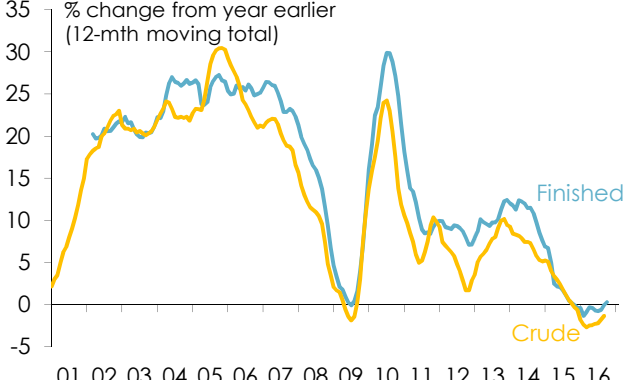
Manufacturing PMIs



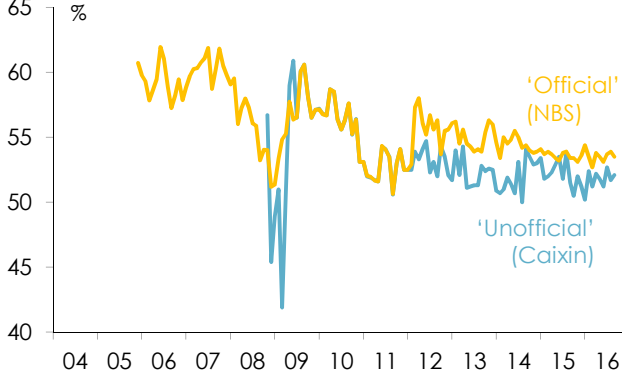
Floor space under construction



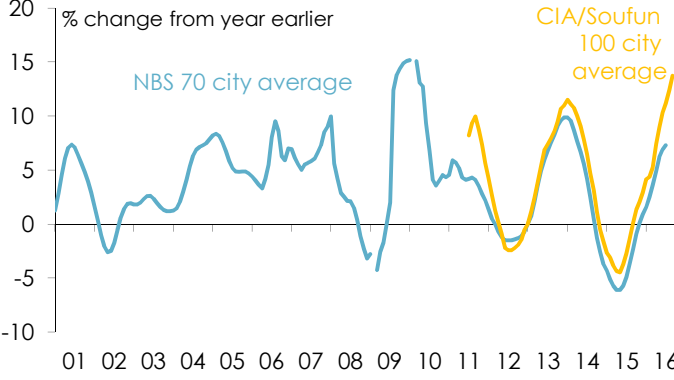
Steel production



Non-manufacturing PMIs



Urban property prices



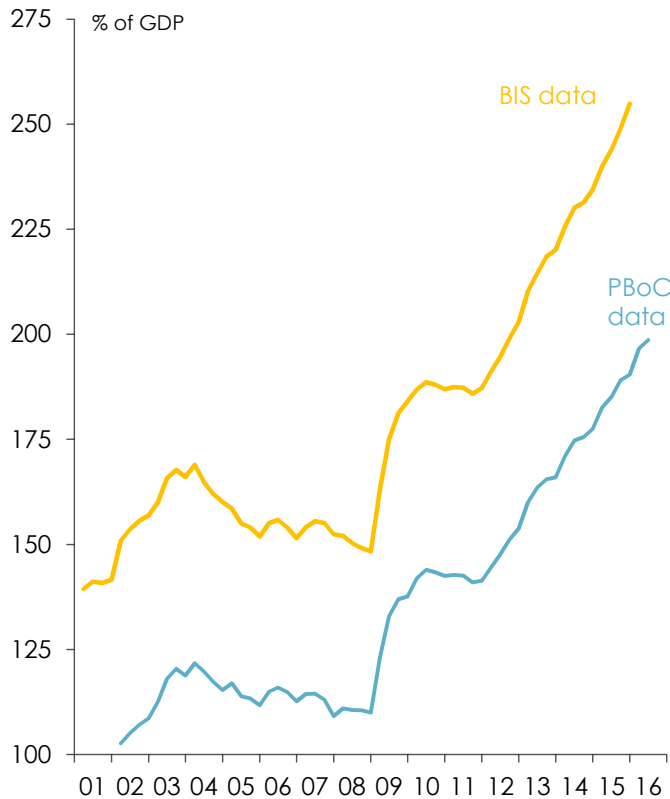
Cement production



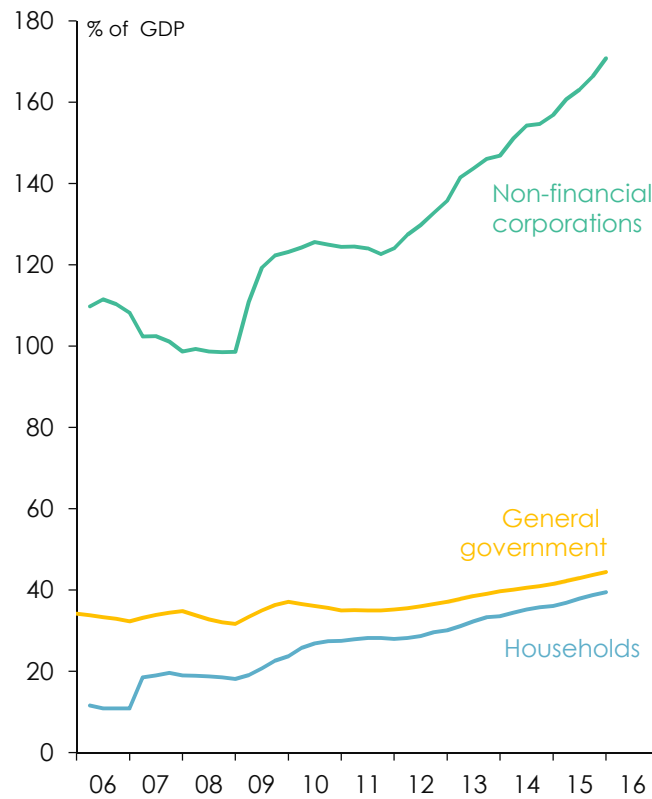
Sources: China National Bureau of Statistics; Markit Economics; China Index Academy (CIA) & Soufun; Thomson Reuters Datastream.

China now carries a lot of debt – most of which is owed by the corporate sector (especially SOEs) rather than households or government

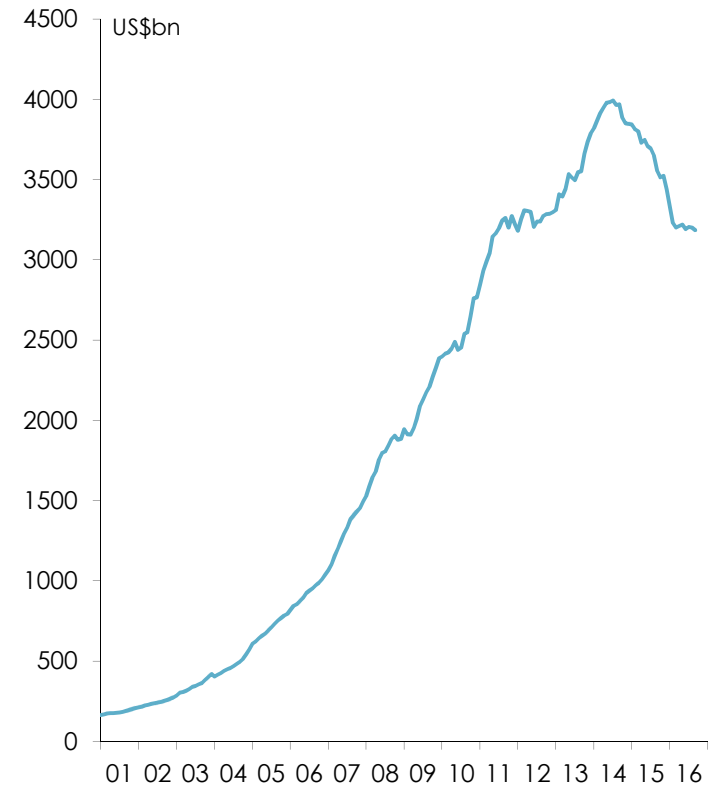
China debt outstanding as a proportion of GDP



Chinese debt outstanding by major sector



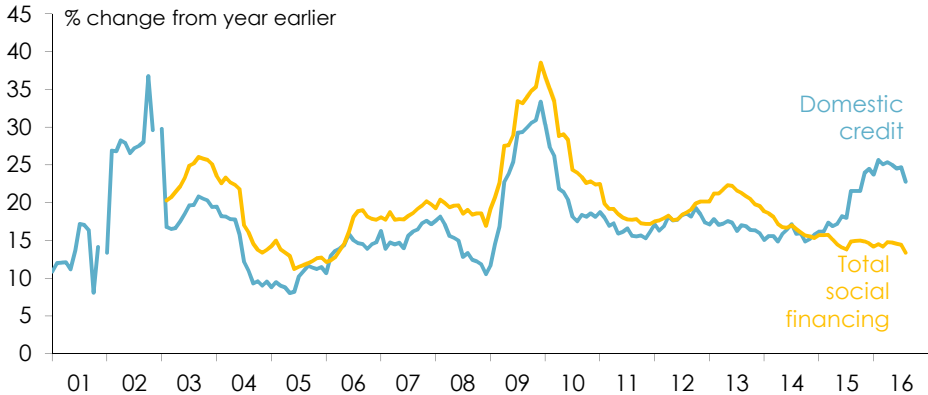
PBoC foreign exchange reserves



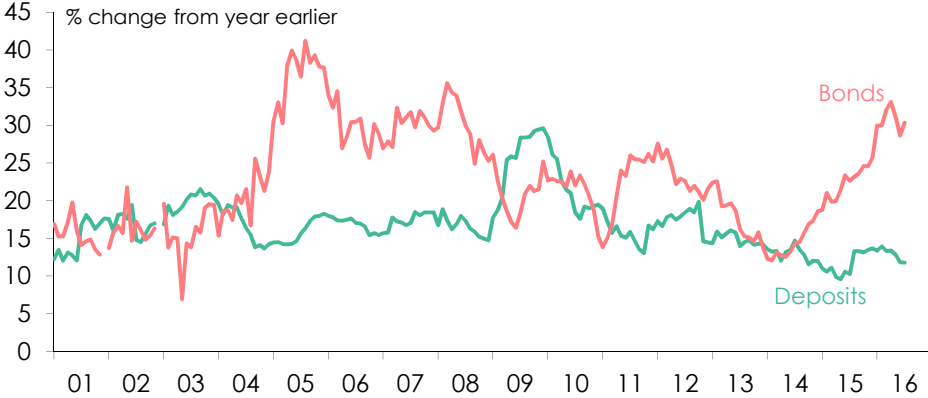
Sources: People's Bank of China (PBoC); Bank for International Settlements (BIS).

