THE ECONOMIC BIG PICTURE

PRESENTATION TO THE

2018 RESOURCES RISING STARS CONFERENCE

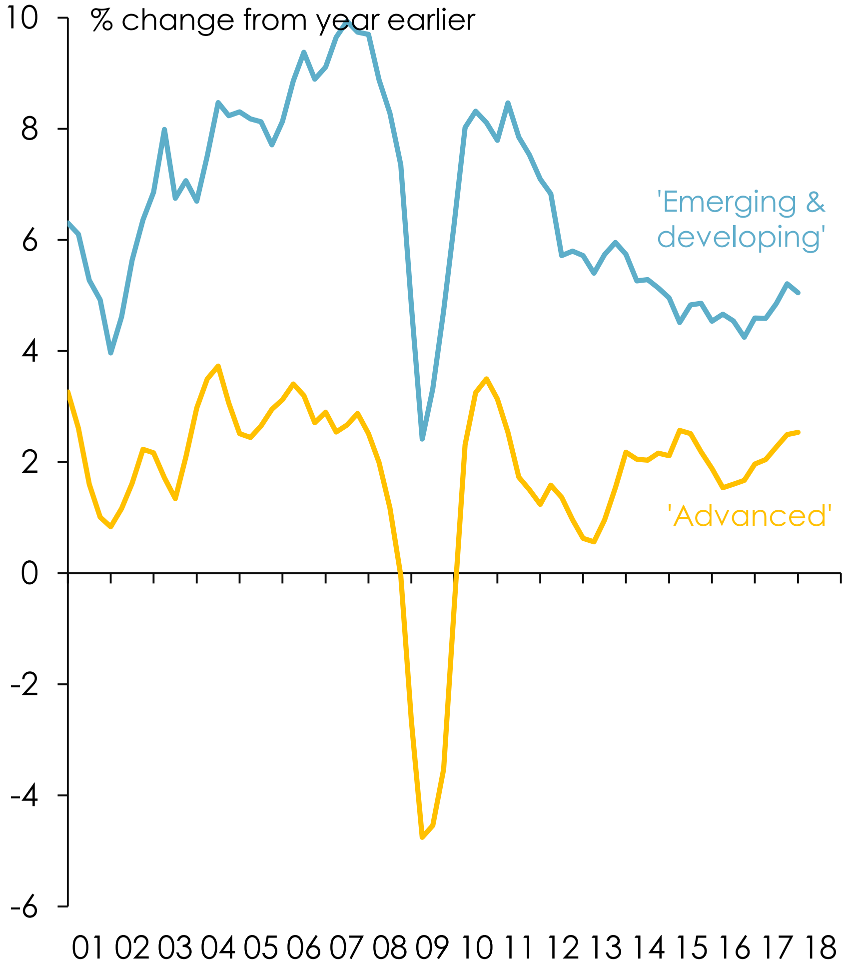
RACV ROYAL PINES RESORT, GOLD COAST
29TH MAY 2018

SAUL ESLAKE
CORINNA ECONOMIC ADVISORY PTY LTD

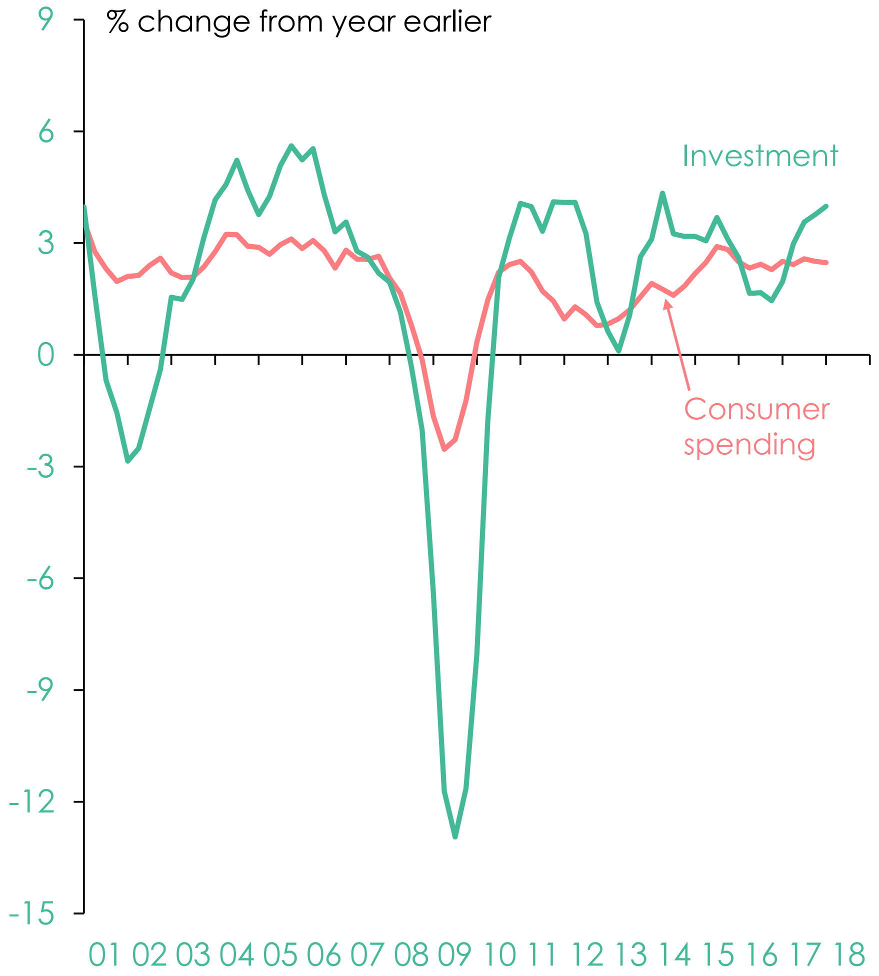
The world economy has picked up since the beginning of last year, led by stronger investment in 'advanced' economies

World economic growth

'Advanced' vs 'emerging and developing' economies



Major components of developed country growth



Sources: Thomson Reuters Datastream; IMF; OECD; Eurostat; other national statistical agencies; Corinna Economic Advisory.

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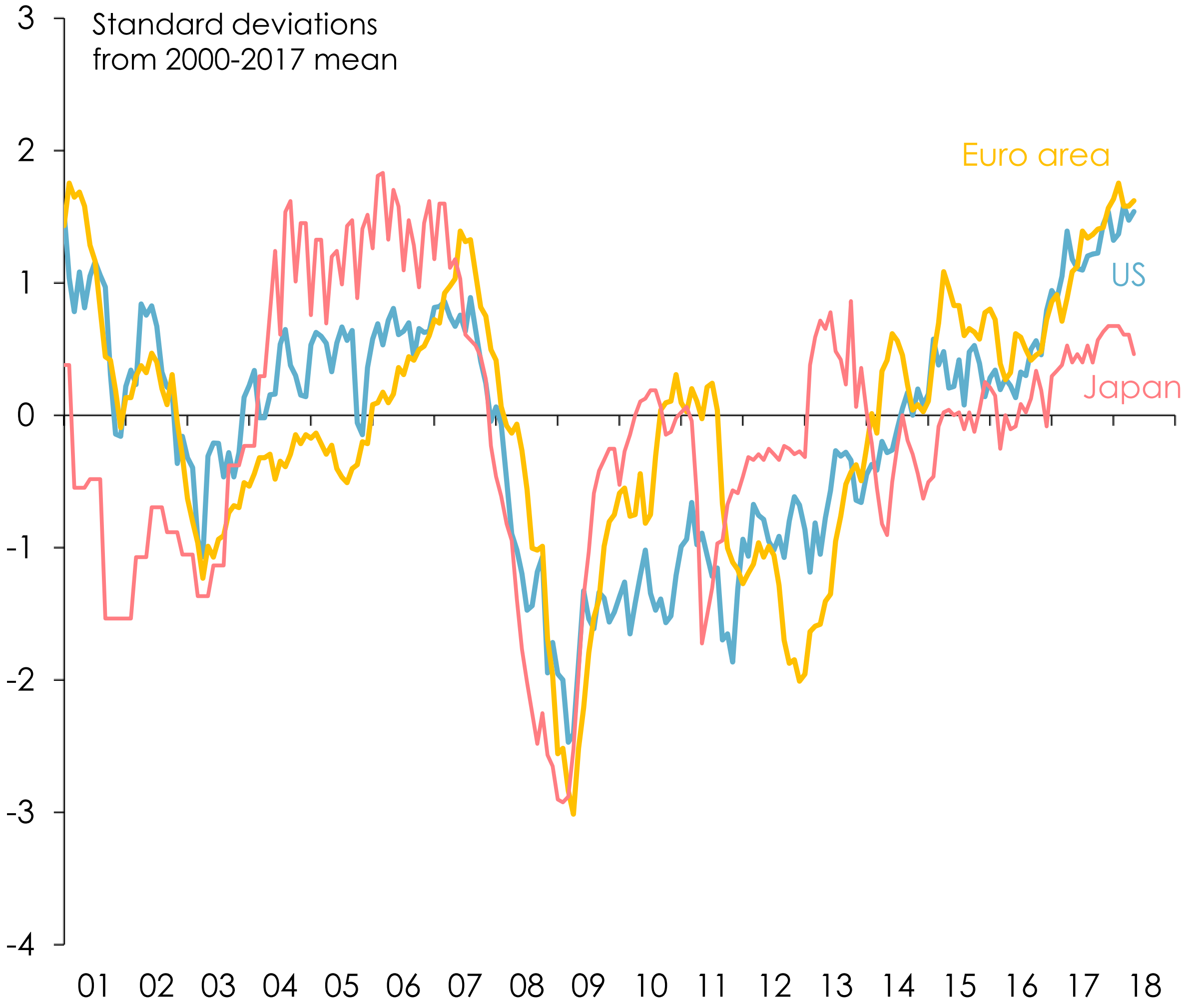
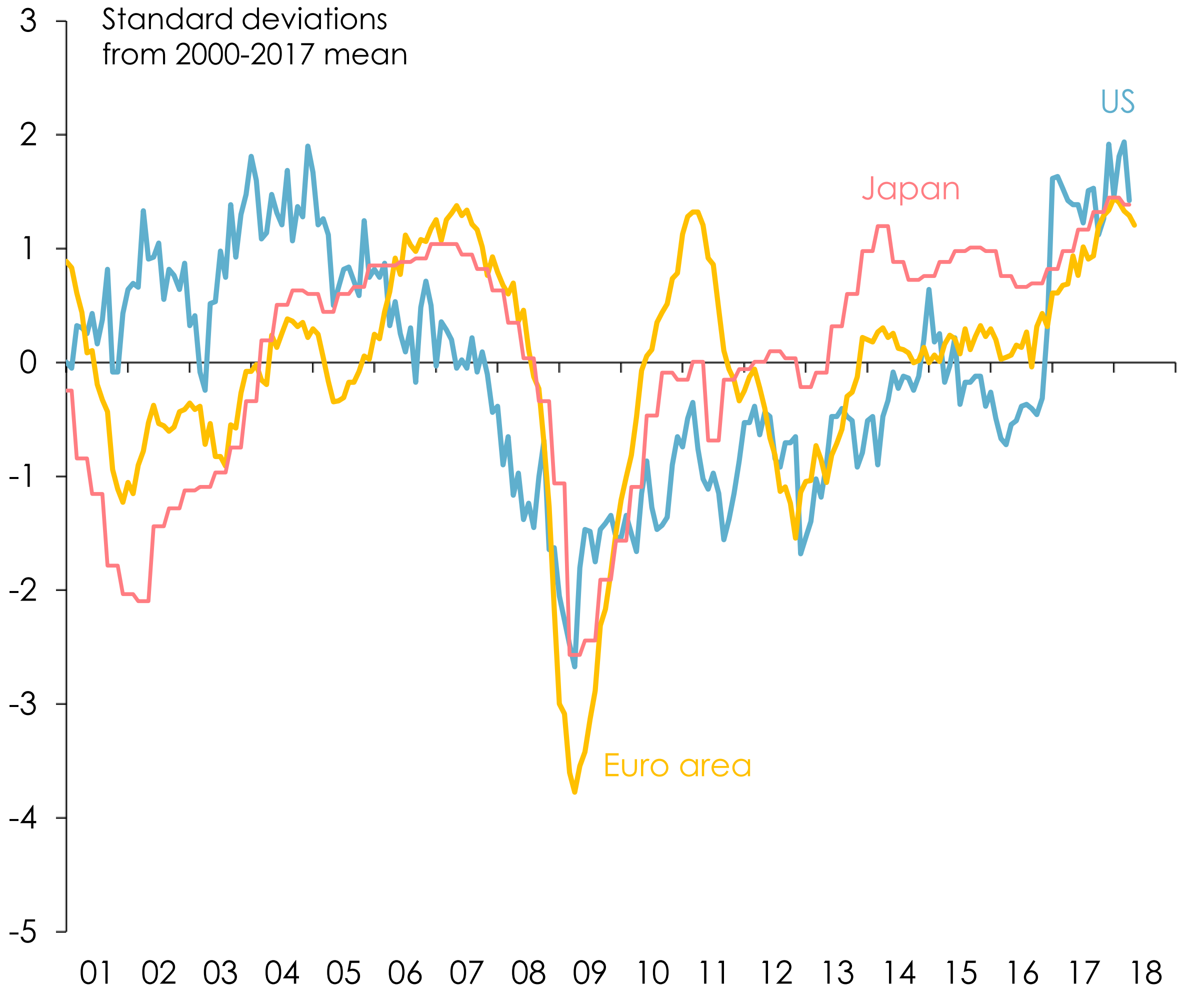
There's been a synchronized improvement in business and consumer confidence in advanced economies

Consumer confidence



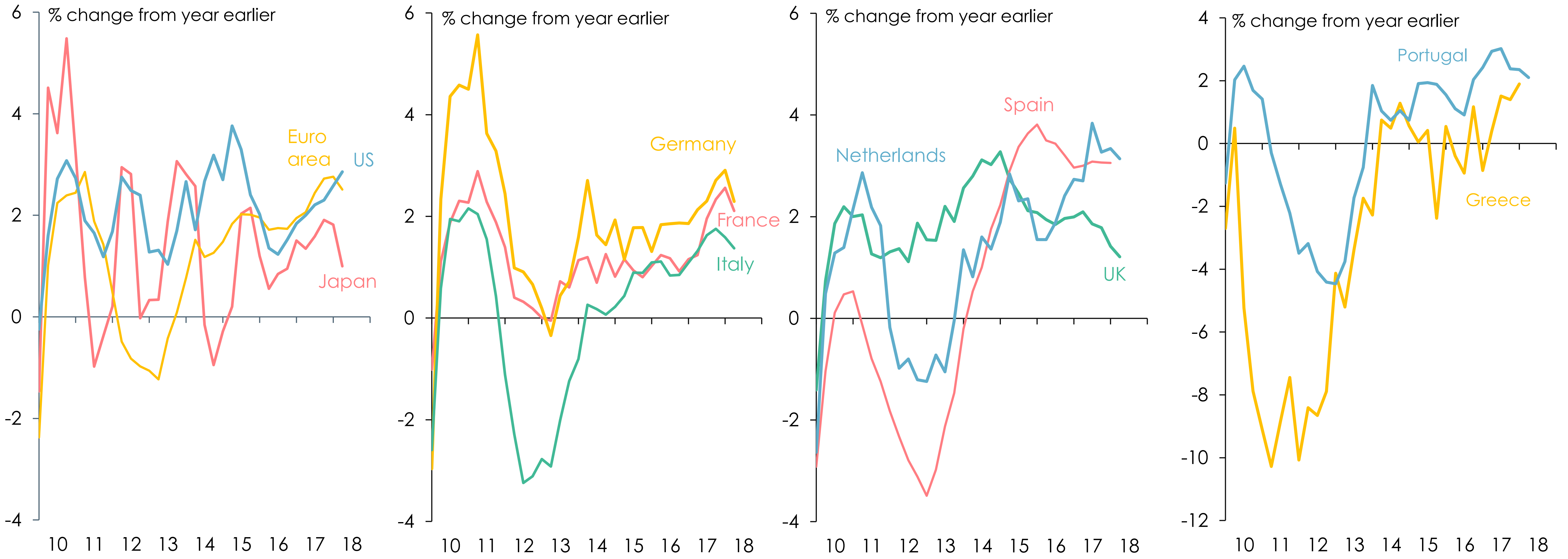
Business confidence



Note: Consumer confidence measures are those compiled by the Conference Board (US), European Commission (euro zone) and Cabinet Office (Japan). Business confidence measures are those compiled by the National Federation of Independent Businesses (US), European Commission (euro zone) and the Bank of Japan (the 'Tankan' survey, averaged over large and small businesses). *Sources:* above-mentioned agencies and Corinna Economic Advisory.

The upswing in 'advanced' economies is more synchronized than at any time since the crisis – including within the euro area (but not the UK)

Real GDP growth in 'advanced' economies



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

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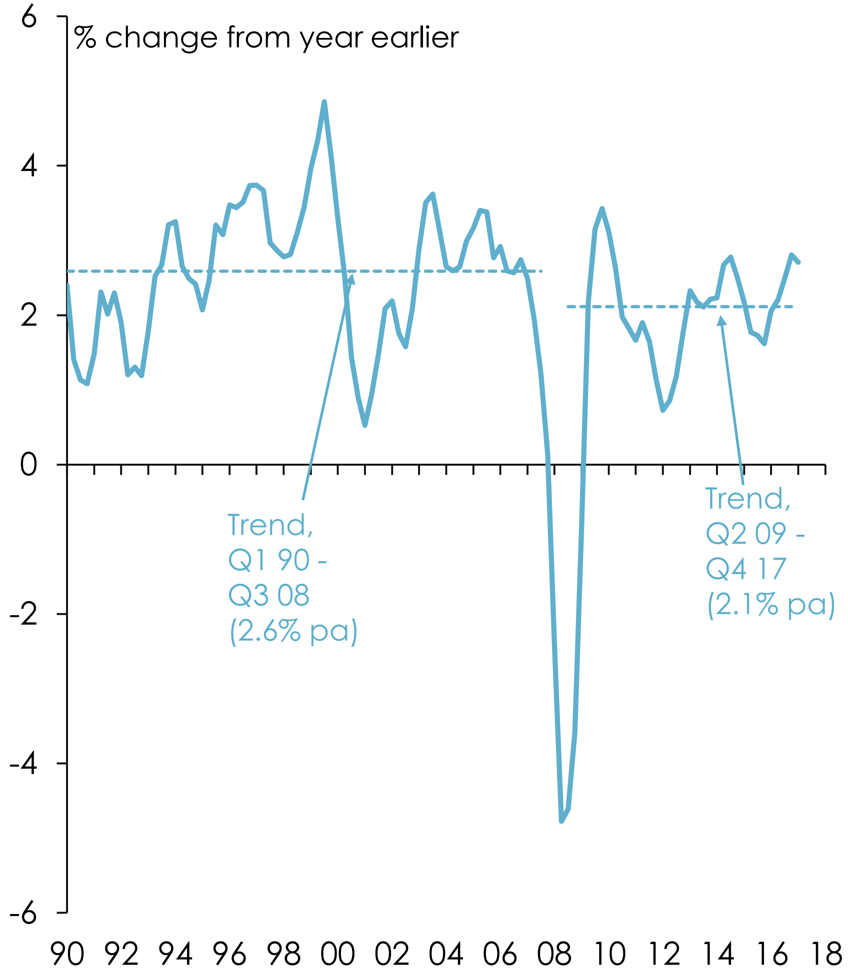
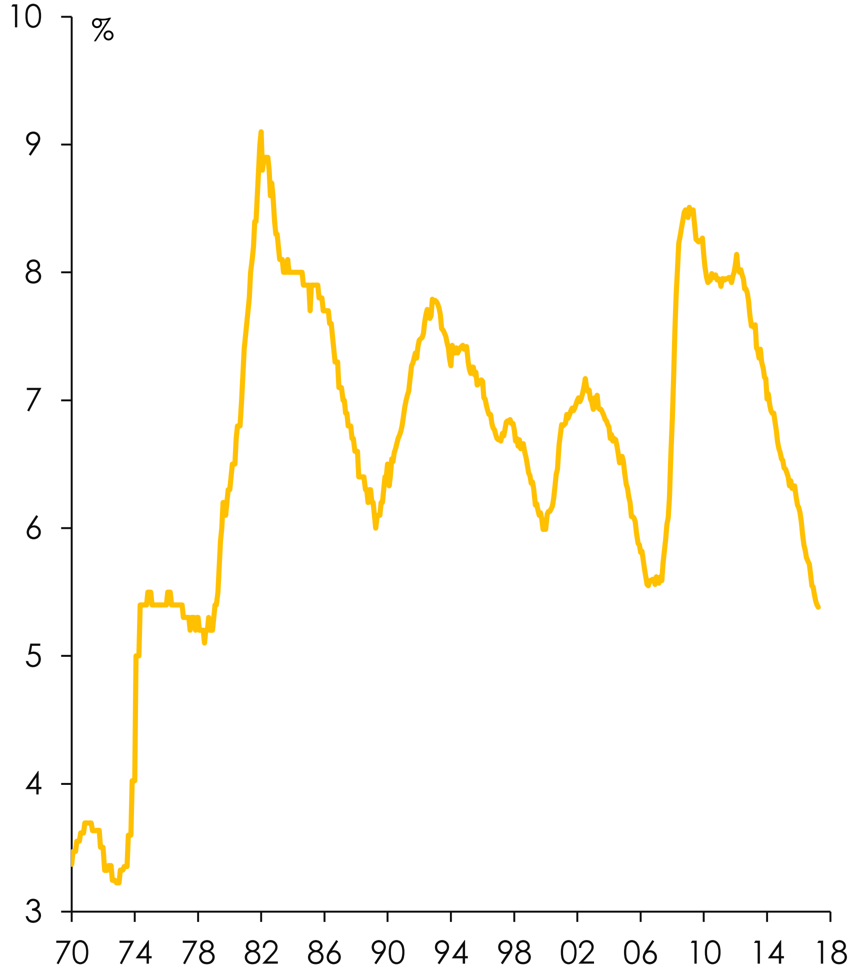
Economic growth across 'advanced' economies has until recently been mostly 'below trend' – yet unemployment has fallen sharply

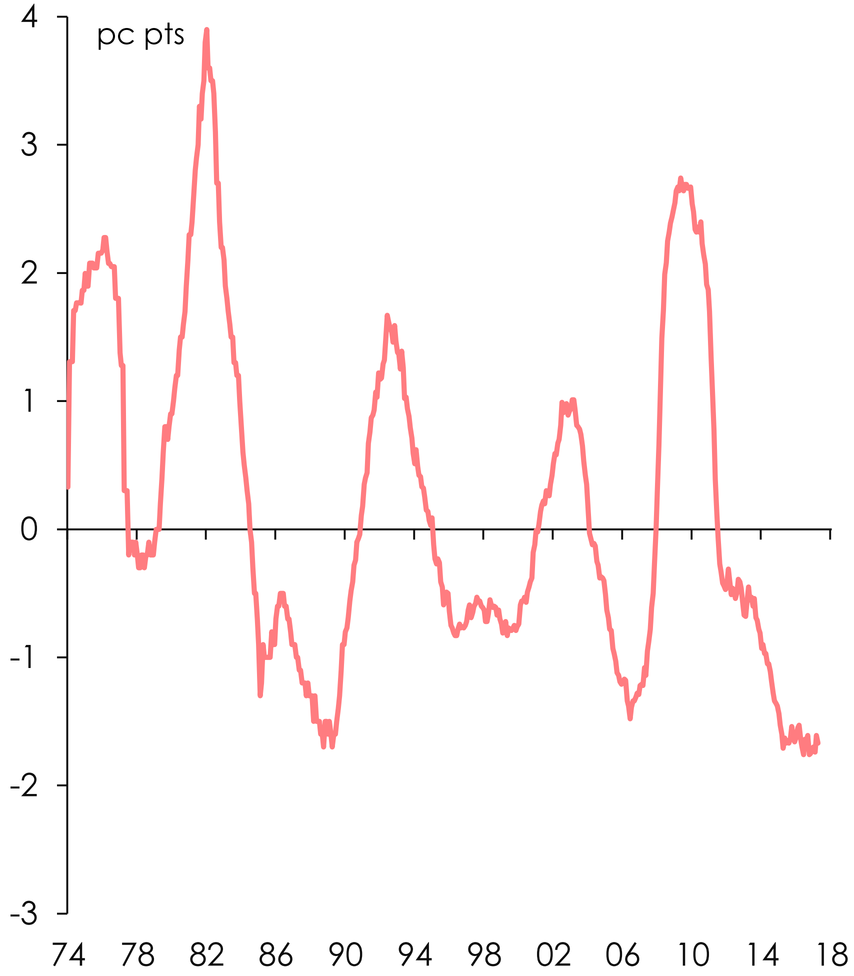
OECD area real GDP growth



OECD area unemployment rate



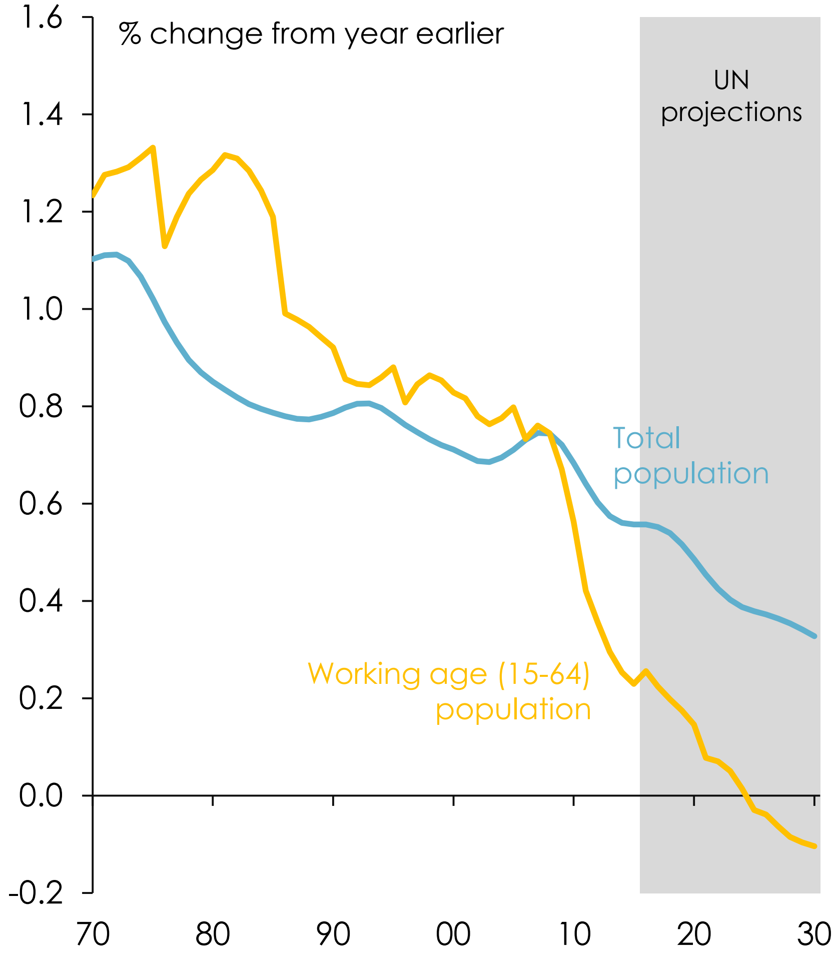
3-year change in OECD unemployment rate



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.

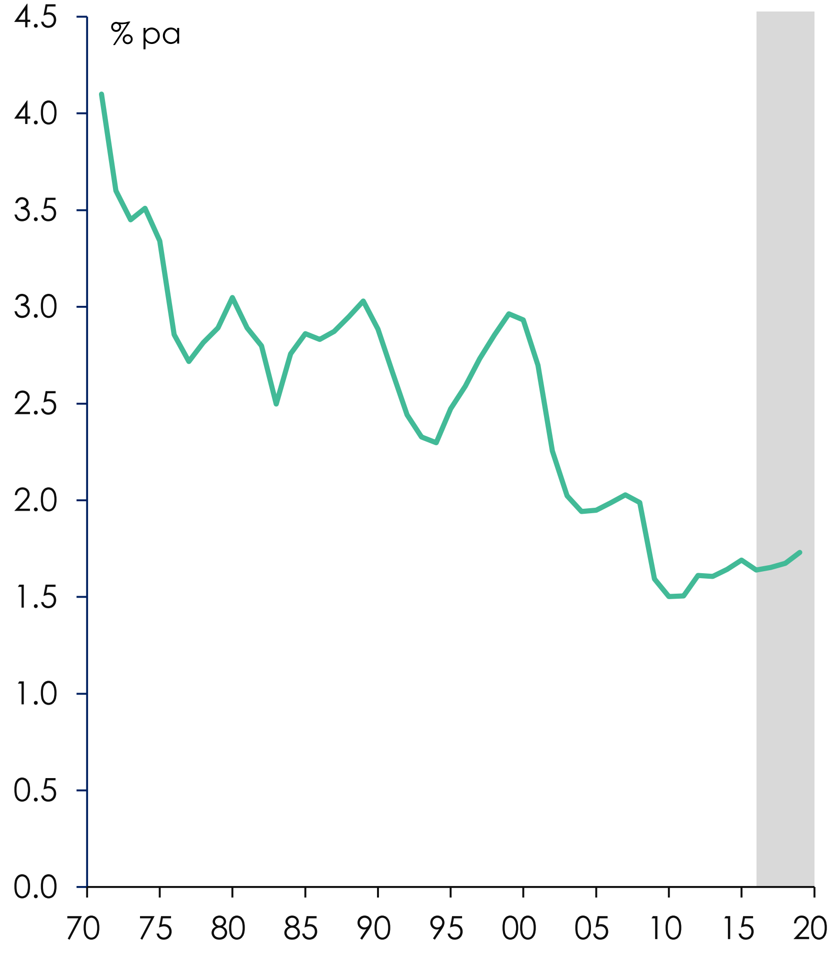
The scope for more rapid economic growth in ‘advanced’ economies is limited by demographic change and slower productivity growth

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 2017 Revision*; Organization for Economic Co-operation & Development (OECD), *Economic Outlook* database June 2017. ‘Potential growth’ means growth in the level of real GDP assuming full employment of the available labour force. Note that the OECD area includes some ‘emerging’ economies (Mexico, Turkey, Chile) and excludes some ‘advanced’ ones (Taiwan, Hong Kong and Singapore).

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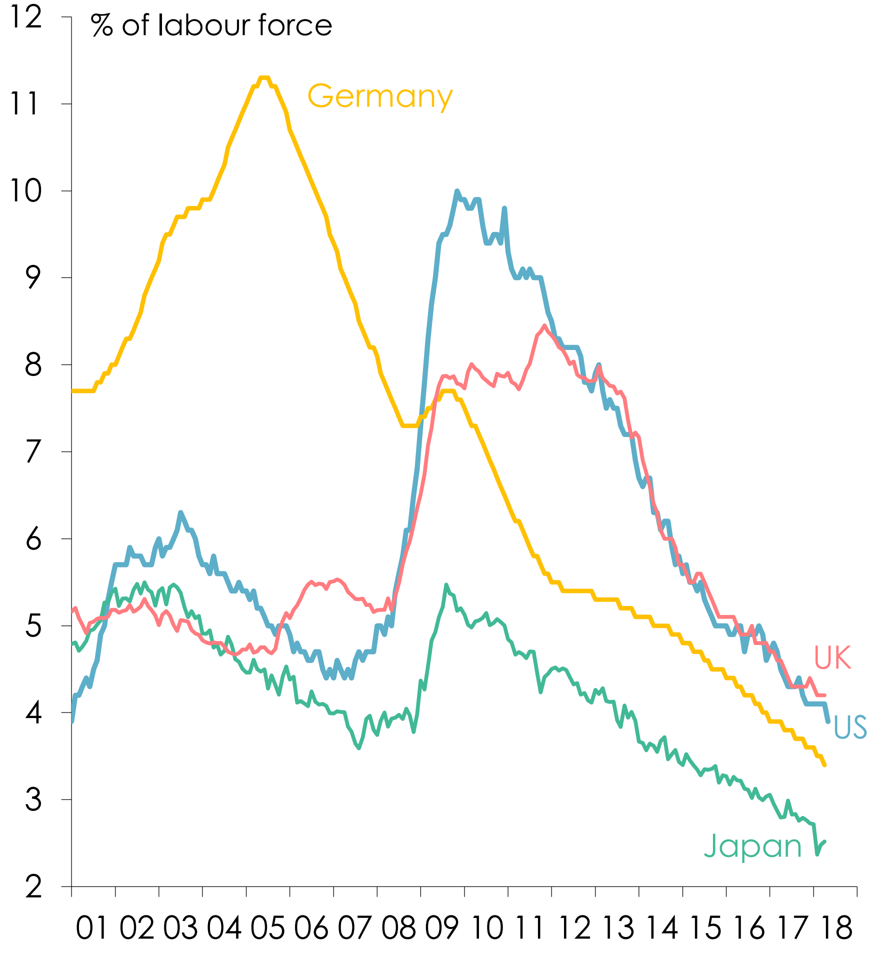
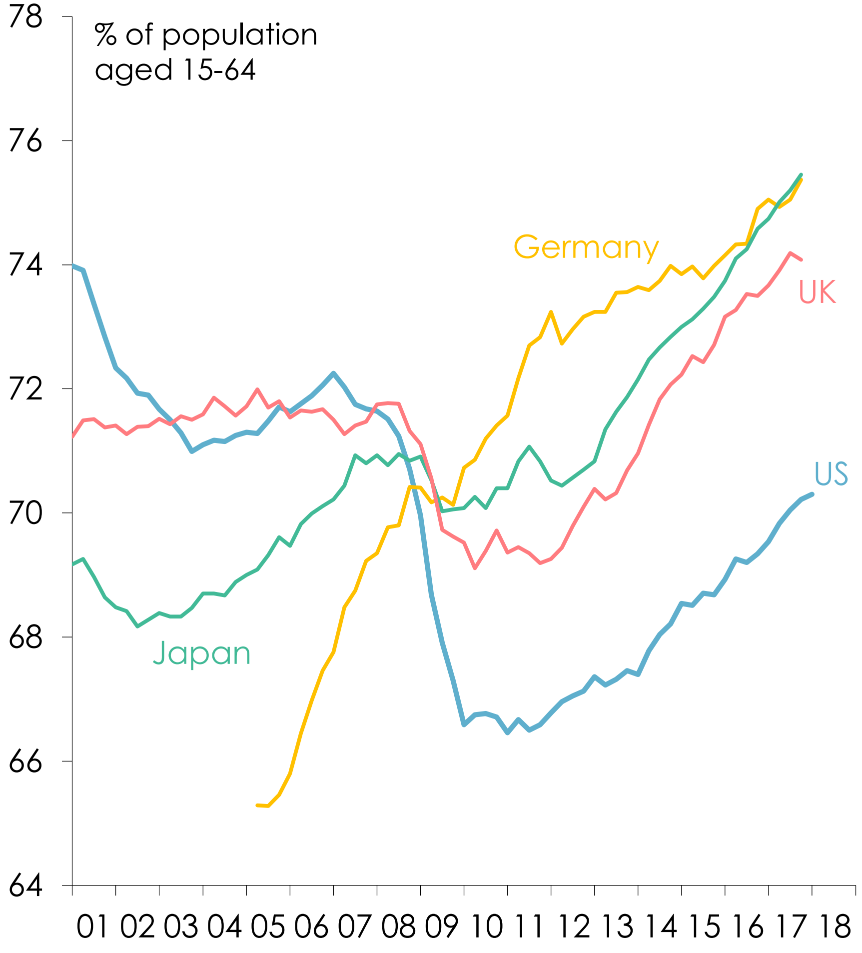
Labour markets are getting tighter – especially in the four largest 'advanced' economies