The most recent round of Chinese monetary stimulus has been financed in a way which has increased the risks in the financial system

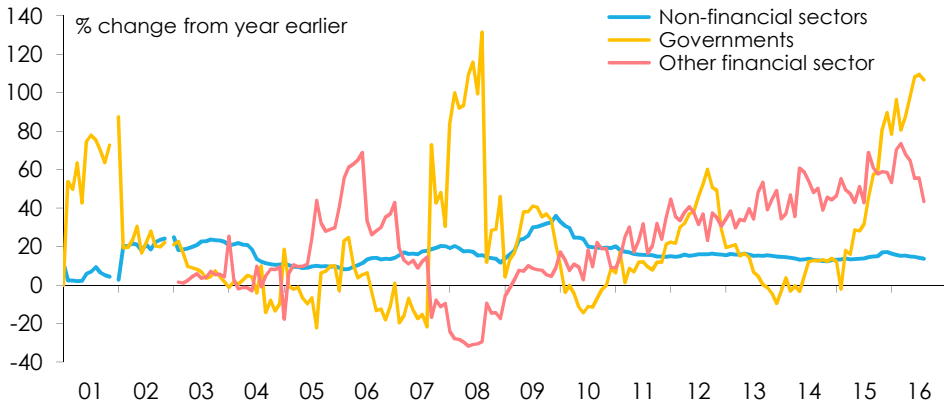
Credit growth - total



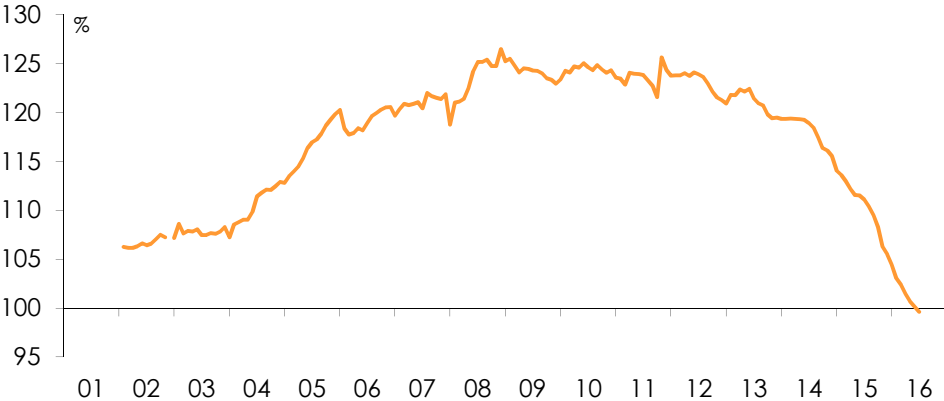
Banking system liabilities



Credit growth - by sector



Banking system deposits-to-loans ratio



Sources: People's Bank of China; Thomson Reuters Datastream.

Insurgent politics in the 'western' world

Will America switch
from 'Yes we can'... ... to 'I alone can' ?

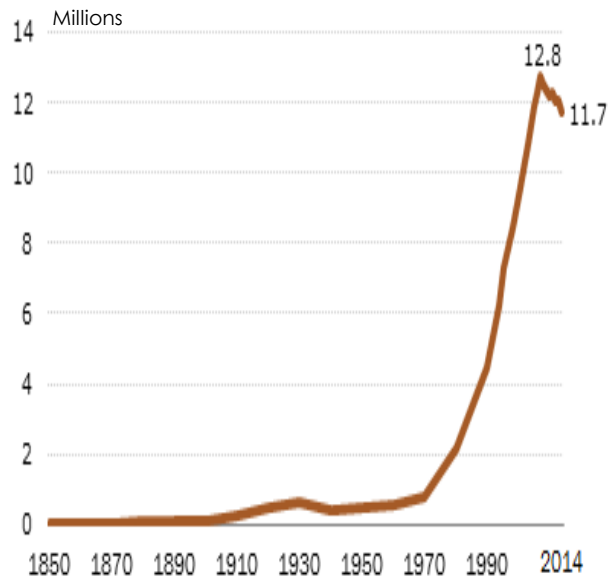


What to expect from a Trump Administration – in Donald Trump’s own words

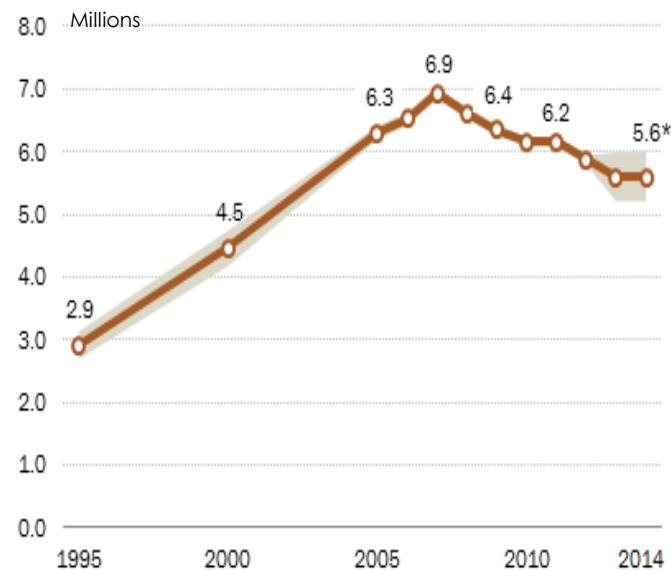
- ❑ “Nobody knows the system better than me, which is why I alone can fix it”
- ❑ “We must immediately suspend immigration from any nation that has been compromised by terrorism until such time as proven vetting mechanisms have been put in place”
- ❑ “We are going to build a great border wall to stop illegal immigration, to stop the gangs and the violence, and to stop the drugs from pouring into our communities”

Actually, more people have been moving from the US to Mexico than the other way round since the financial crisis

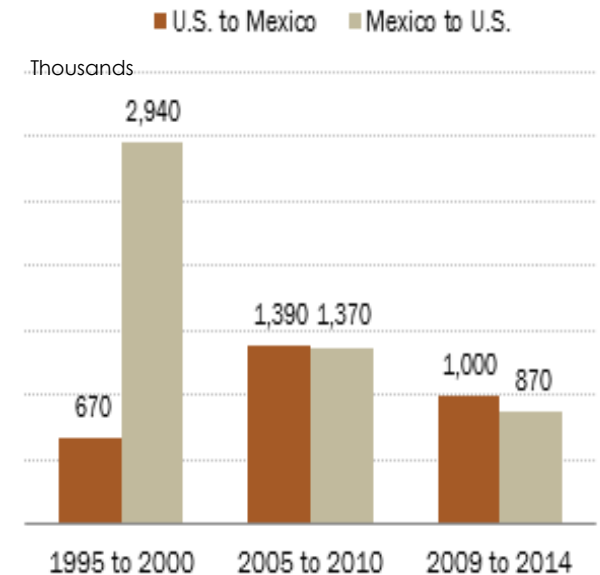
Mexican immigrant population in the US



Mexican unauthorized population in the US



Immigration between the US and Mexico



“I will present the facts plainly and honestly ... We will honour the American people with the truth, and nothing else”

— Donald Trump, acceptance speech, Republican National Convention, Cleveland Ohio, 21st July 2016

Source: Ana Gonzalez-Barrera, ['More Mexicans Leaving than Coming to the US'](#), Pew Research Center, 19th November 2015