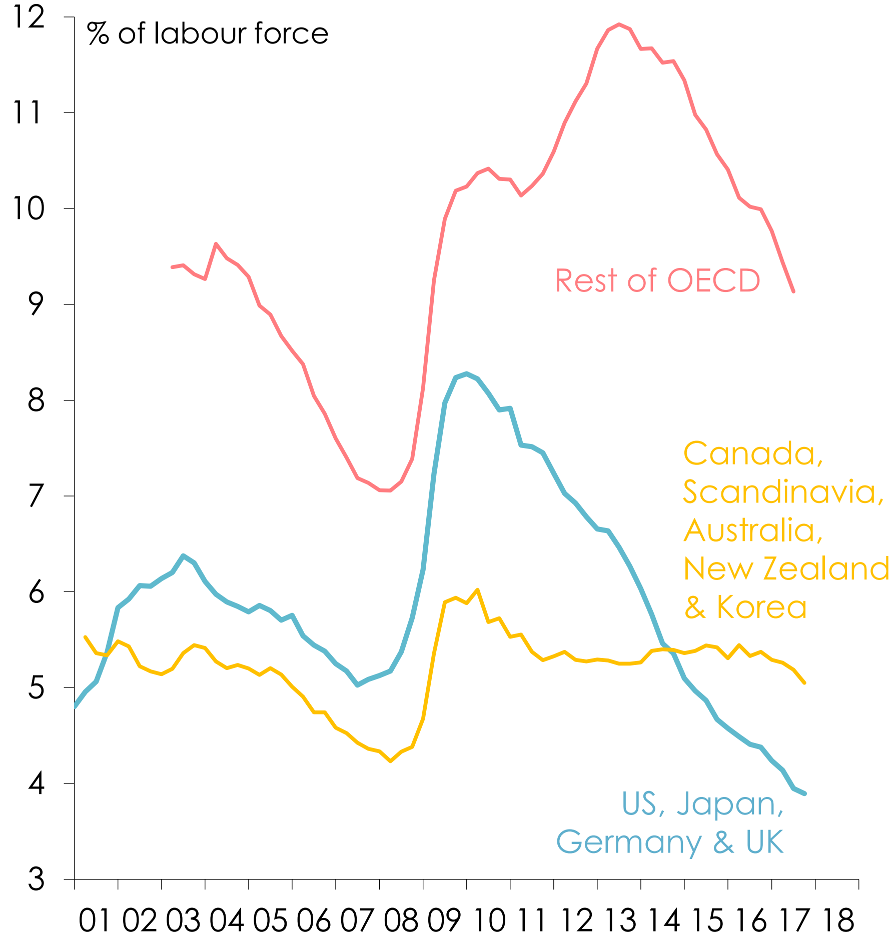
Unemployment – 4 largest 'advanced' economies



'Employment rates' – 4 largest 'advanced' economies



Unemployment rates – other OECD economies



Sources: US Bureau of Labor Statistics; Eurostat; Japan Labour Ministry; Bundesagentur fur Arbeit; UK Office of National Statistics ; OECD *Main Economic Indicators*; Corinna Economic Advisory.

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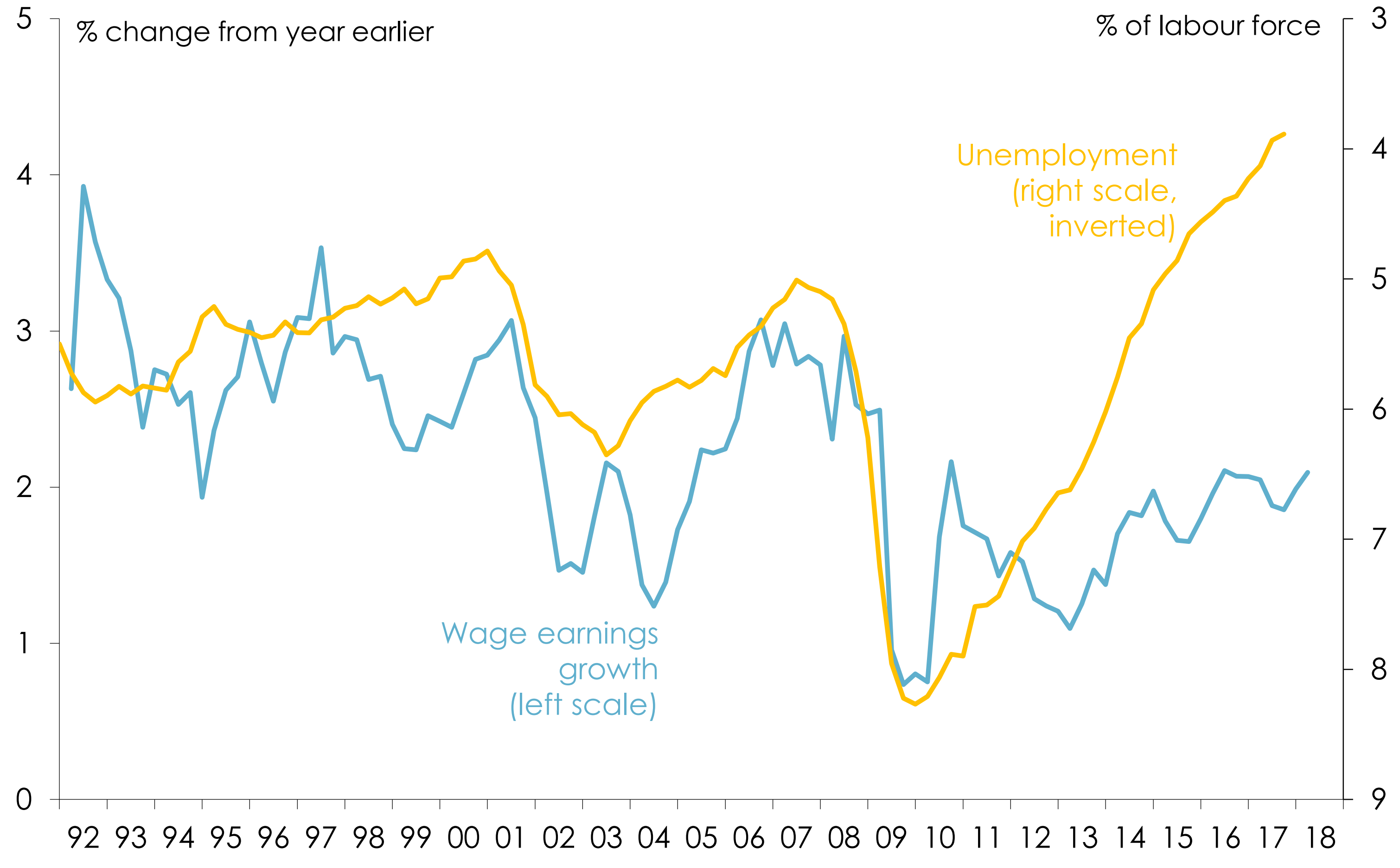
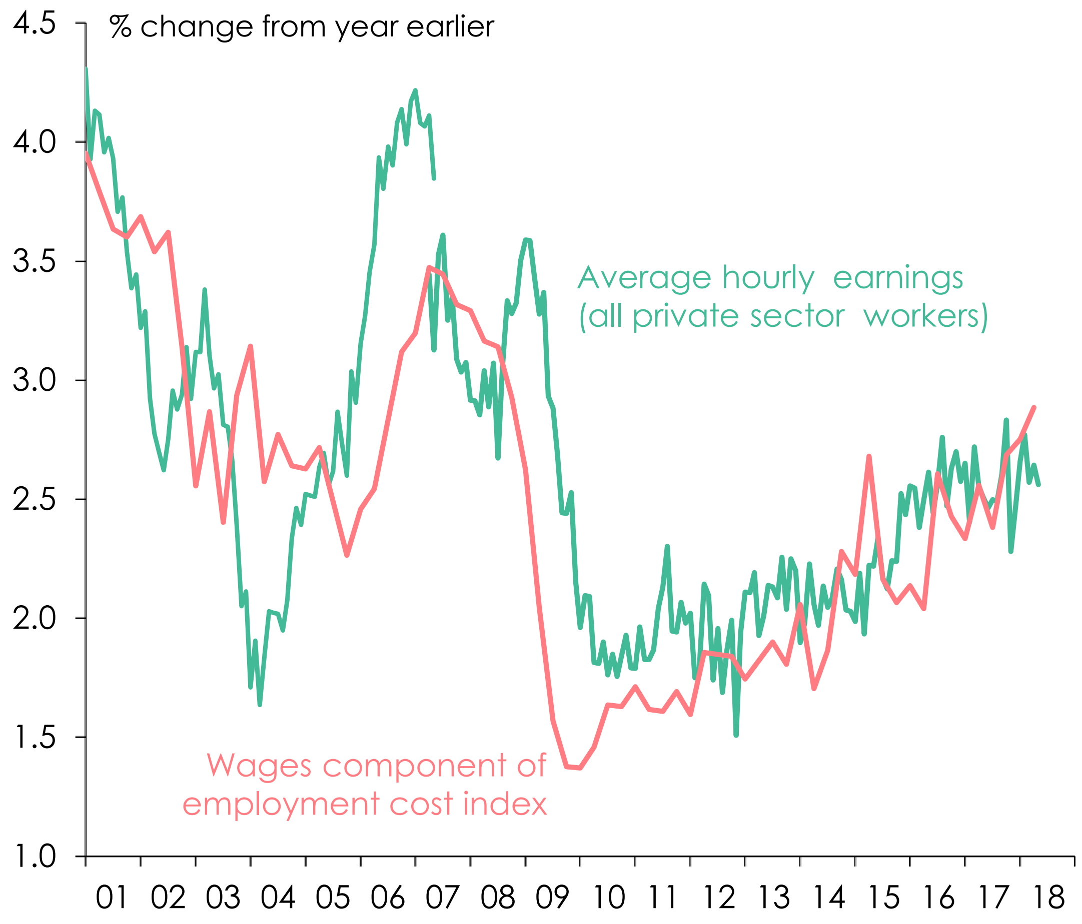
Wages are taking longer to respond to labour market tightening than they did before the crisis – but there are now clear signs of wages rising in the US

Wages growth and unemployment in the four largest 'advanced' economies



US measures of wages growth



Note: Wages growth and unemployment are averages for the US, Japan, Germany and the UK, weighted by total employment.
Sources: US Bureau of Labor Statistics; Eurostat; Japan Labour Ministry; Bundesagentur fur Arbeit; UK Office of National Statistics; OED; Corinna Economic Advisory.

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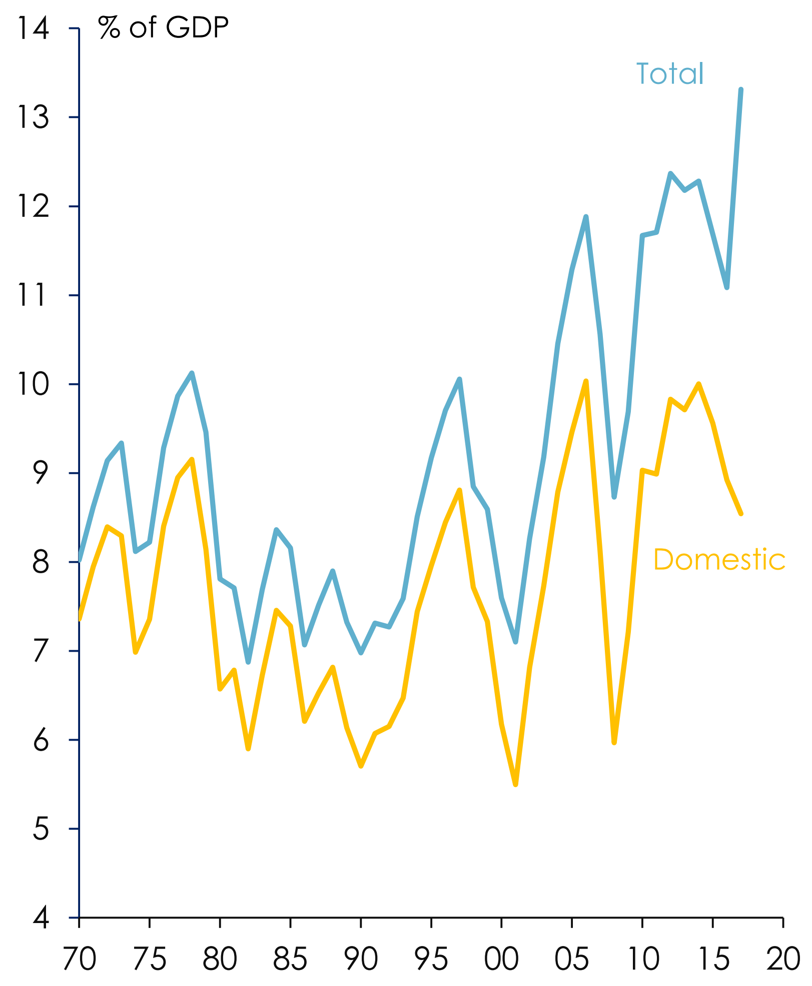
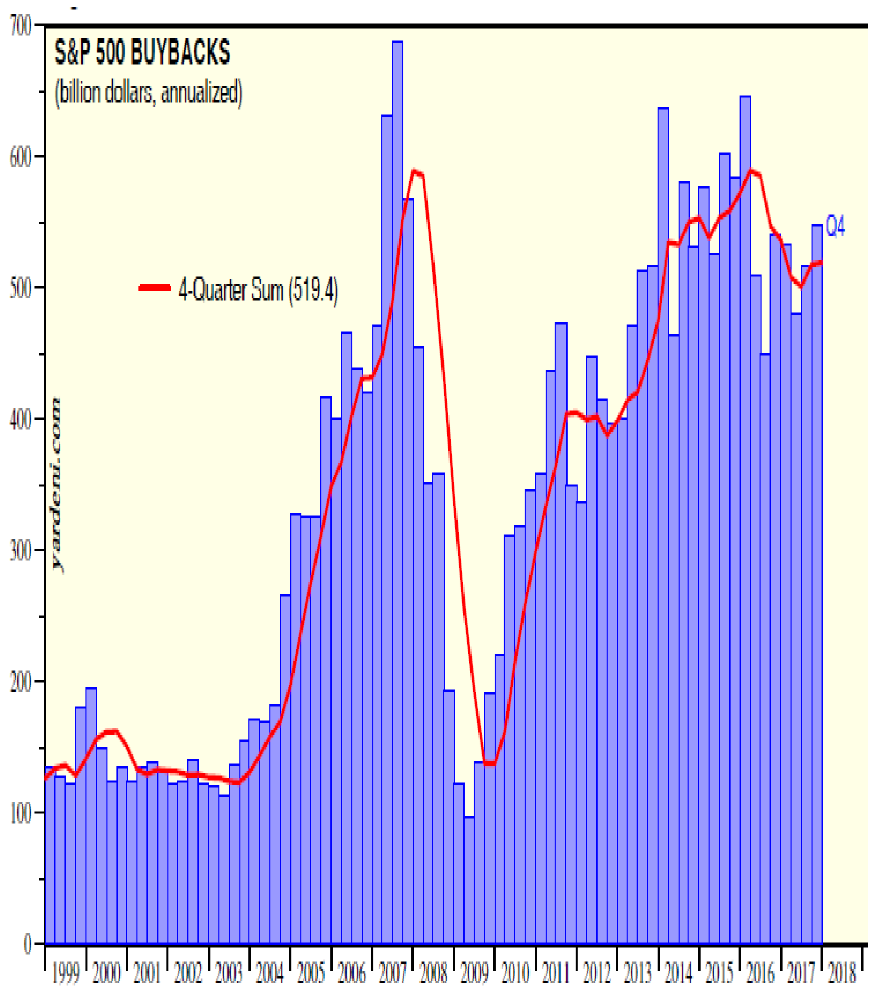
Sluggish wages growth has been one factor boosting corporate profits – which with buy-backs and record low bond yields has buoyed stocks

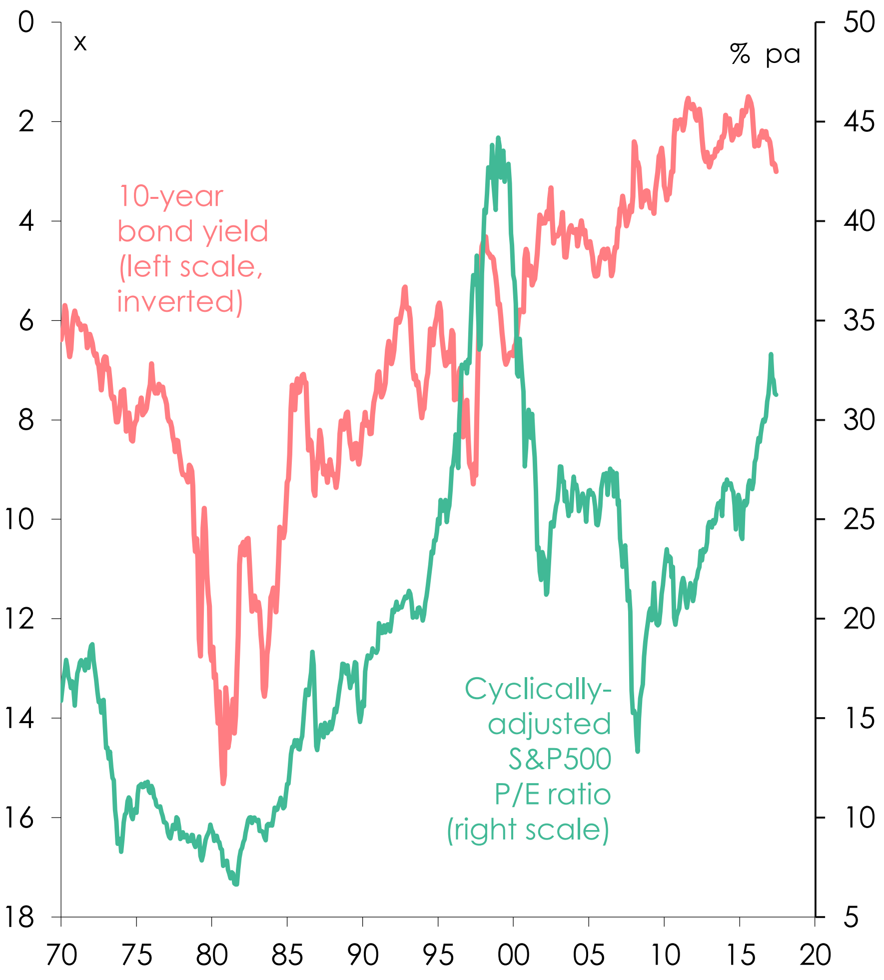
US pre-tax corporate profits as a pc of GDP



US share buybacks



US bond yields and P/E ratio



Sources: US Bureau of Economic Analysis; Yardeni Research Inc.; Robert Shiller; Thomson Reuters Datastream.

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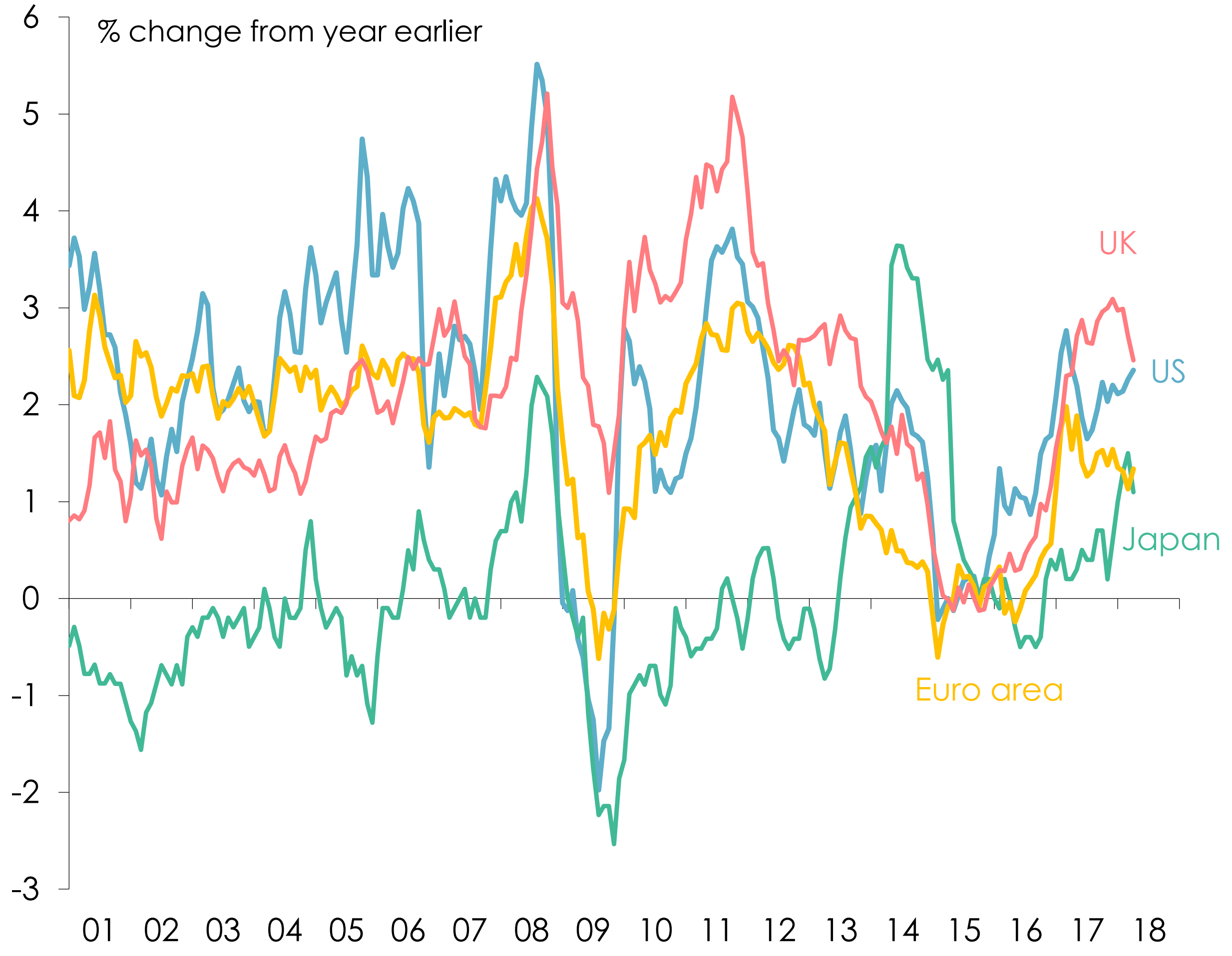
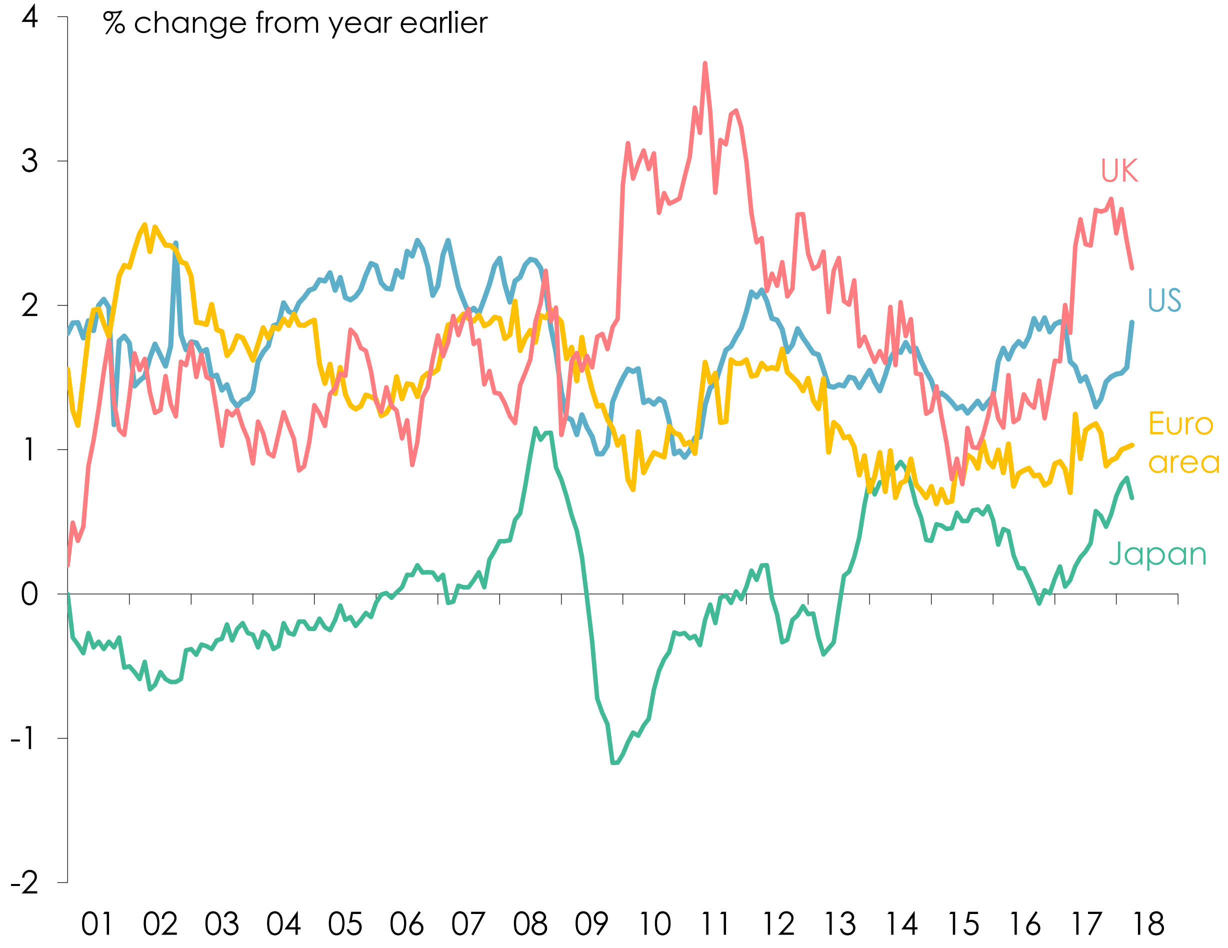
Inflation in the major 'advanced' economies is now more clearly heading to where central banks want it to be – although "we're not there yet"

'Headline' consumer price inflation



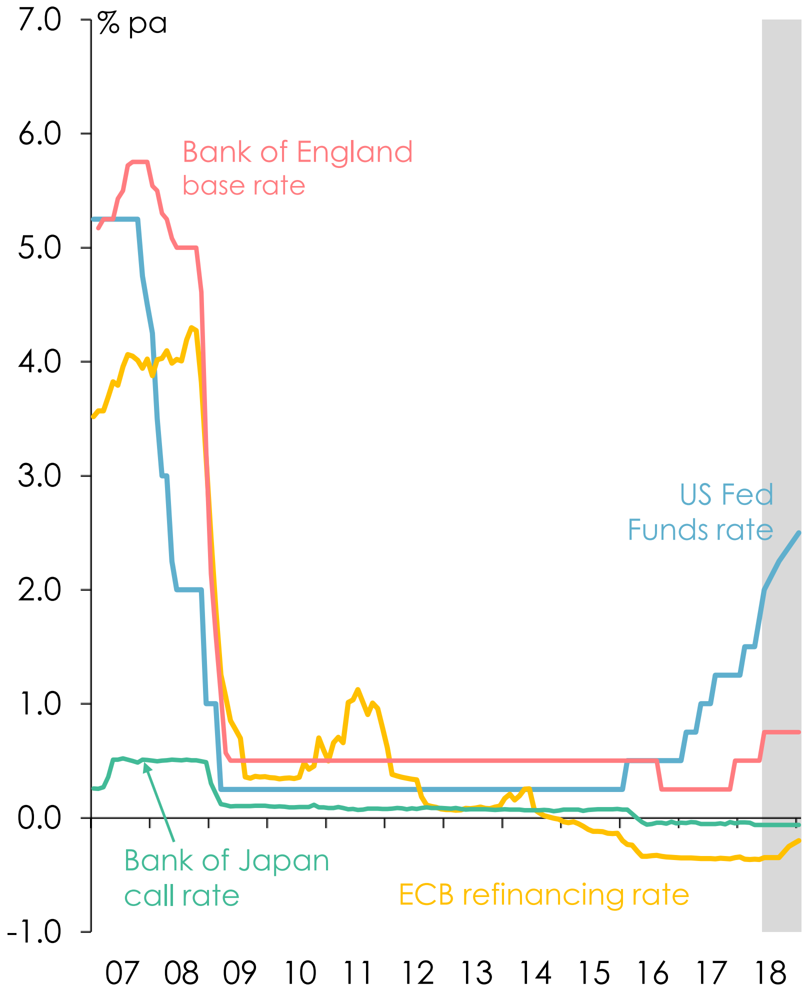
Central bank preferred measures of 'core inflation'



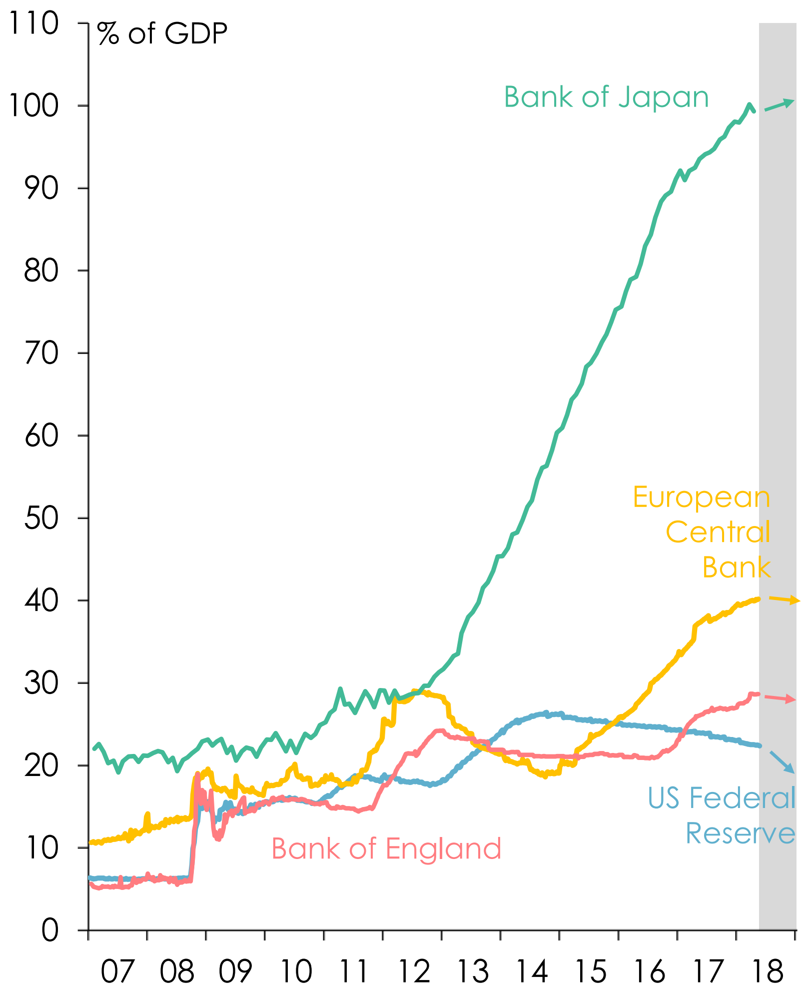
Sources: US Bureau of Labor Statistics and Bureau of Economic Analysis; Eurostat; Japan Statistics Bureau; Bank of Japan; UK Office of National Statistics. Central bank preferred measure of 'core inflation' is private consumption expenditure deflator excluding food and energy in the US; CPI excluding food and energy in the euro area and UK; and 'trimmed mean' in Japan.

So the era of ultra-cheap money is coming to an end – as bond markets began to sense from the middle of last year

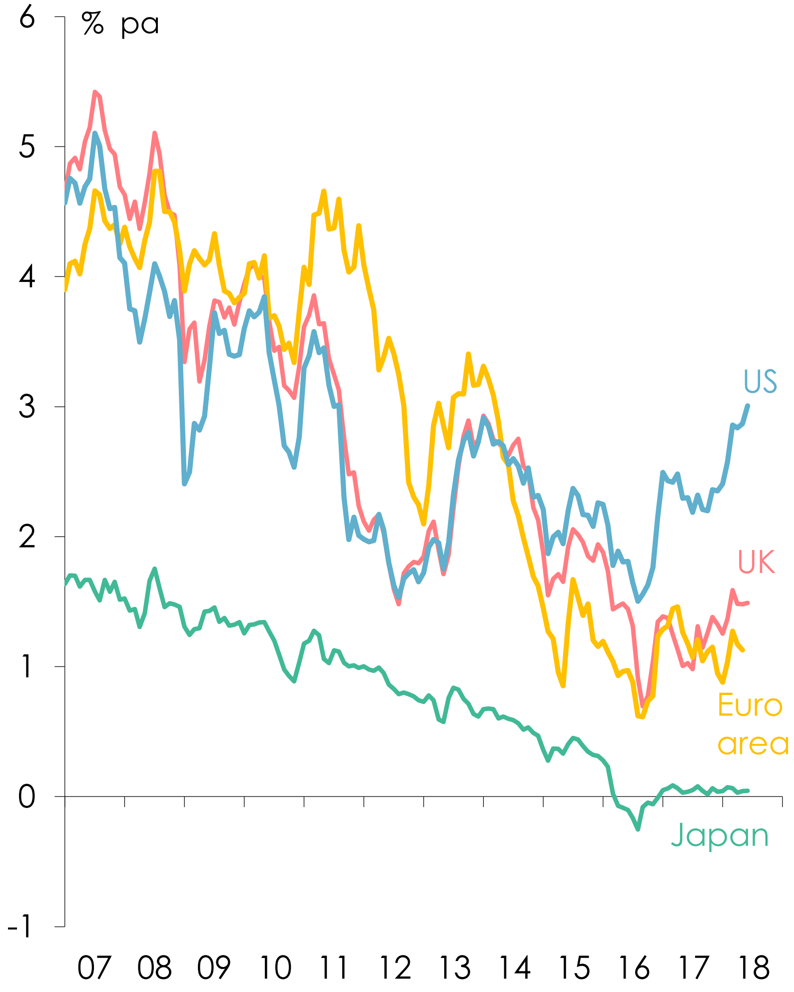
Major central bank policy interest rates