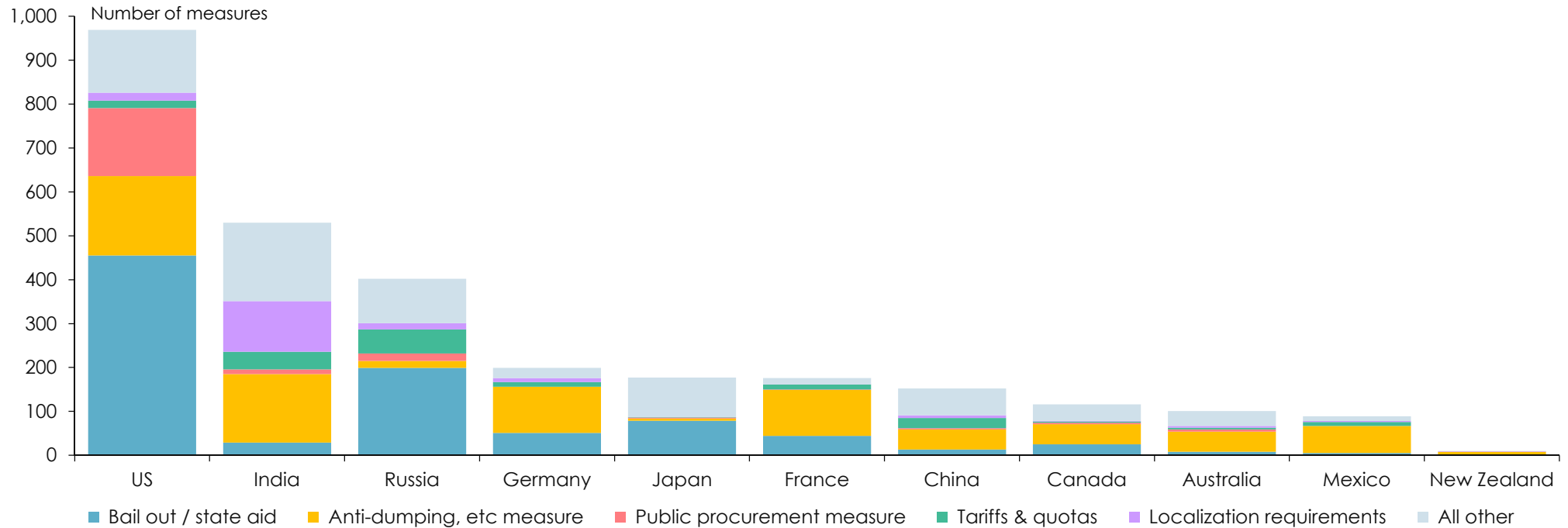
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- ❑ “Nobody knows the system better than me, which is why I alone can fix it”
- ❑ “We must immediately suspend immigration from any nation that has been compromised by terrorism until such time as proven vetting mechanisms have been put in place”
- ❑ “We are going to build a great border wall to stop illegal immigration, to stop the gangs and the violence, and to stop the drugs from pouring into our communities”
- ❑ “I have made billions of dollars in business making deals – now I’m going to make our country rich again. I am going to turn our bad trade agreements into great ones ... I will make individual deals with individual countries ... We are going to enforce all trade violations, including through the use of taxes and tariffs, against any country that cheats ... Our horrible trade agreements with China and many others, will be totally renegotiated. That includes renegotiating NAFTA to get a much better deal for America – and we’ll walk away if we don’t get the deal that we want”

Actually, the US has imposed more trade-restricting measures than any other country since the financial crisis

Anti-trade measures introduced since 2008 – selected countries



“I will present the facts plainly and honestly ... We will honour the American people with the truth, and nothing else”

— Donald Trump, acceptance speech, Republican National Convention, Cleveland Ohio, 21st July 2016

Source: Global Trade Alert database.

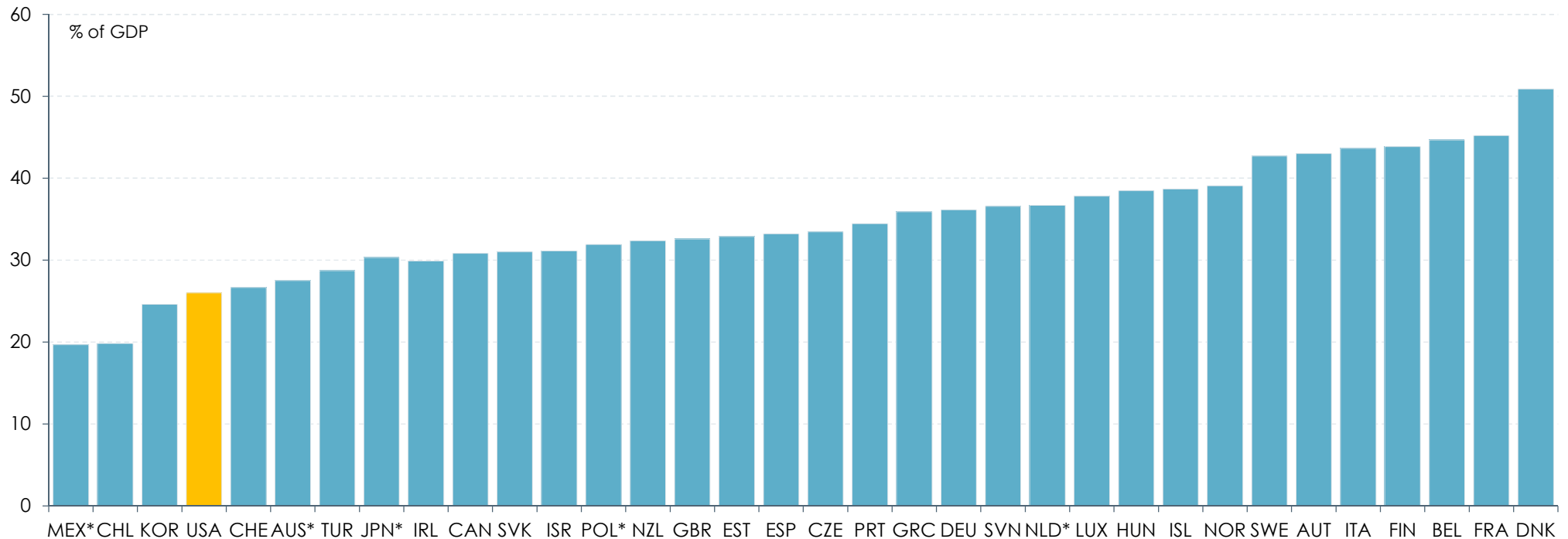
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- ❑ “America is one of the highest-taxed nations in the world ... I have proposed the largest tax reduction of any candidate who has declared for the presidential race this year ... Middle-income Americans will experience profound relief, and taxes will be simplified for everyone”

Actually, the US is not 'one of the highest-taxed nations in the world'

Taxation as a pc of GDP – OECD member countries, 2014



“I will present the facts plainly and honestly ... We will honour the American people with the truth, and nothing else”

— Donald Trump, acceptance speech, Republican National Convention, Cleveland Ohio, 21st July 2016

Note: * Data is for 2013. Source: OECD, <https://data.oecd.org/tax/tax-revenue.htm>

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What to expect from a Trump Administration – in Donald Trump’s own words

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- ❑ “When I am President ... with these new economic policies, trillions of dollars will start flowing into our country ... We will build the roads, highways, bridges, tunnels, airports, and the railways of tomorrow. This, in turn, will create millions more jobs”

What might a Trump presidency mean for the rest of the world

❑ A shock to global financial markets

- financial markets are assuming that Hillary Clinton will win – just as they assumed that Britain would vote to stay in the EU
- a different outcome could likewise produce sharp movements on financial markets (after all, there's more at stake)

❑ An abrupt decline in business confidence – in the US and elsewhere

- notwithstanding US business' traditional alignment with the Republican Party, most American business leaders don't want a Trump Presidency – any more than they would have wanted Bernie Sanders in the White House

❑ Possibly, a large fall in the US dollar

- foreigners have over US\$30 trillion (170% of US annual GDP) invested in the US
- if foreign investors seek to reduce their exposures to the US, the US\$ could fall significantly
- in such circumstances, freely-floating currencies (including the A\$ and NZ\$) could rise sharply against the US\$
- which could well prompt the RBA & RBNZ into further reductions in interest rates even though there is little justification for them on domestic policy grounds

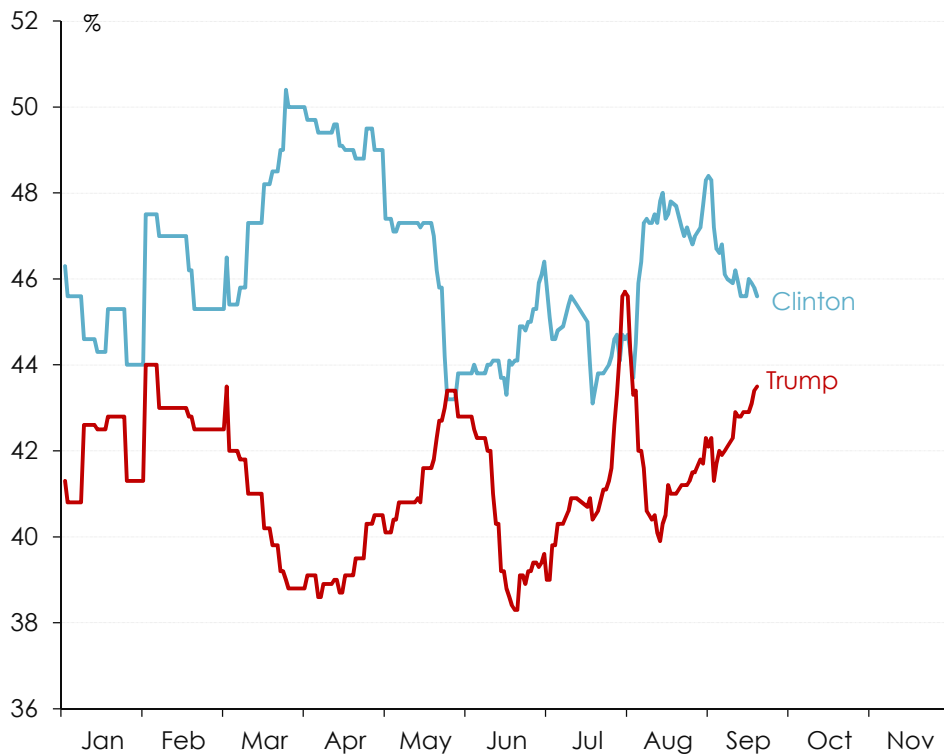
❑ A 'trade war' with China – and possibly Japan

- a Trump Administration would declare China (and potentially Japan) a 'currency manipulator' – opening the way for the imposition of tariffs of up to 45% on imports from China (and possibly Japan)
- such measures would be intended to cause a sharp drop in Chinese (and Japanese) exports to the US – which would in turn likely result in those economies weakening – with adverse consequences for other countries' exports to them
- it's hard to believe that China and Japan wouldn't retaliate in some (equally damaging way)

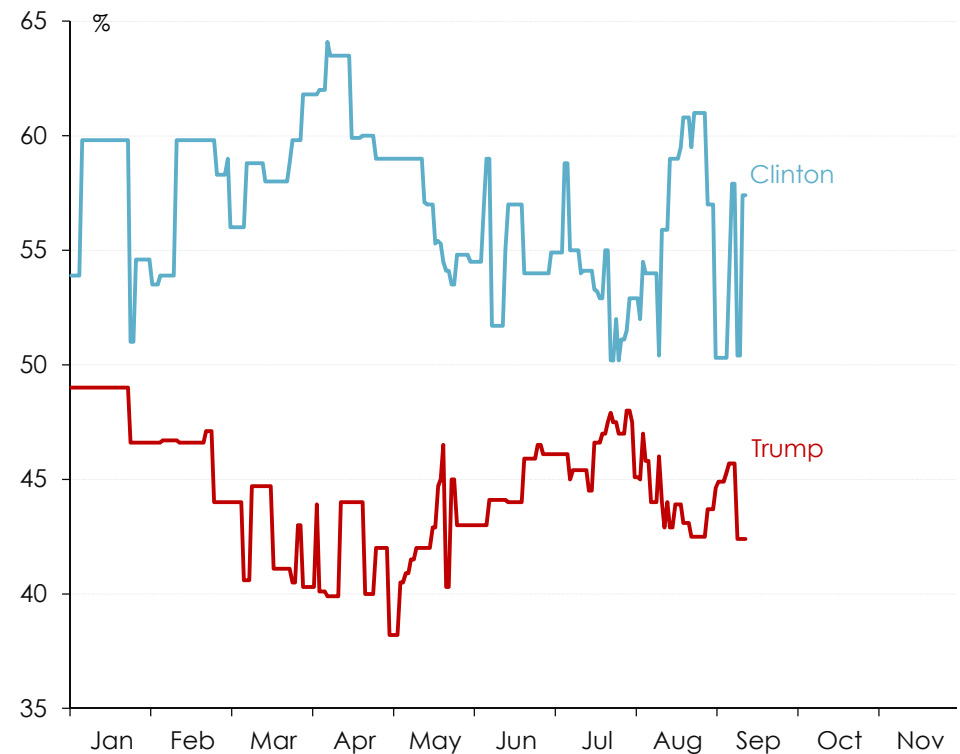
❑ 'Trade wars' can lead to real wars

Opinion polls and betting markets both give Hillary Clinton a clear lead over Donald Trump - but they were wrong about the 'Brexit' vote

US presidential voting intentions – average of seven major national opinion polls

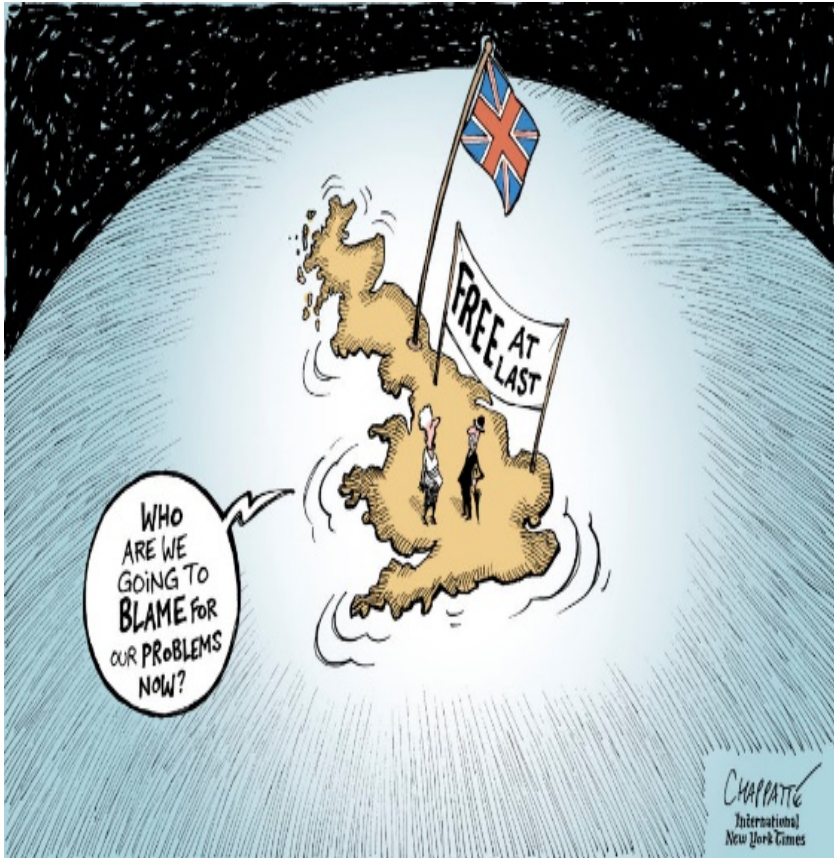


Iowa Electronic Markets Presidential Vote Share Market



Sources: [RealClearPolitics](#); University of Iowa Tippie College of Business [2016 US Presidential Election markets](#)

Support for Trump comes from similar sentiments to the support for 'Leave' in the UK's 'Brexit' referendum ...



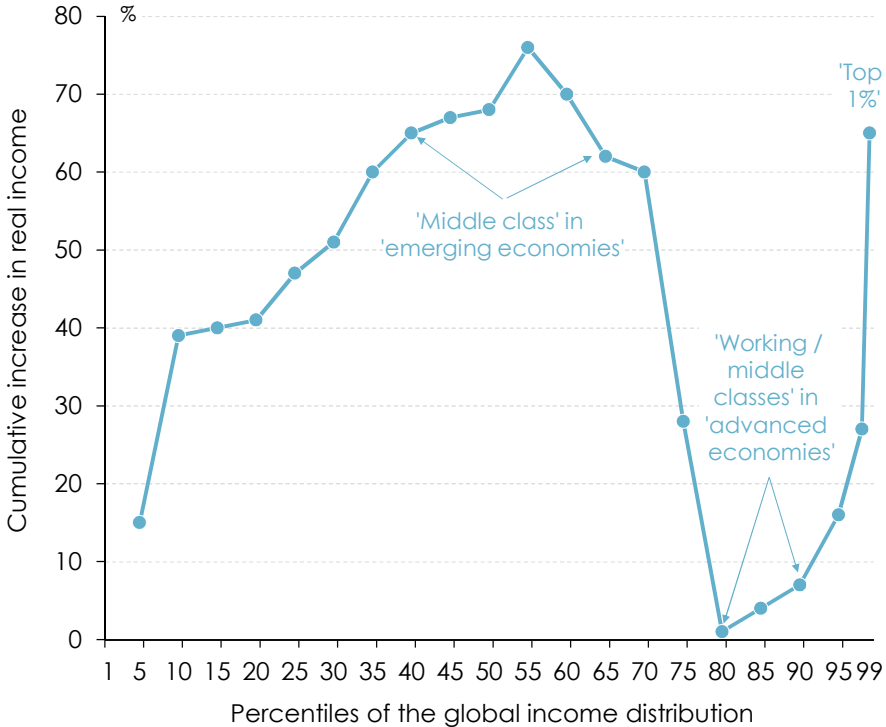
- ❑ The 'Brexit' vote was a victory of
 - the old over the young
 - the angry over the ambivalent
 - the fearful over the hopeful
 - the insular over the cosmopolitan .. and
 - people living in small towns and rural areas over people living in big cities
- ❑ It was to some extent a triumph of
 - those who see themselves as 'victims' of globalization, of rapid technological and social change, and of changes in the ethnic or racial composition of society ...
 - over those whom the same people see as the 'perpetrators' of those changes (the 'elites' and 'experts')
- ❑ And it was a vote for greater control by national governments over the movement of goods, services, capital and (especially) people across national borders
 - and against individuals' ability freely to choose where they live, and from where they buy goods and services

... and these political trends aren't unique to the US and UK

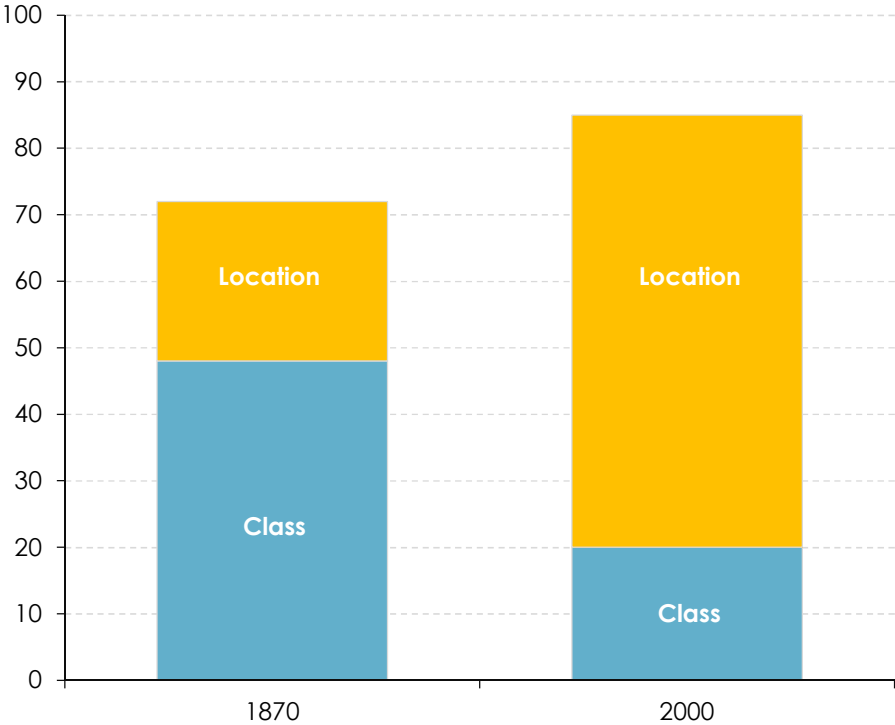


Two charts that help explain 'Brexit', Trump & Sanders, Le Pen and other troubling political trends across the 'developed' world

Growth in real income by percentiles of the global income distribution, 1988-2008