Major central bank balance sheets



10-year bond yields



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

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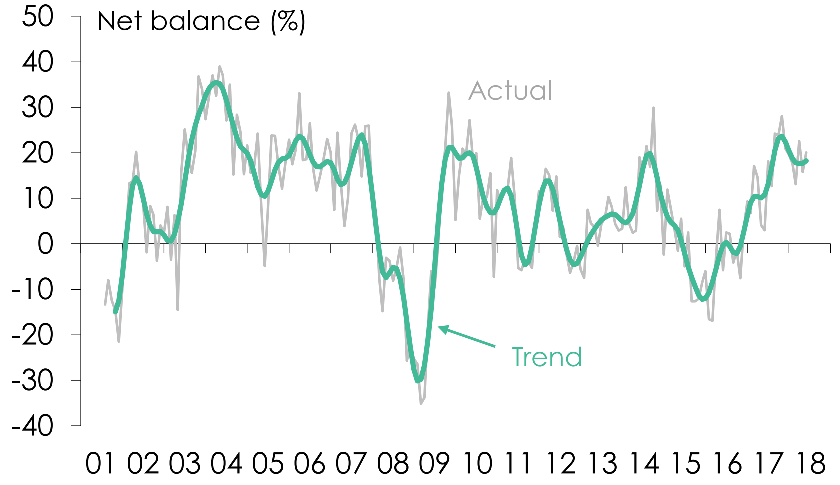
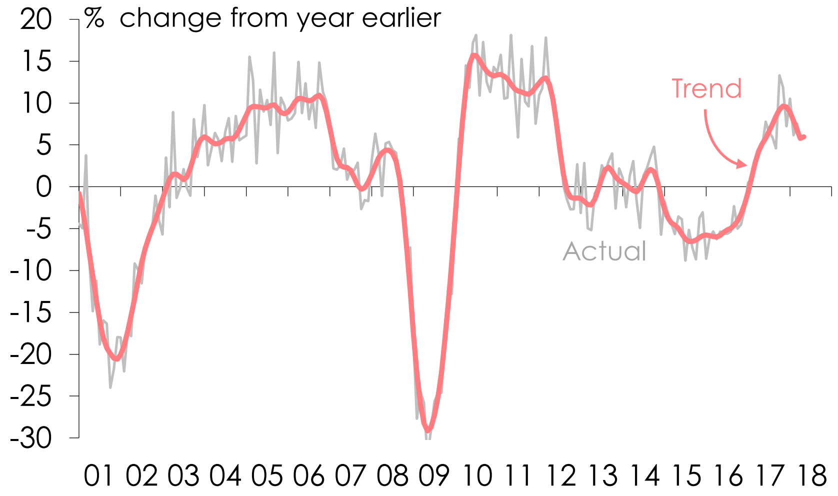
The world economy is currently 'as good as it's going to get' – and many 'leading indicators' with good track records are looking 'peaky'

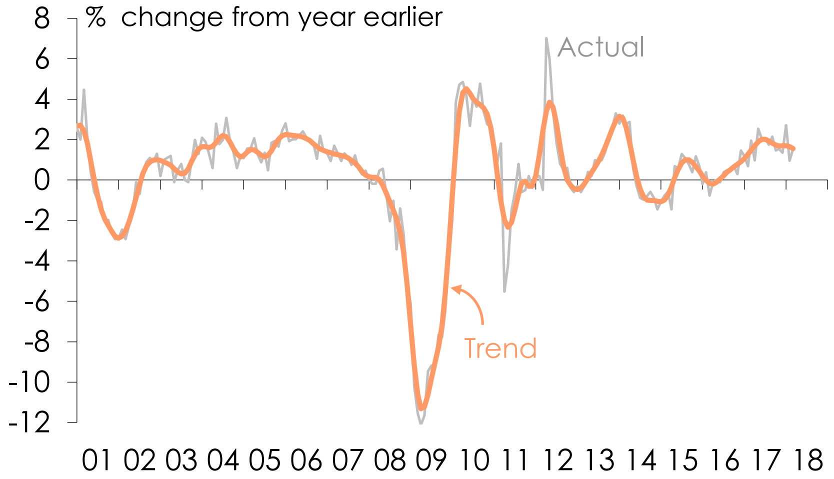
US – NY Fed 'Empire State' survey



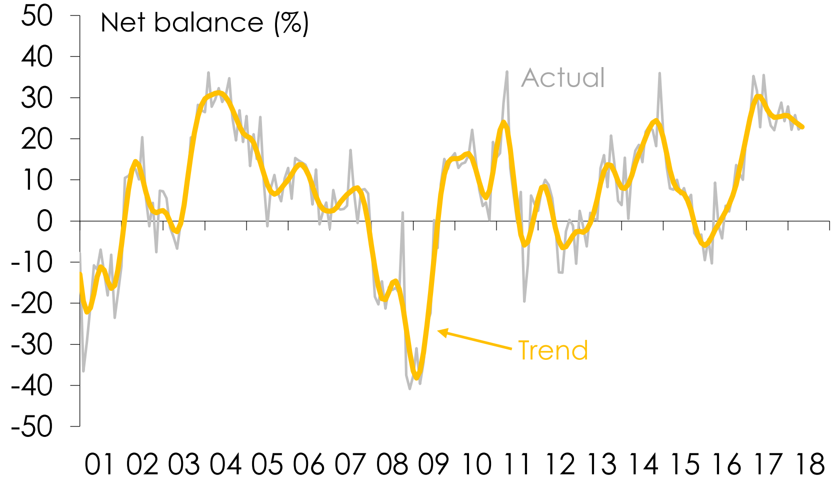
US – 'core' capital goods orders



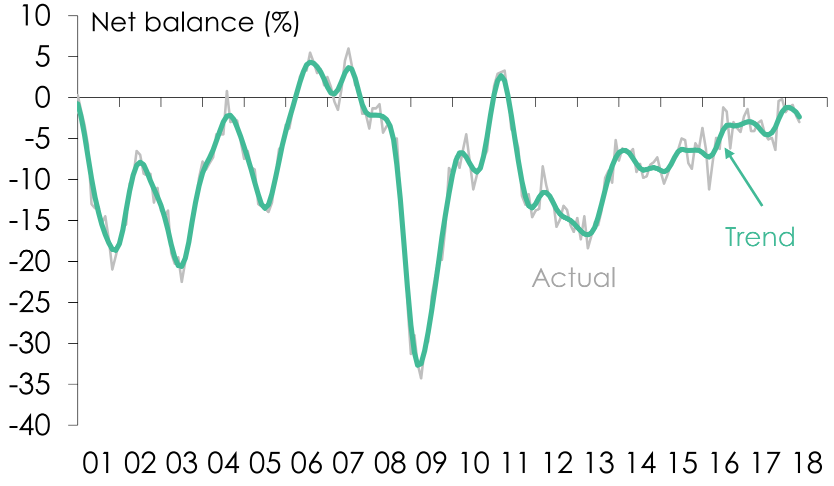
Japan – METI business activity index



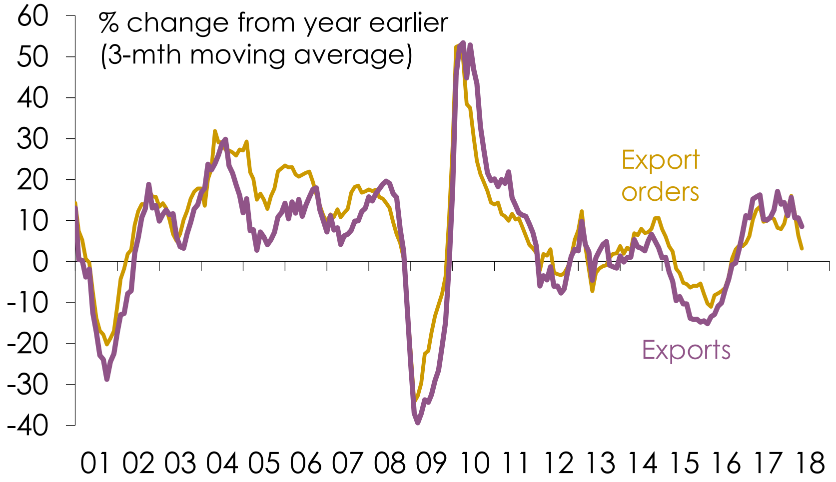
US – Philly Fed business survey



Euroland – BNB business survey



Taiwan – exports & export orders

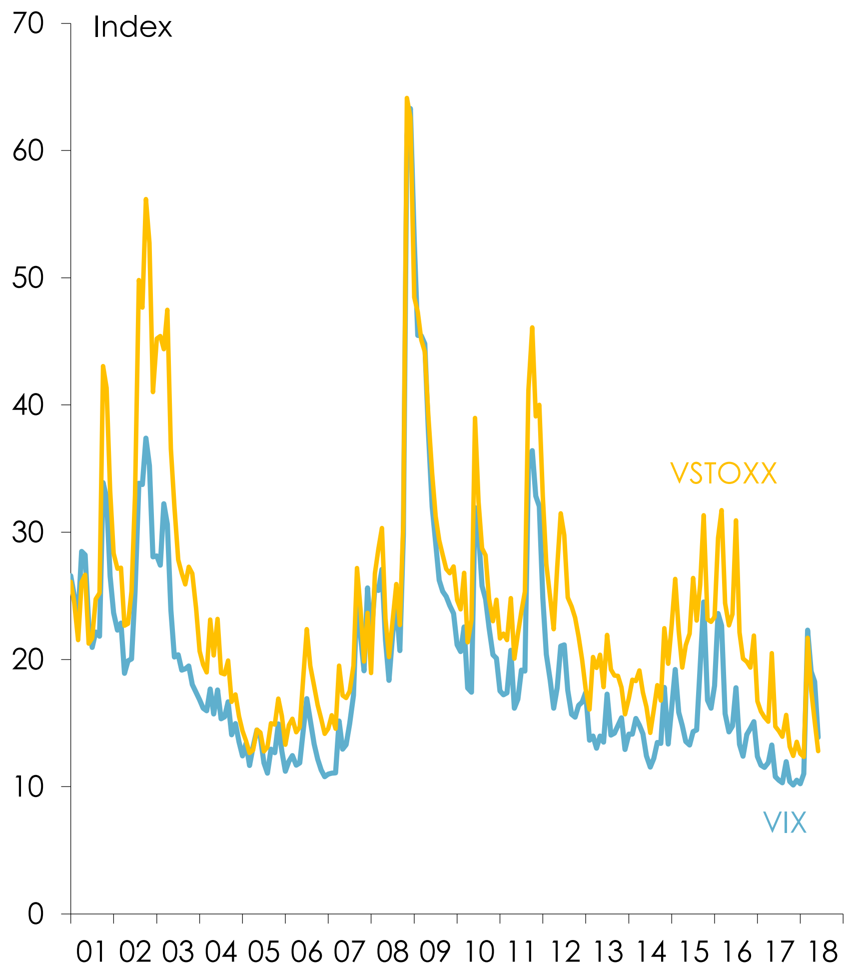


Note: US 'core' capital goods orders excludes defence equipment and aircraft. *Sources:* Federal Reserve Banks of New York and Philadelphia; US Commerce Department; Belgian National Bank; Japan Ministry of External Trade & Industry; Taiwan Statistical Bureau.

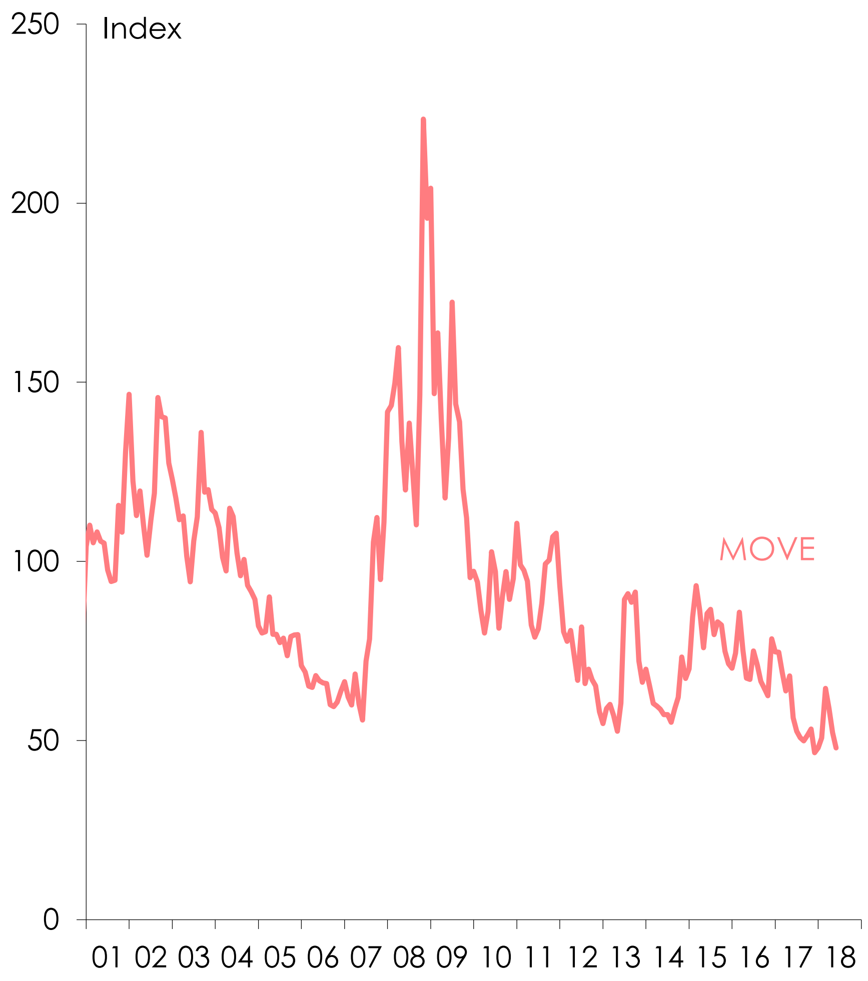
‘Quantitative tightening’ should, in theory, result in greater volatility in financial assets, although so far it hasn’t

Measures of financial market volatility

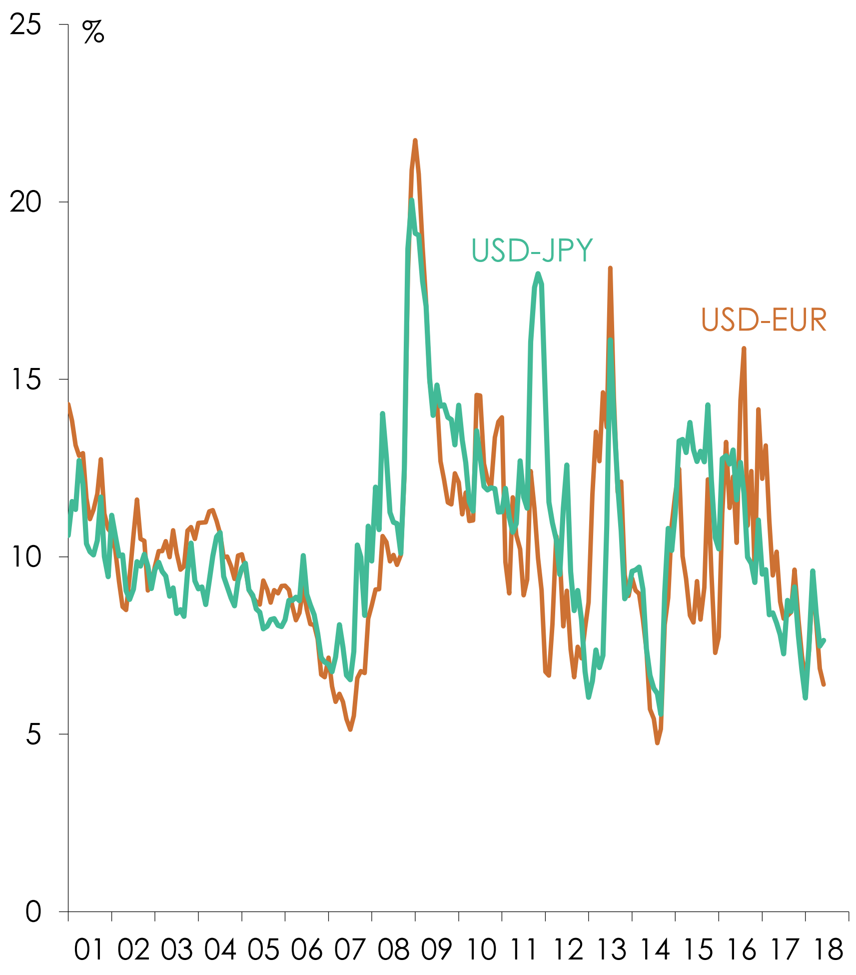
Equities



Bonds



Currencies



Note: The VIX index is a measure of the implied volatility of S&P 500 index options. VSTOXX is a measure of the implied volatility of Euro Stoxx 50 options. The MOVE (Merrill lynch Option Volatility Estimate) is a weighted average of the implied volatility of options on 1-, 2, 5-, 10- and 30-year US Treasury bond yields. The currency volatilities are of 3-month options. *Source:* Thomson Reuters Datastream.