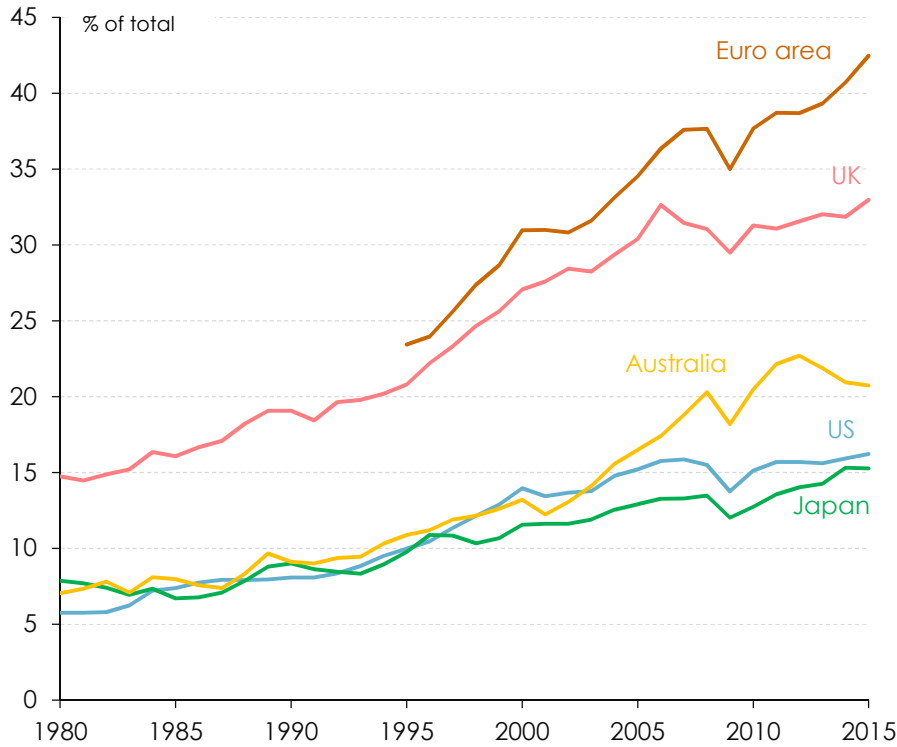
Level and composition of global inequality, 1870 and 2000



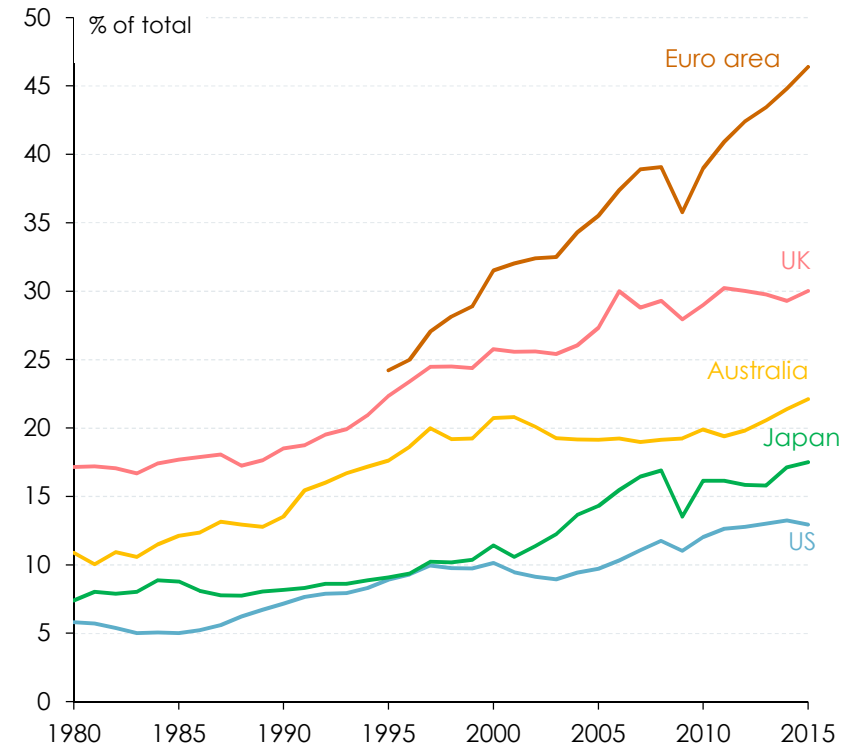
Note: Real income measured in 2005 US dollars (converted at purchasing power parities). Inequality measured by a Theil Index.
 Sources: Christoph Lakner and Branko Milanović, *Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession*, World Bank Economic Review August 2015; Branko Milanović, *Global Income Inequality by the Numbers: in History and Now - An Overview*, World Bank Policy Research Working Paper No 6259, November 2012.

Imports have risen strongly as a share of US GDP – but so have exports; and both have risen by less than in other ‘advanced’ economies

Imports as a share of GDP



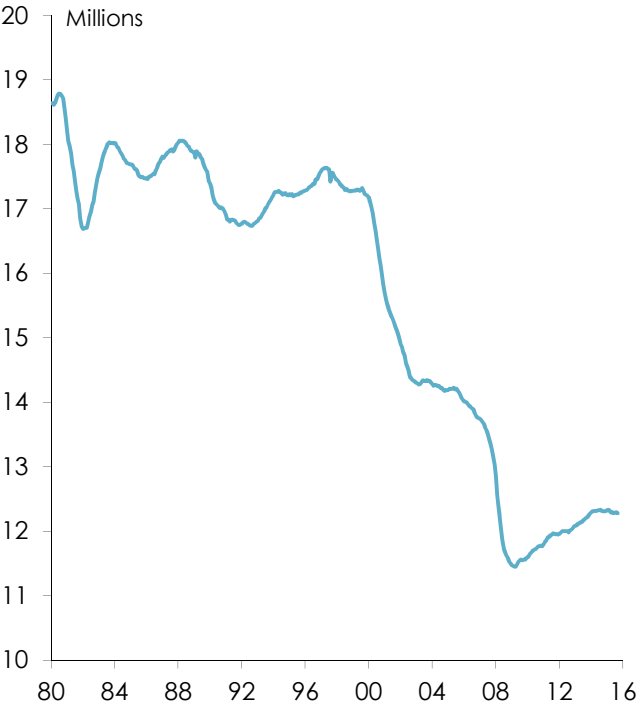
Exports as a share of GDP



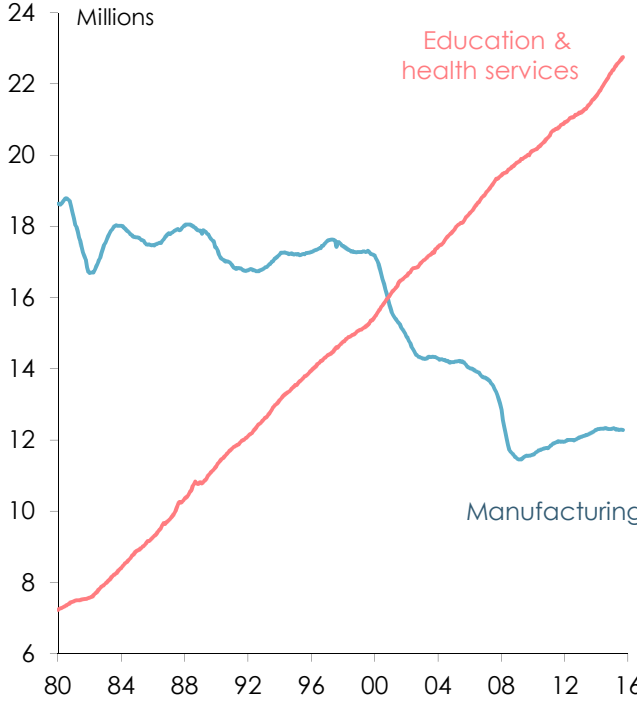
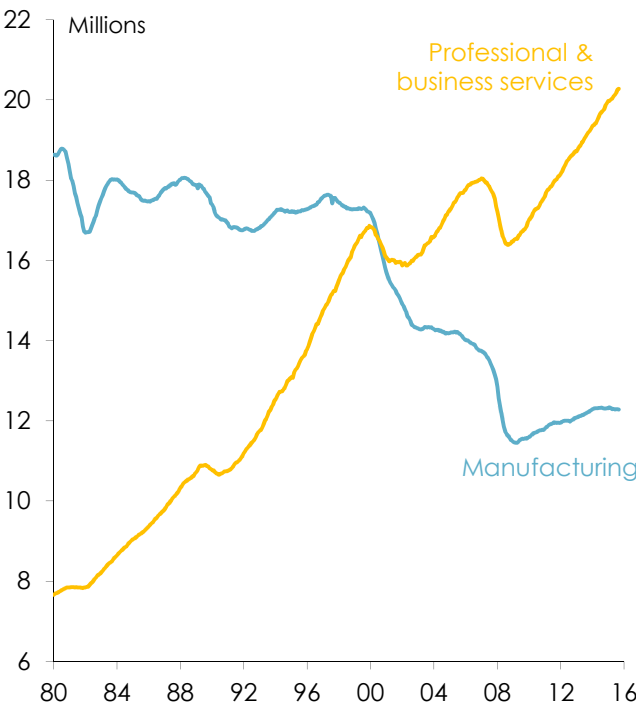
Sources: US Bureau of Economic Analysis; Japan Cabinet Office; Eurostat; UK Office for National Statistics; ABS.