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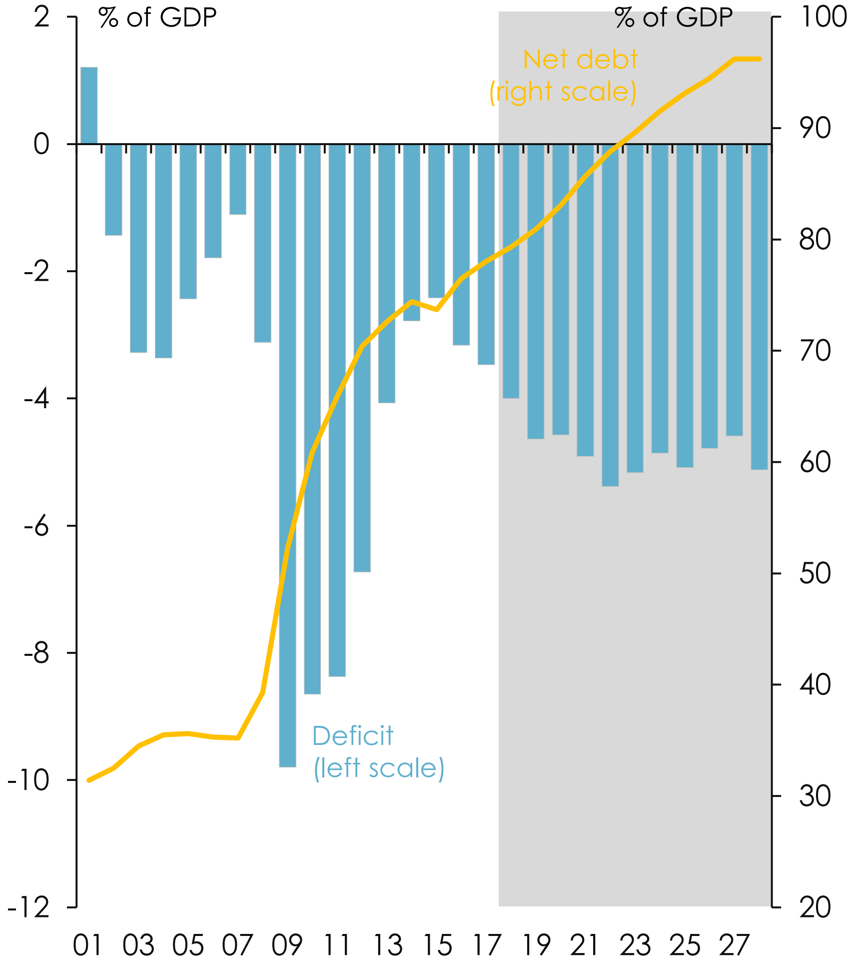
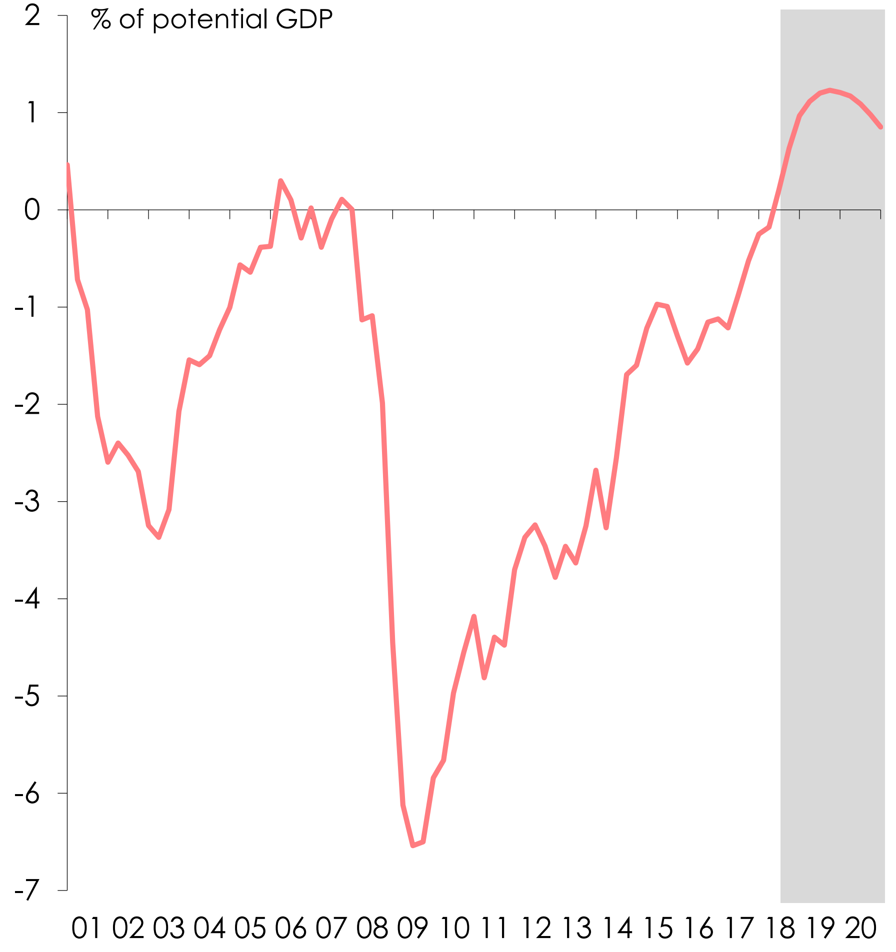
US fiscal stimulus is spectacularly ill-timed from an economic management standpoint and will add to upward pressure on interest rates

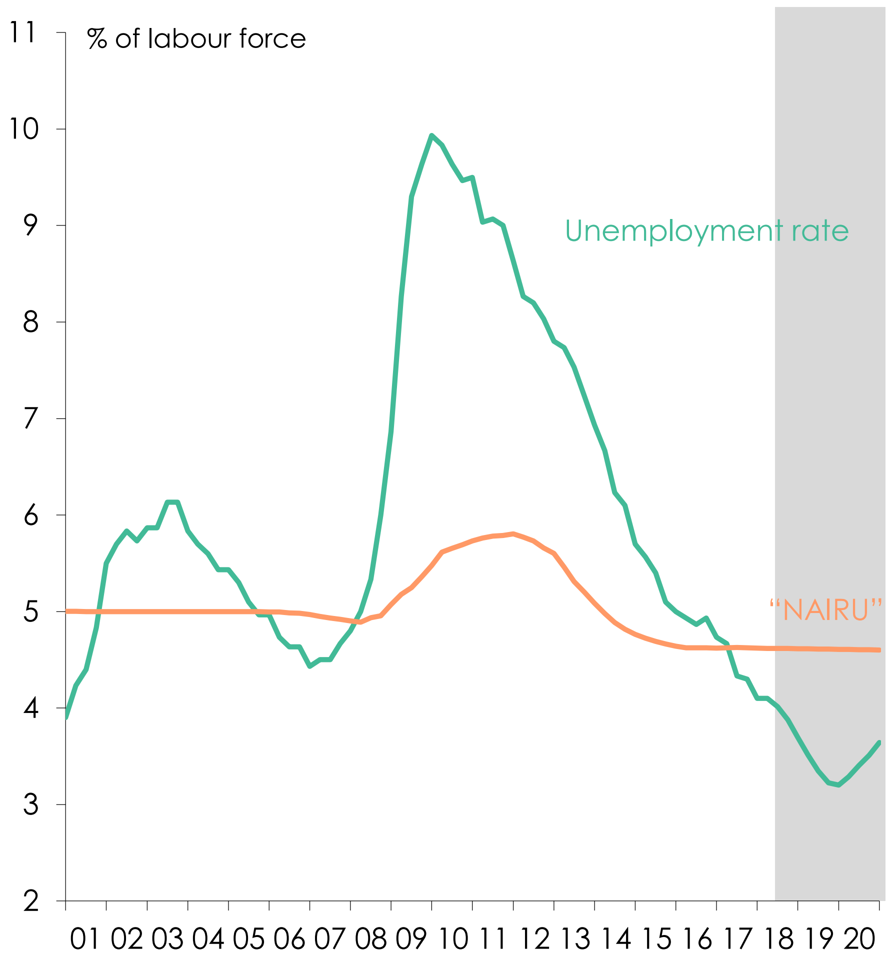
US Federal Government budget deficit and debt



US 'output gap'



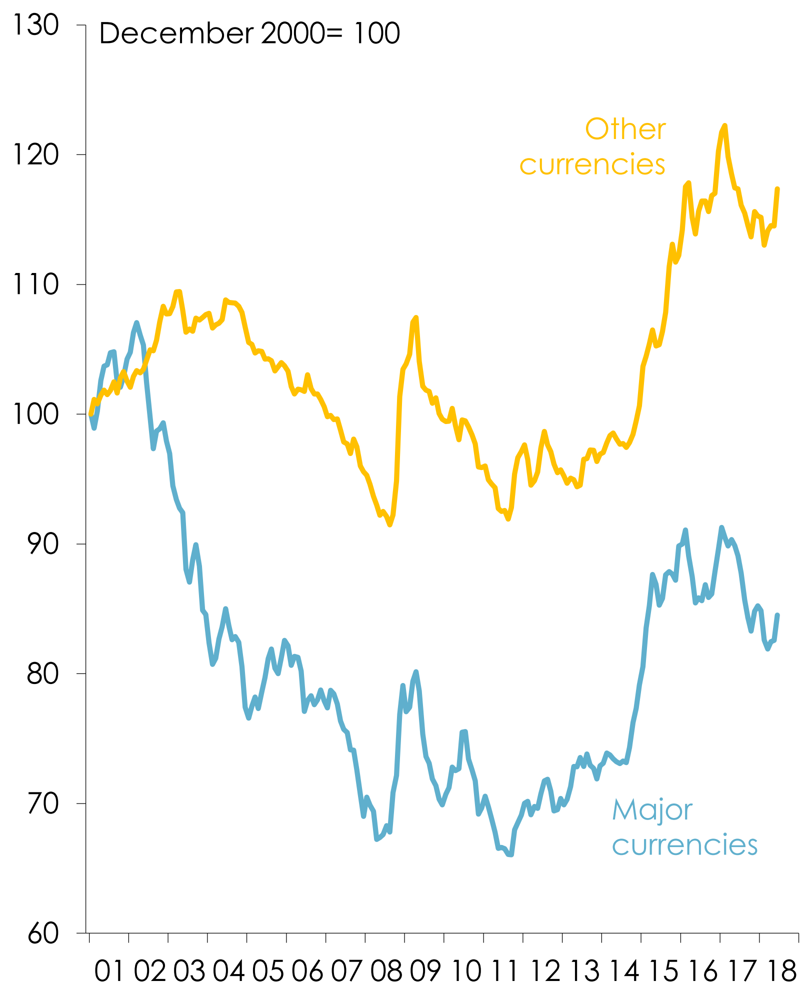
US unemployment rate and 'NAIRU'



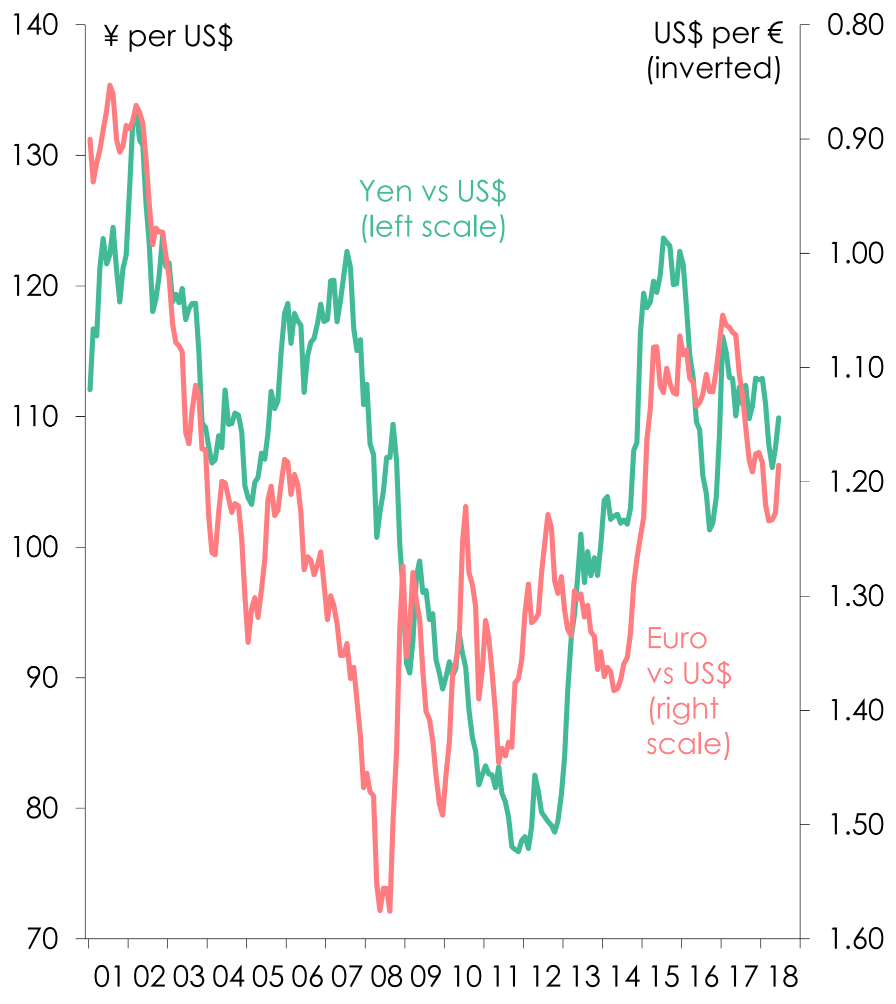
Note: 'Net debt' excludes debt held by the US Federal Reserve. The 'output gap' is the difference between actual and 'potential' GDP. The 'NAIRU' or non-accelerating inflation rate of unemployment' is the lowest level of unemployment consistent with stable inflation.
Source: US Congressional Budget Office, *The Budget and Economic Outlook: 2018 to 2028.*

Widening interest rate spreads between the US and other major economies should see the US$ strengthen – which could mean trouble for some others

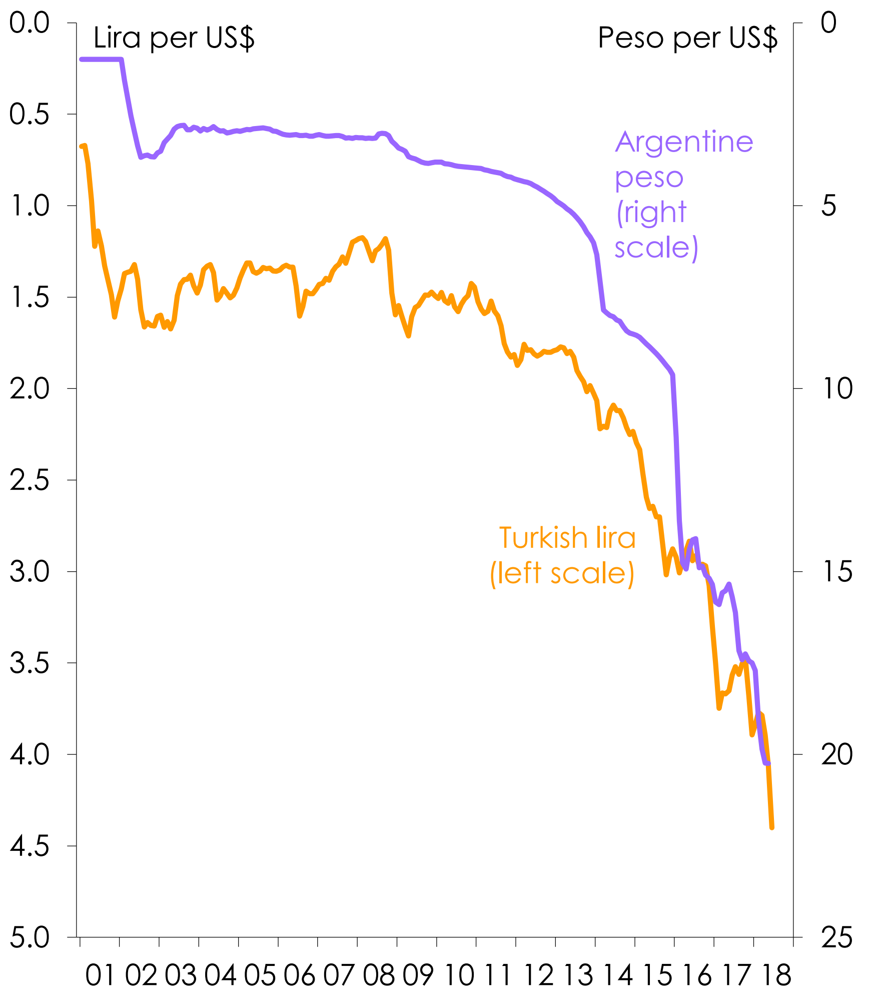
US dollar index vs major and other currencies



US dollar vs Japanese yen and euro



Turkish lira and Argentine peso vs US dollar



Source: Thomson Reuters Datastream.

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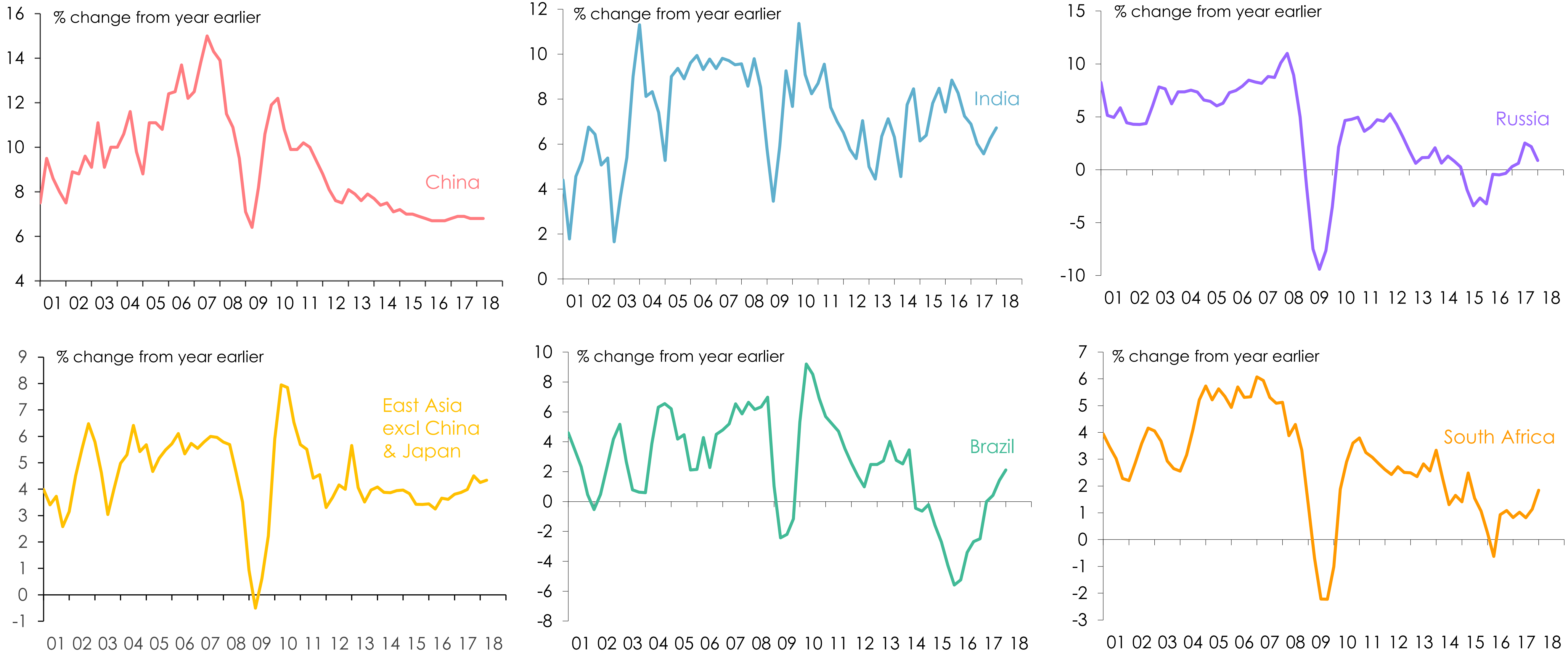
Growth has picked up in emerging market economies which were previously hard hit by falling commodity prices

Real GDP growth – major emerging market economies



Sources: national statistical agencies; Thomson Reuters Datastream.