Employment in US manufacturing fell precipitously between 1997 and 2009 - although a greater number of jobs were created in other sectors

Employment in US manufacturing



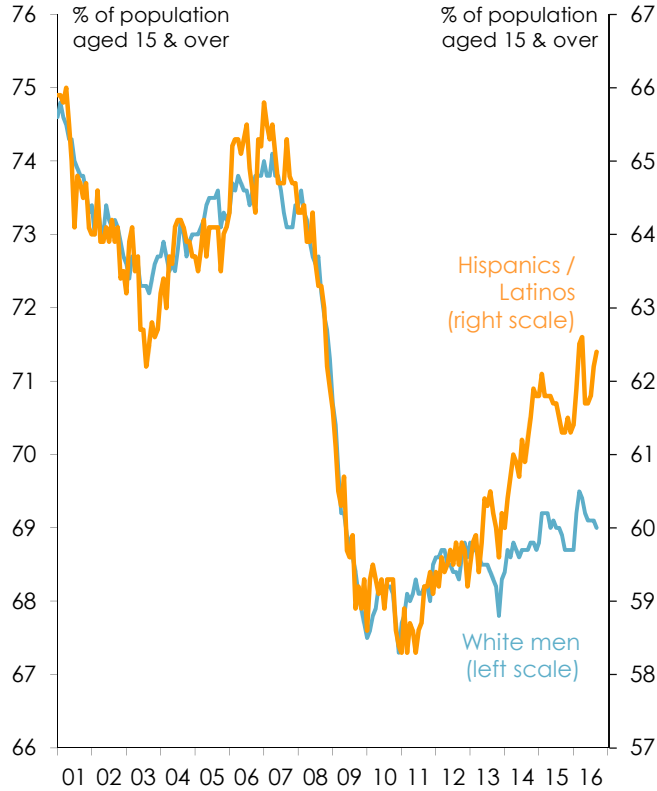
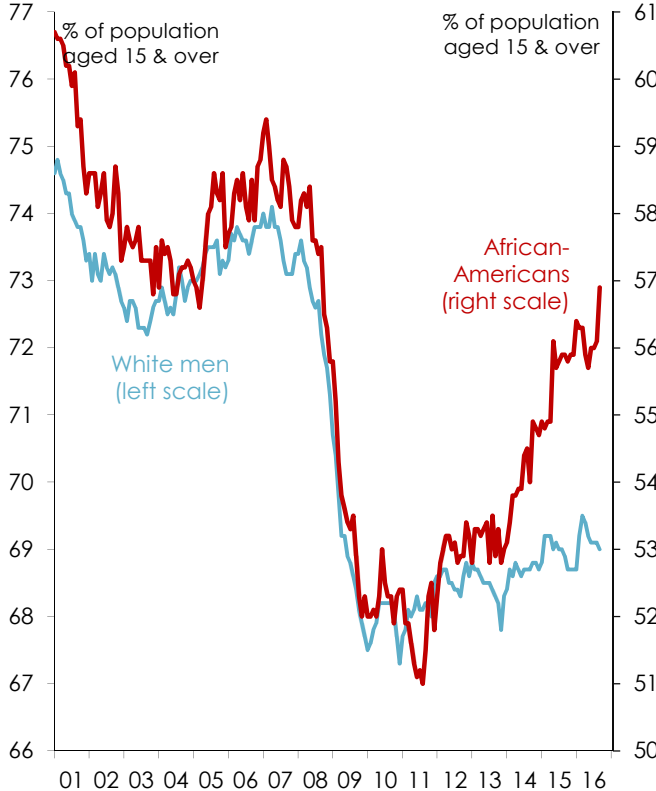
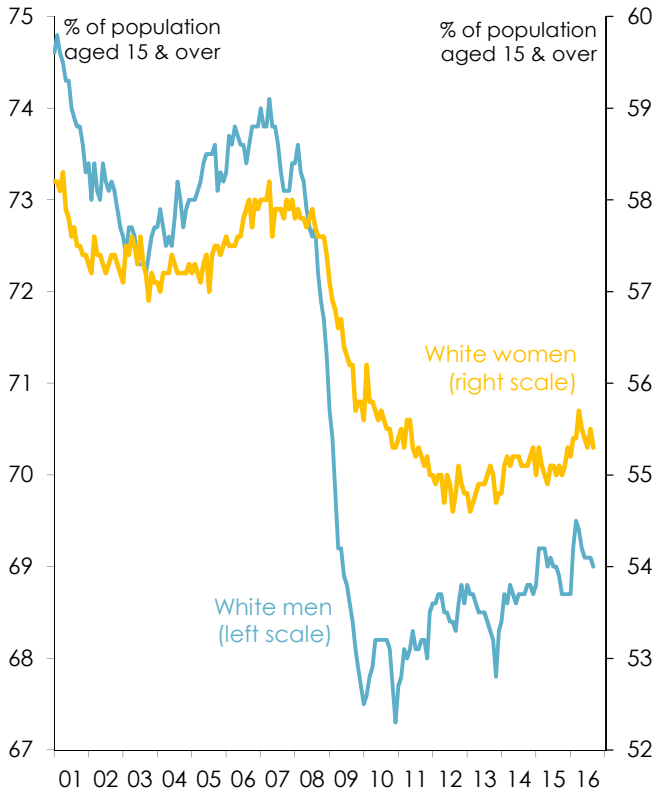
Employment in US manufacturing compared with selected services sectors



Source: US Bureau of Labor Statistics.

Changes in the US labour market have been tougher on white men than on other demographic groups

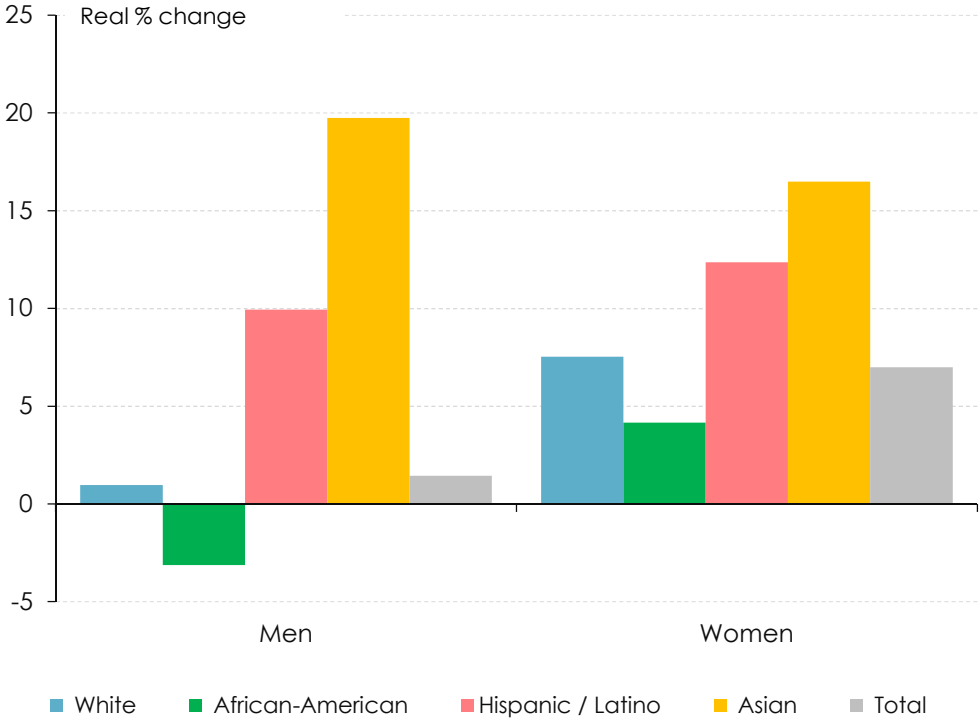
Employment as a pc of the working-age population – white men vs other demographic groups



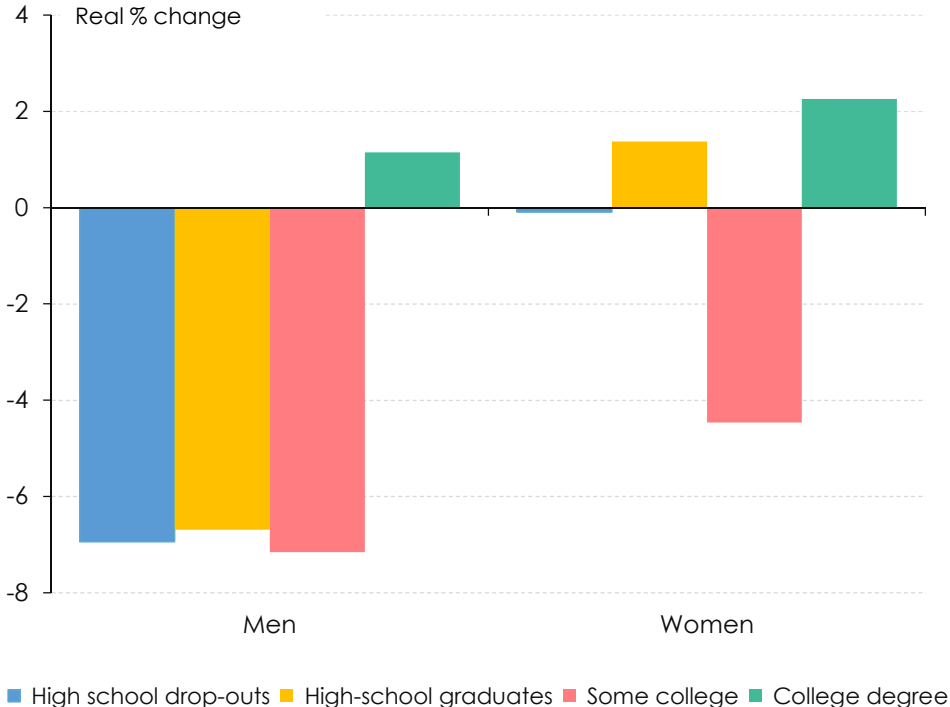
Source: US Bureau of Labor Statistics.