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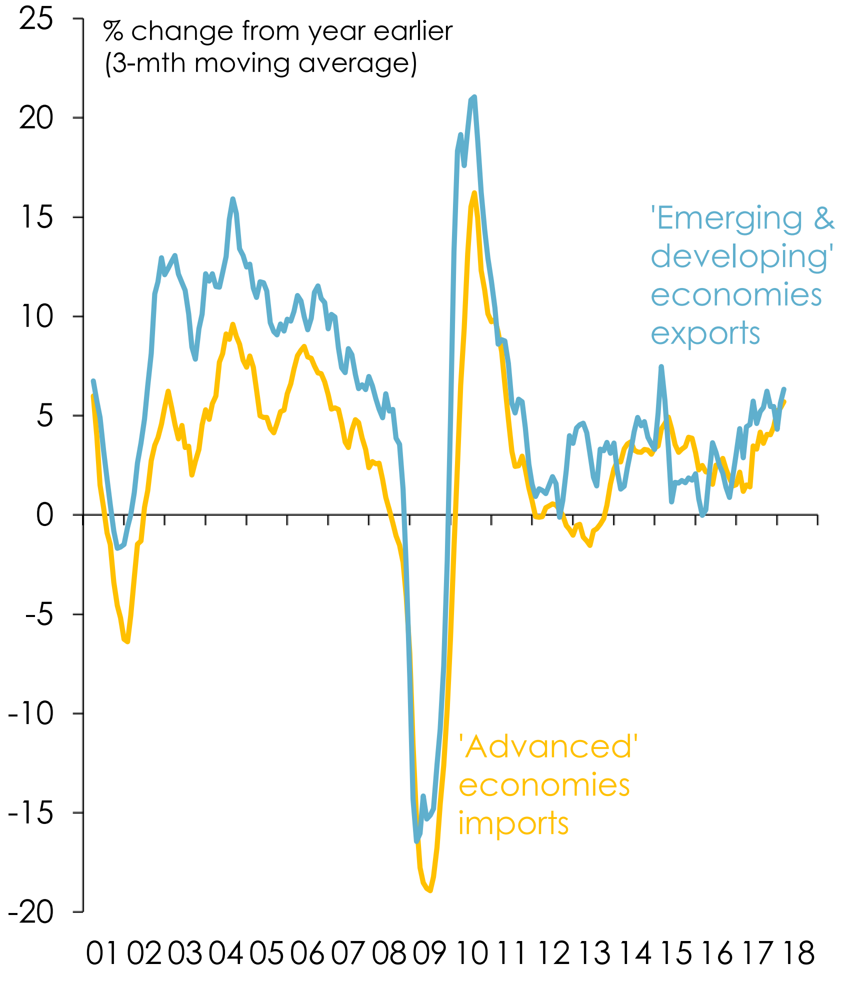
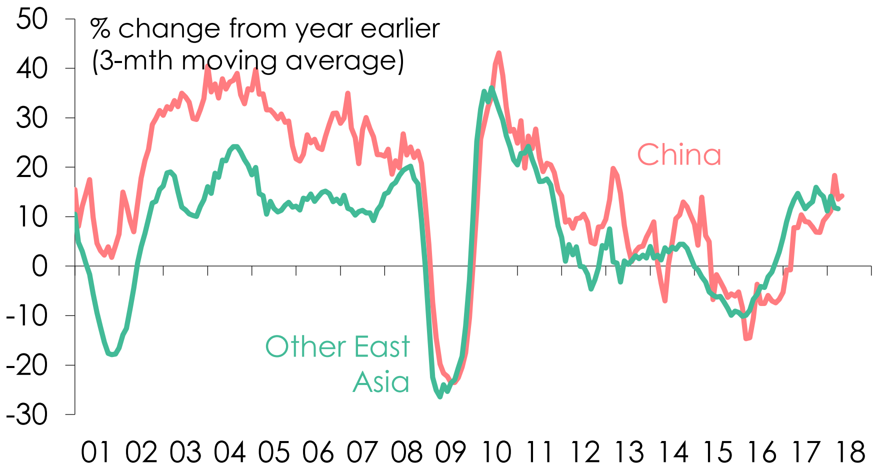
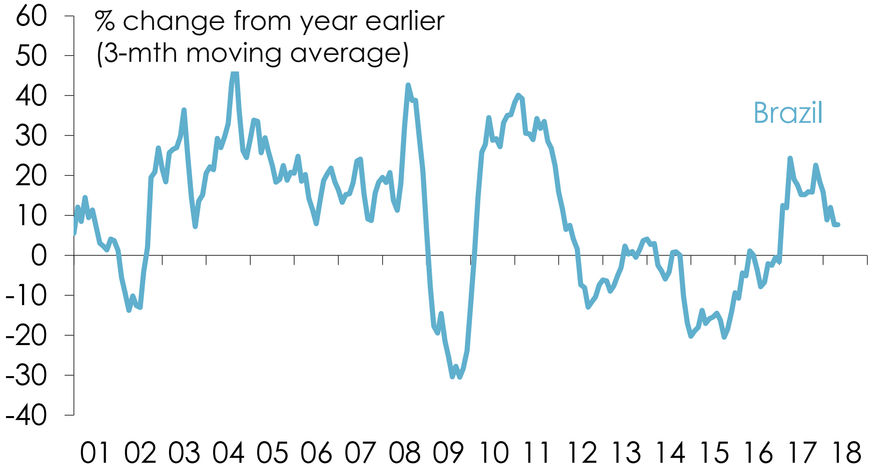
Revival in emerging economies' growth has been largely driven by exports

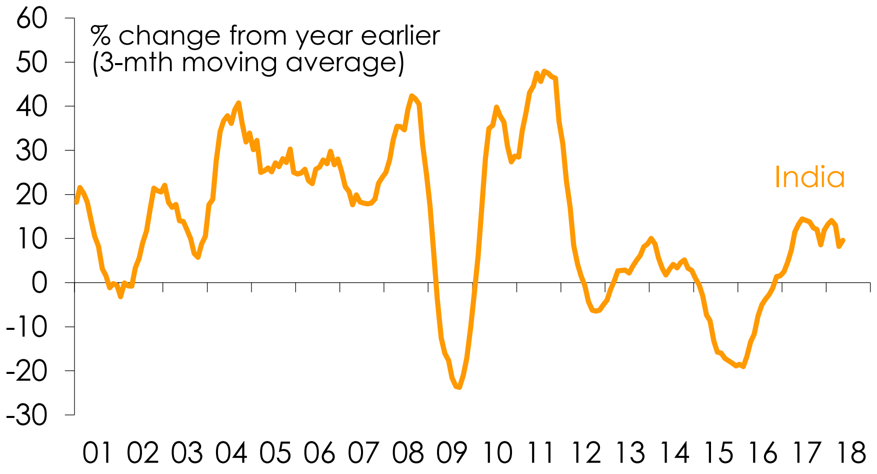
Merchandise trade volumes

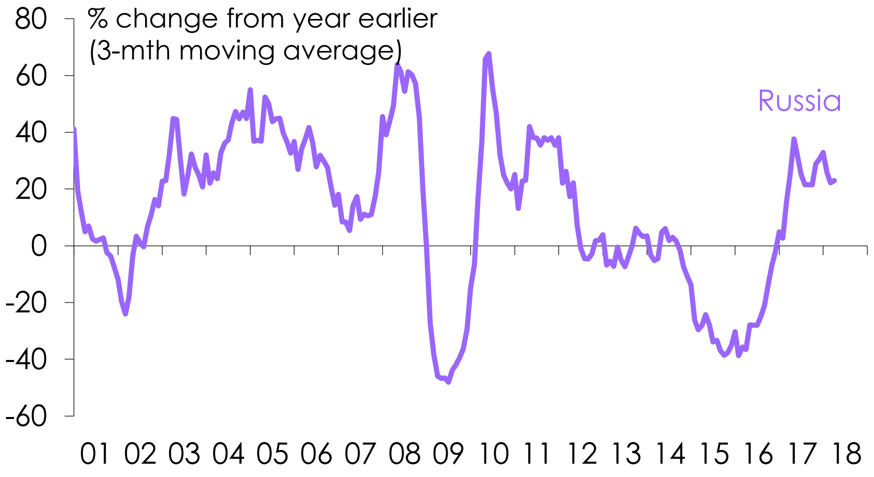


Major emerging market economies – value of exports (in US$)





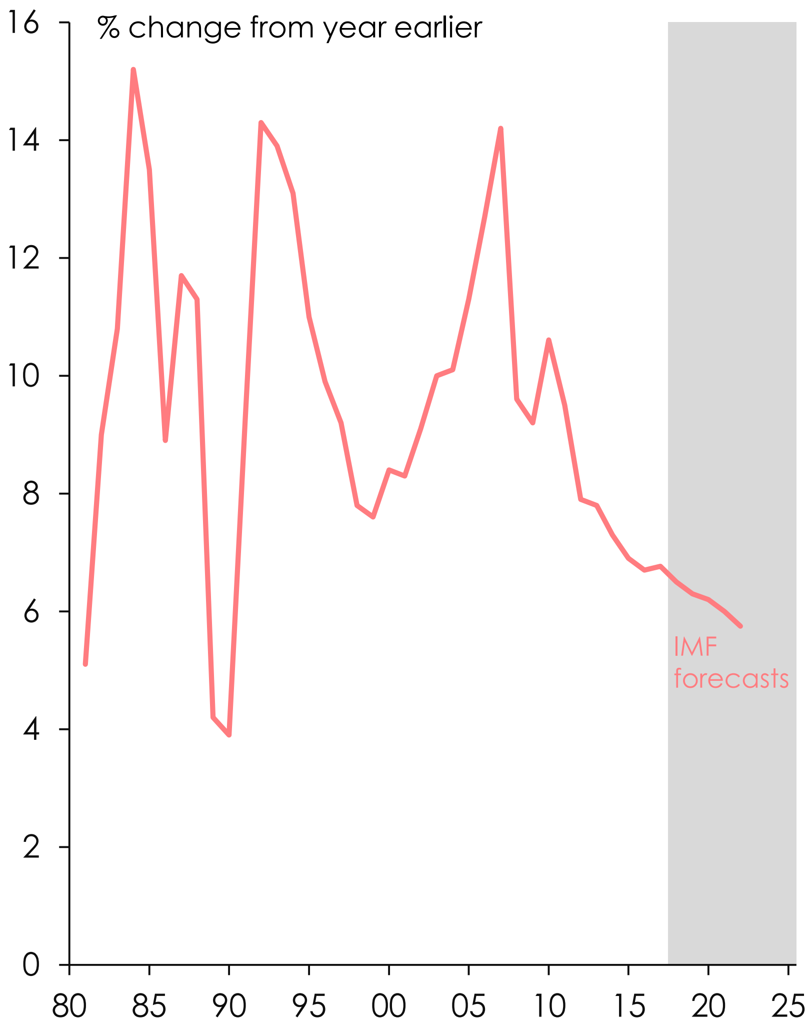




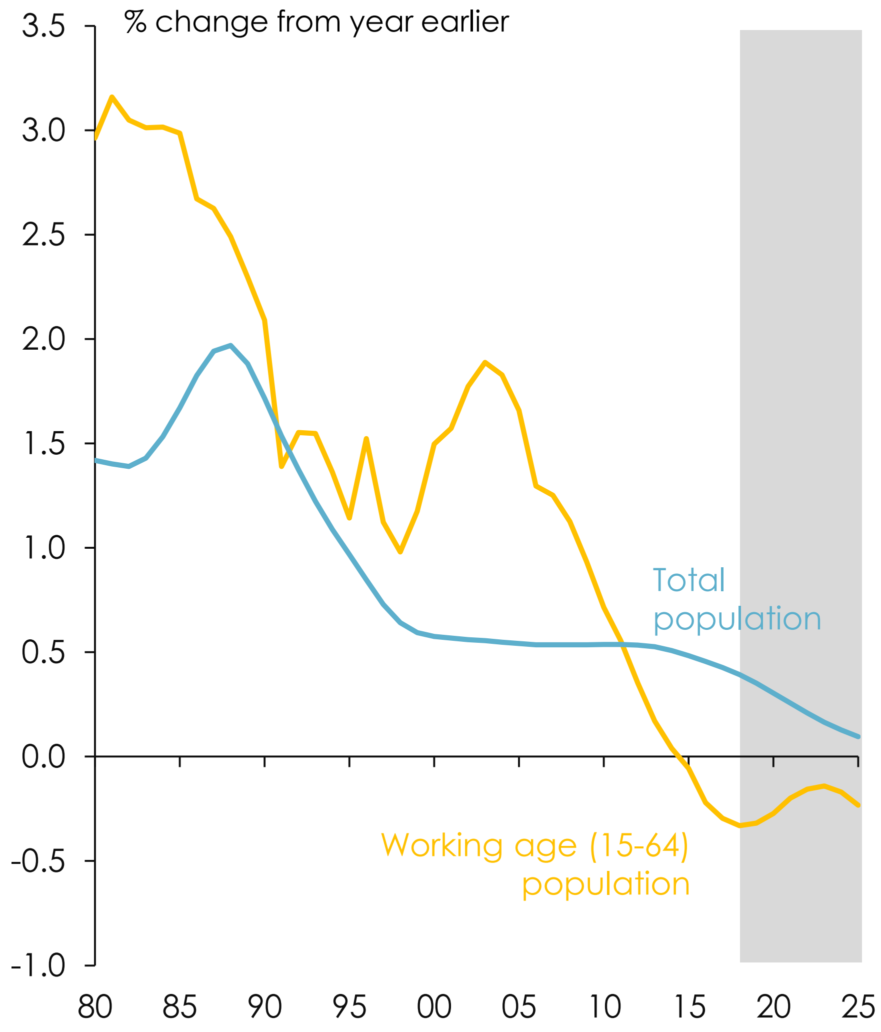
Sources: Netherlands Economic Planning Bureau (CPB); national statistical agencies and central banks.

China's economy is slowing, partly because its workforce has started to shrink – and because productivity growth is slowing

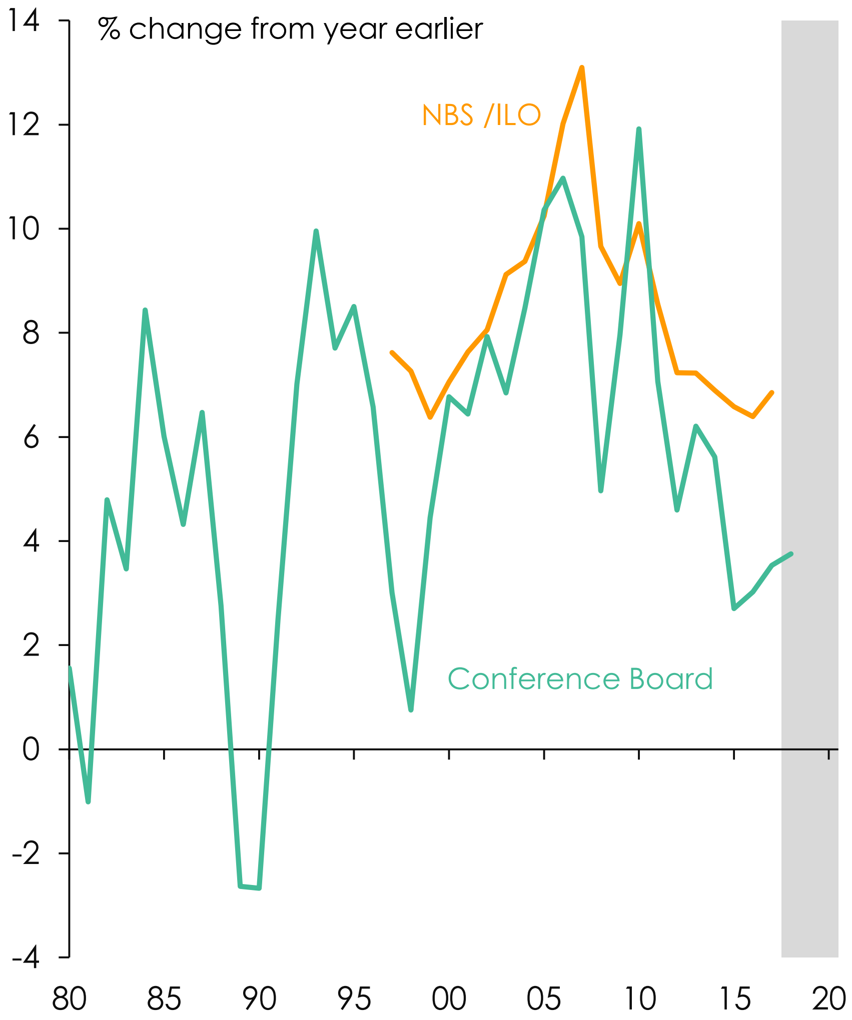
China real GDP growth



Chinese population



Chinese labour productivity



Sources: China National Bureau of Statistics (NBS); IMF ; UN Economic & Social Affairs Division, Population Branch ; International Labour Organization.