Men – and especially older, poorly-educated men – have experienced significant declines in their real earnings over the last 15 years

Change in median real earnings, 2000-2015, by demographic group (16 and over)



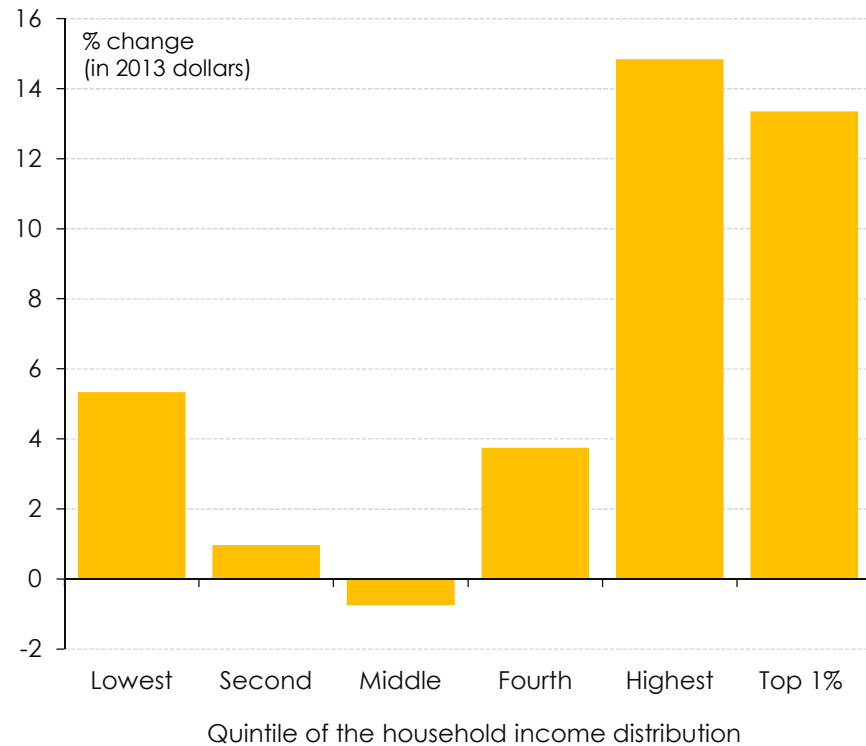
Change in median real earnings, 2000-2015, by educational attainment (25 and over)



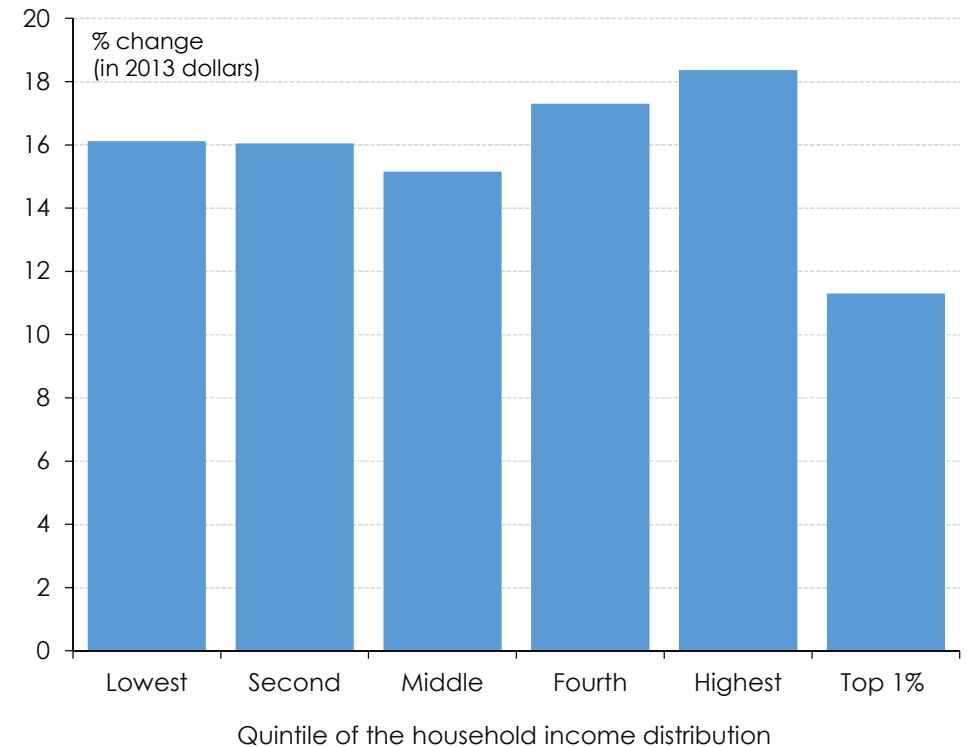
Source: US Bureau of Labor Statistics.

Income inequality in the US has increased significantly since 2000 – although the tax-transfer system has countered that to a large extent

Real change in US pre-tax household income, by quintile, 1998-2013



Real change in US post-tax household income, by quintile, 1998-2013



Note: 'Quintiles' are one-fifths (20% shares) of households ranked by pre-tax income and adjusted ('equivalized') for household size.
Source: US Congressional Budget Office, *The Distribution of Household Income and Federal Taxes 2013* (June 2016).

Australia hasn't been immune from these political trends – although so far they remain on the fringe

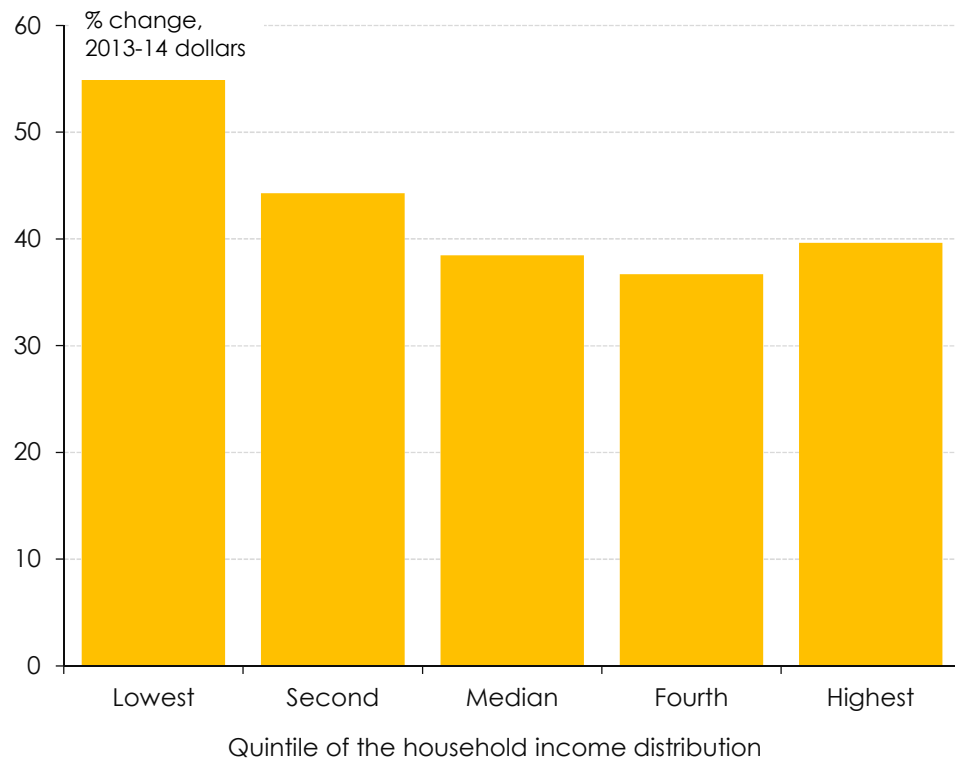


.... for the most part....

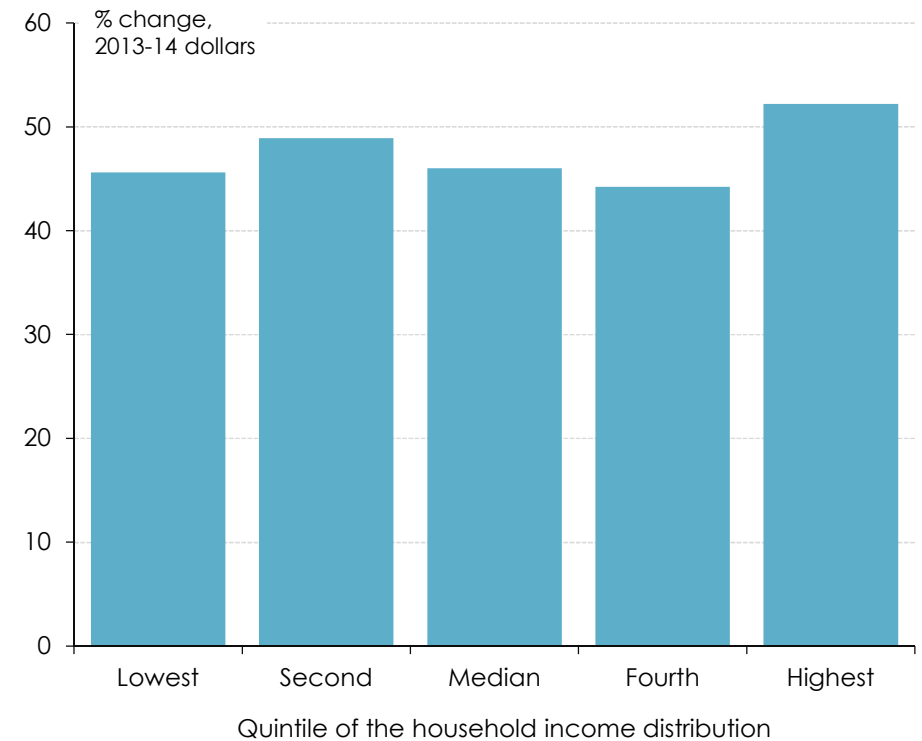


Australian household incomes have risen by much more than in the US, and have been much less unequally distributed than in the US

Real change in Australian gross household income, by quintile, 1999-2000 to 2013-14



Real change in Australian household disposable income, by quintile, 1999-2000 to 2013-14

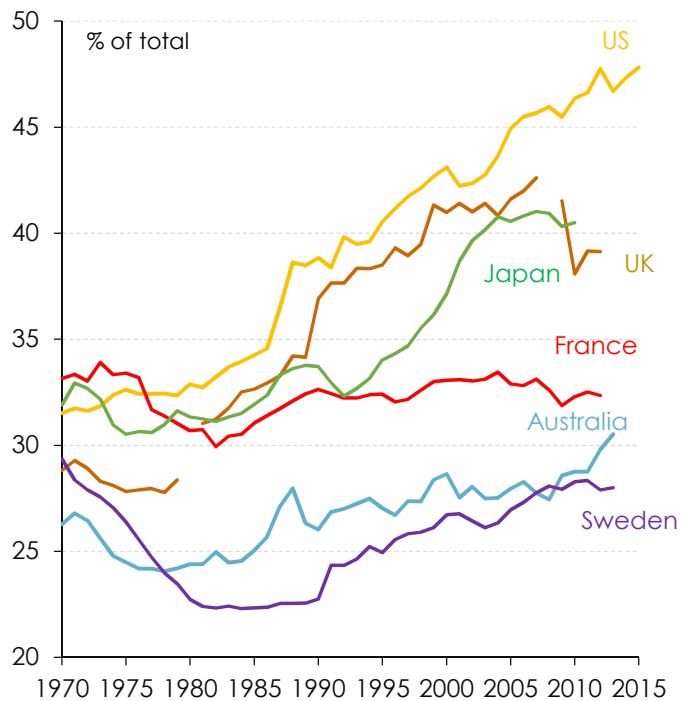


Note: 'Quintiles' are one-fifths (20% shares) of households ranked by pre-tax income and adjusted ('equivalized') for household size.
Source: ABS, *Household Income and Wealth, Australia 2013-14* (catalogue no. 6523,0, September 2015).

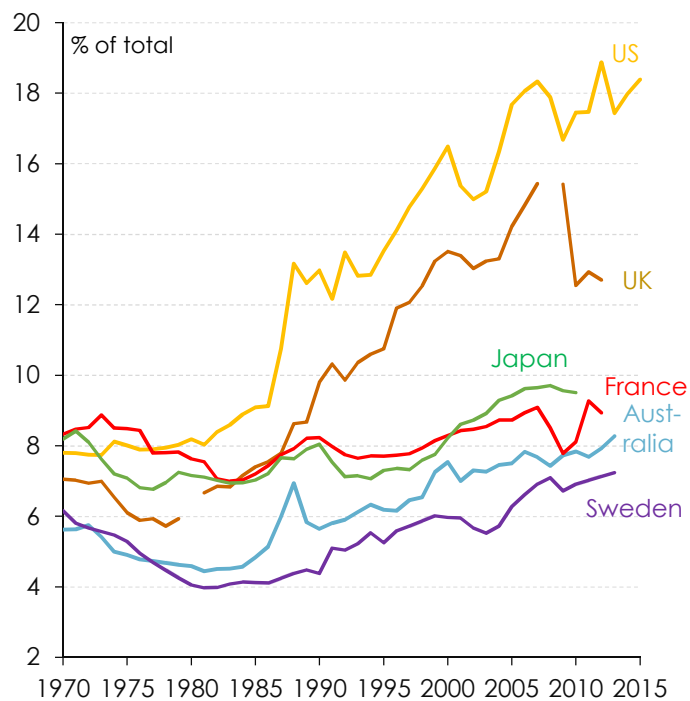
Australia is actually at the Swedish end of the spectrum of trends in pre-tax income distribution

Upper income groups' share of total pre-tax income in selected 'advanced' economies

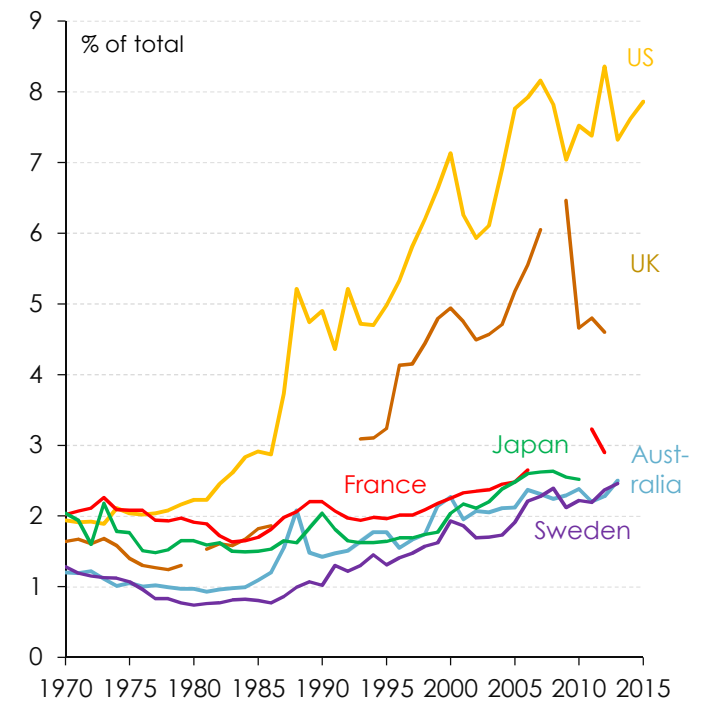
Top 10%



Top 1%



Top 0.1%

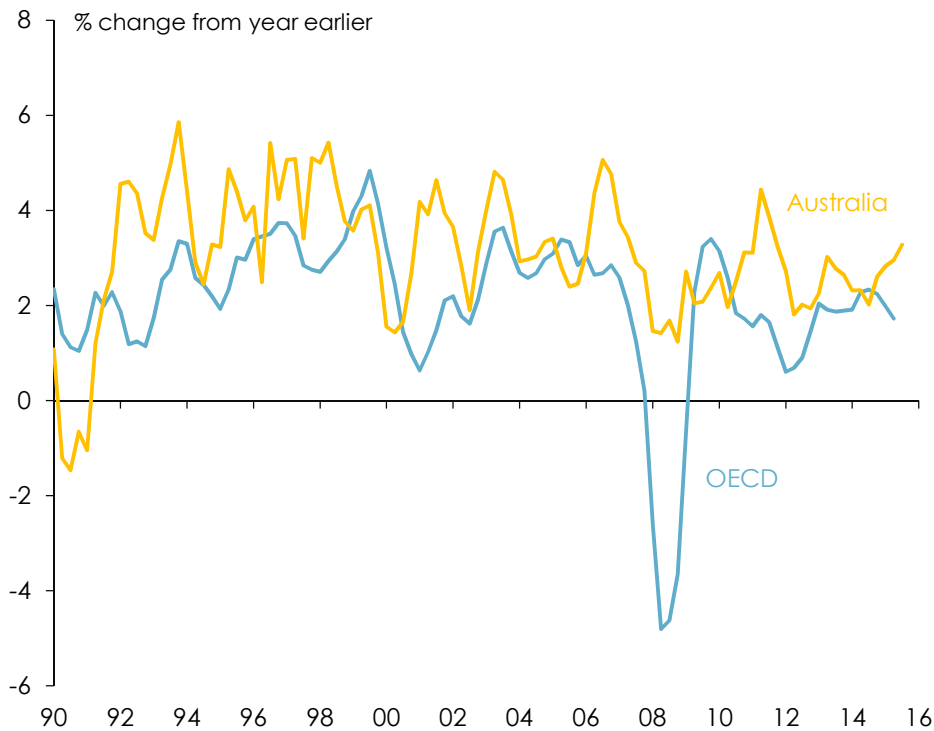


Note: Shares are of pre-tax taxable income as reported to and published by national tax collection agencies.

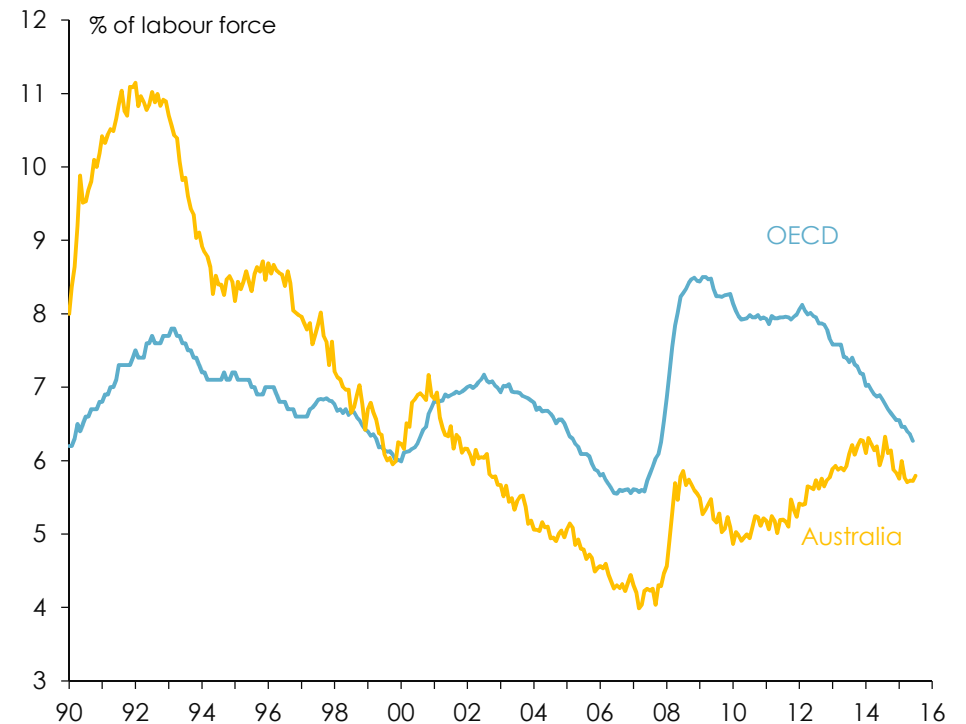
Sources: Facundo Alvaredo, Tony Atkinson, Thomas Piketty, Emmanuel Saez and Gabriel Zucman, *The World Wealth and Income Database* (<http://www.wid.world/>)

Not having had a recession since the early 1990s has been a major factor in the stronger income growth enjoyed by Australian households

Real GDP growth – Australia vs OECD countries



Unemployment rate – Australia vs OECD countries



Note: The Organization for Economic Co-operation and Development (OECD) comprises 34 (mostly) 'advanced' or 'industrialized' economies in Europe and North America, plus Japan, Korea, Israel, Turkey, Chile, Australia and New Zealand.
Source: OECD; ABS.

Questions?

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