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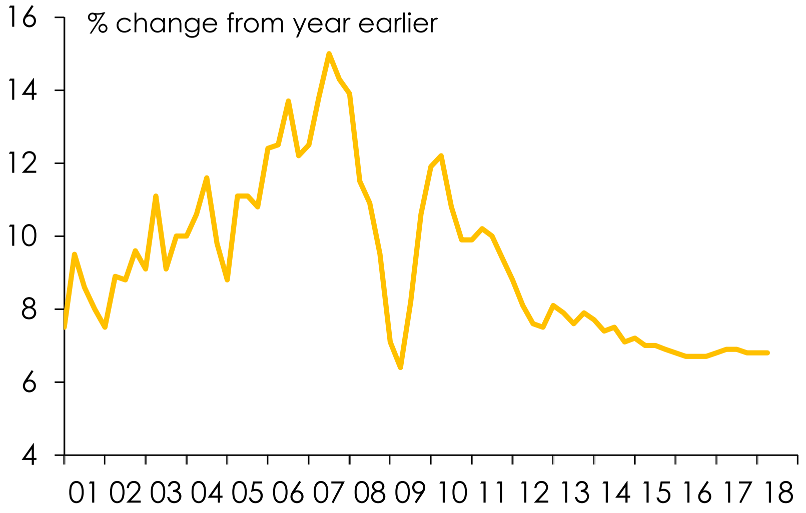
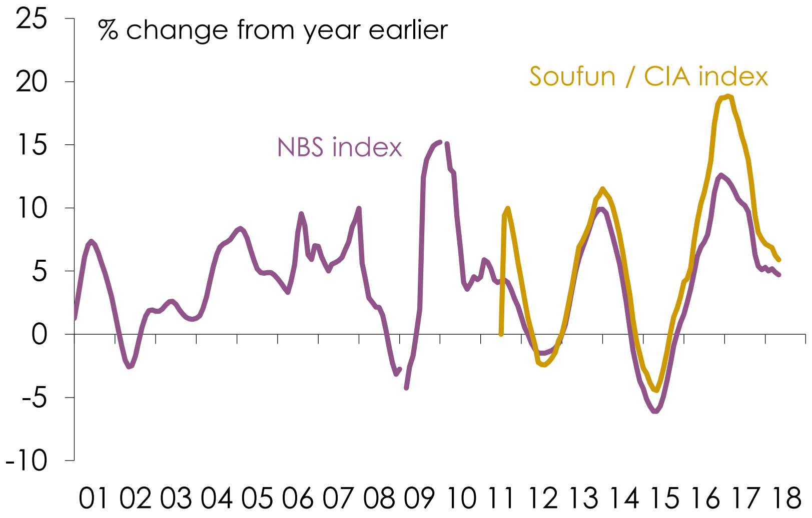
Amazingly steady Chinese GDP figures masking a slow-down in some of the more commodity-intensive sectors of the economy

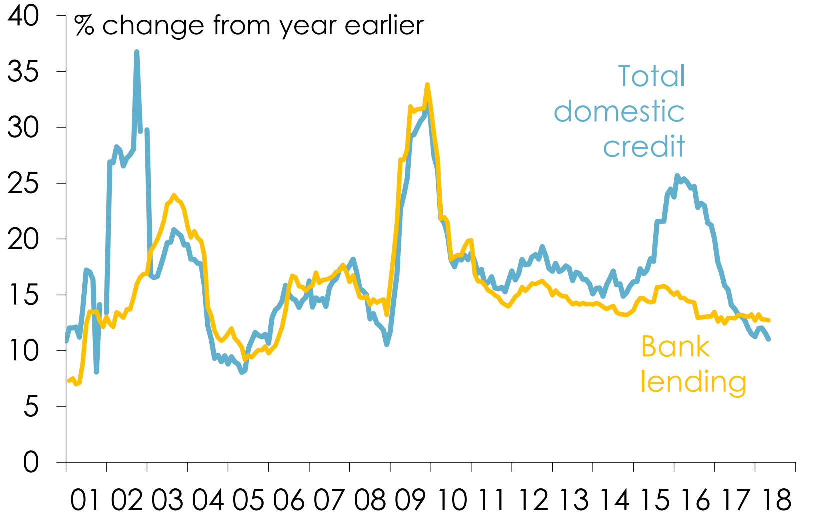
Real GDP growth



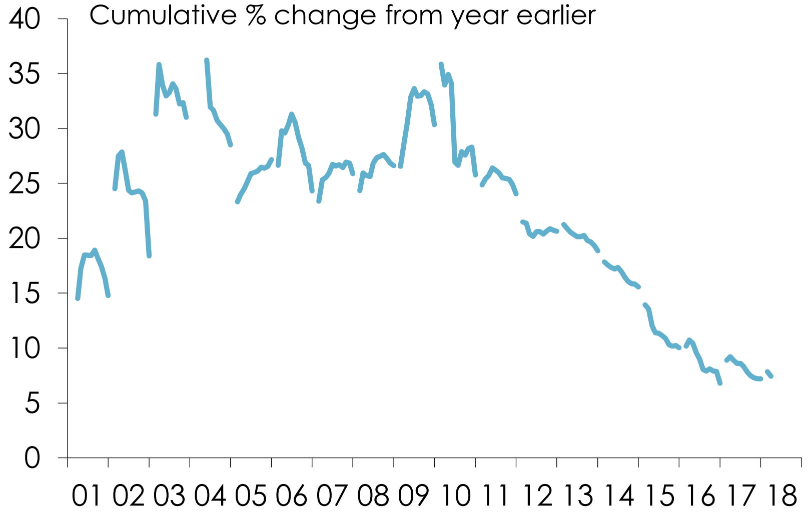
Residential property prices



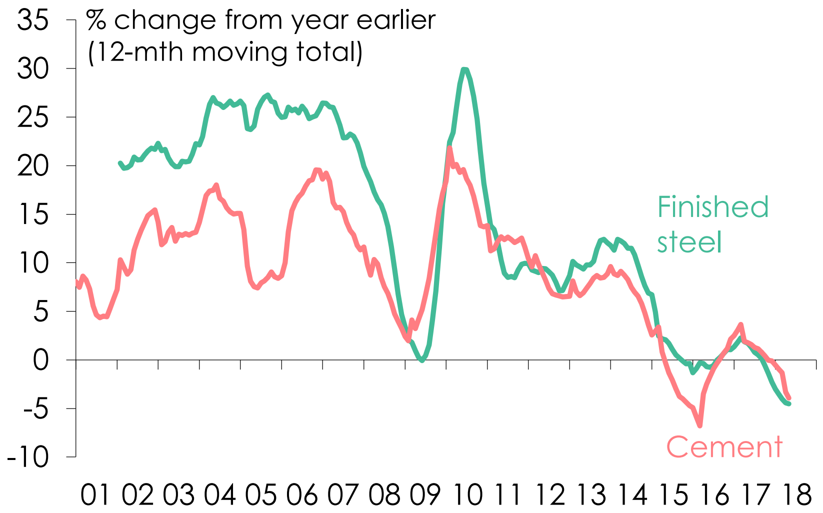
Credit growth



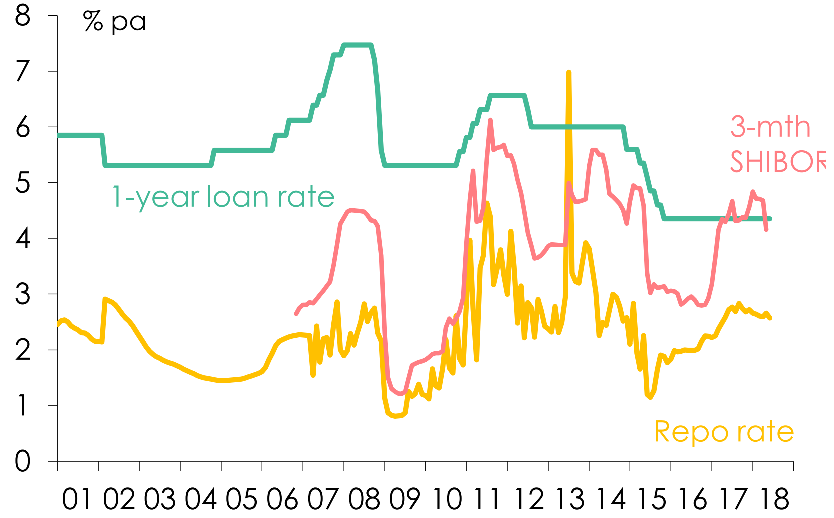
Fixed asset investment



Steel and cement production



Interest rates



Source: China National Bureau of Statistics; People's Bank of China.

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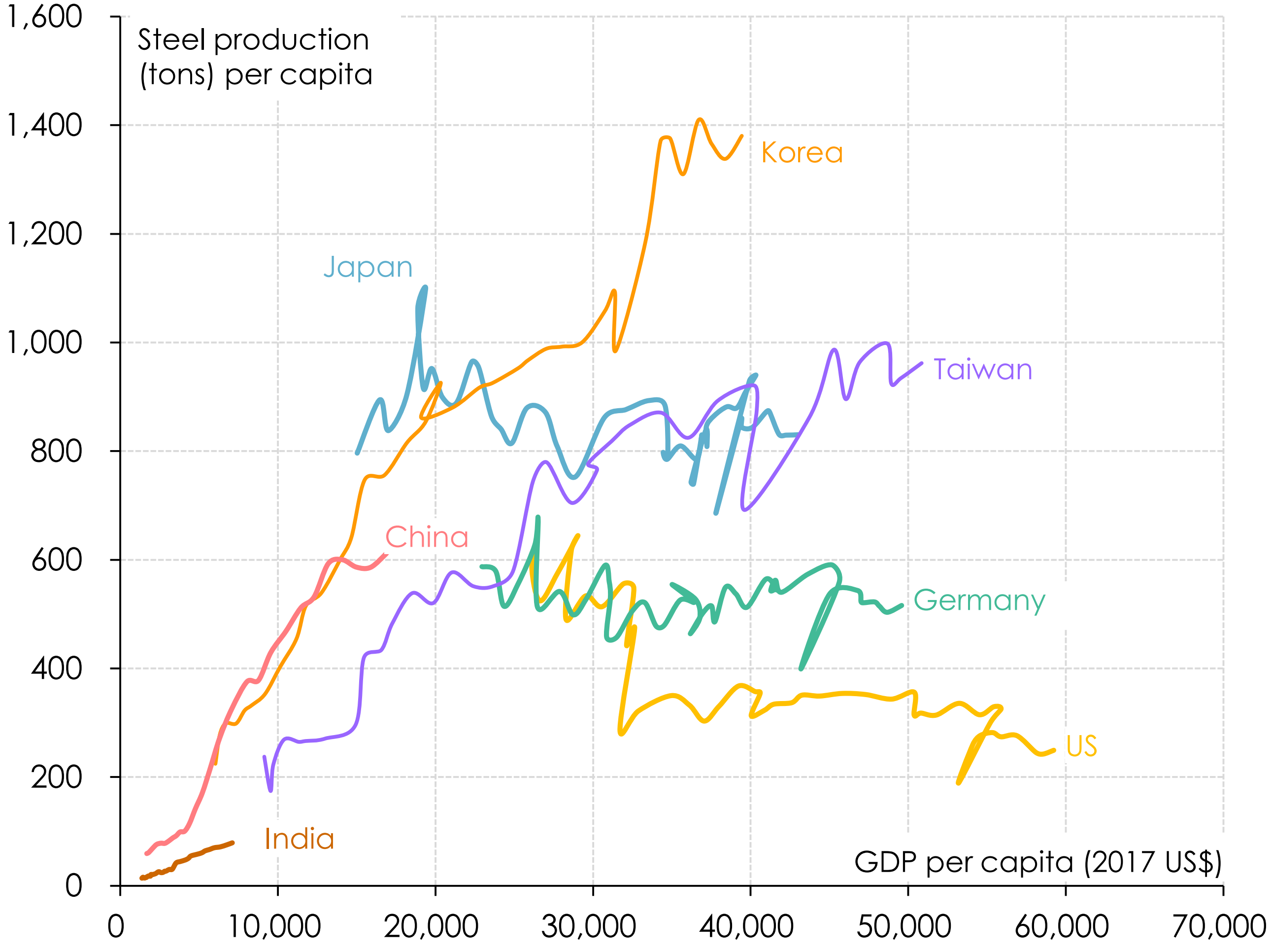
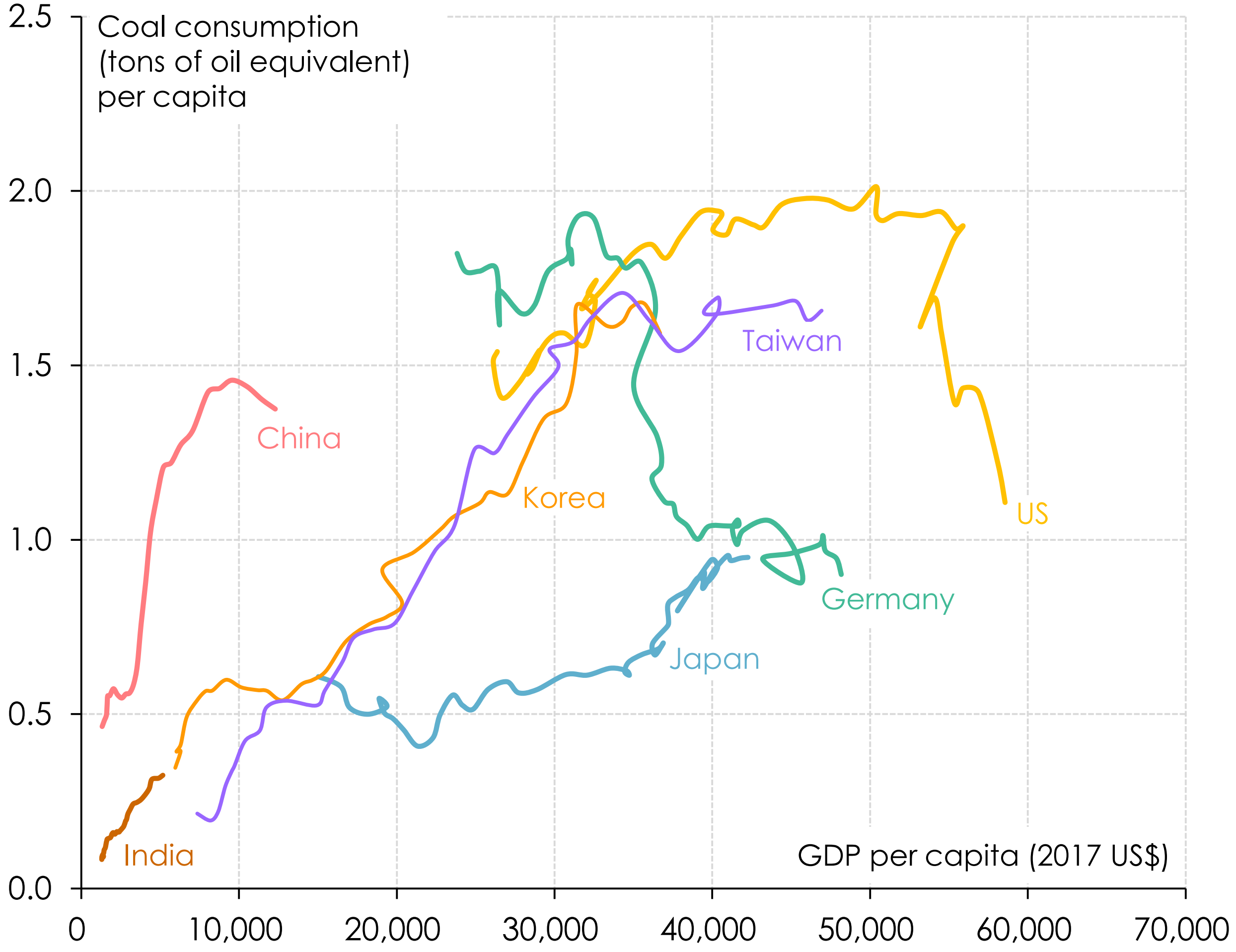
China appears to have reached 'peak steel' and 'peak coal', at lower levels of per capita income than most 'advanced' economies

Steel intensity of economic activity, 1969-2017



Coal intensity of economic activity, 1969-2016



Sources: World Steel Institute; BP; The Conference Board; Corinna Economic Advisory.

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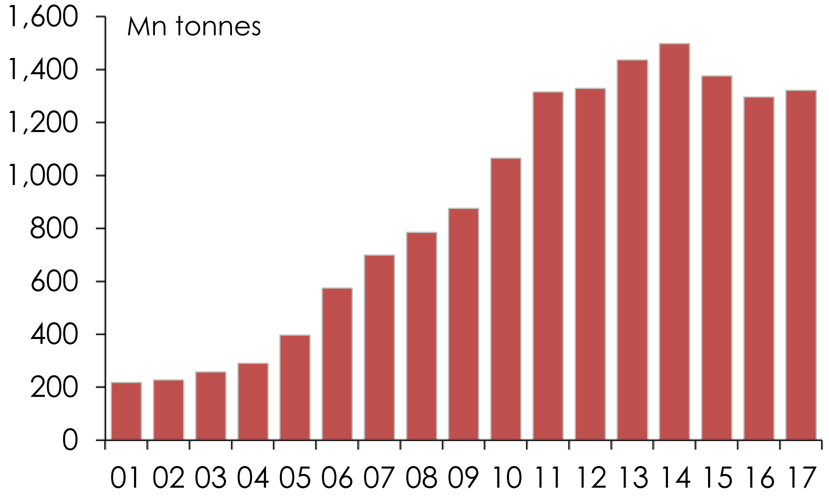
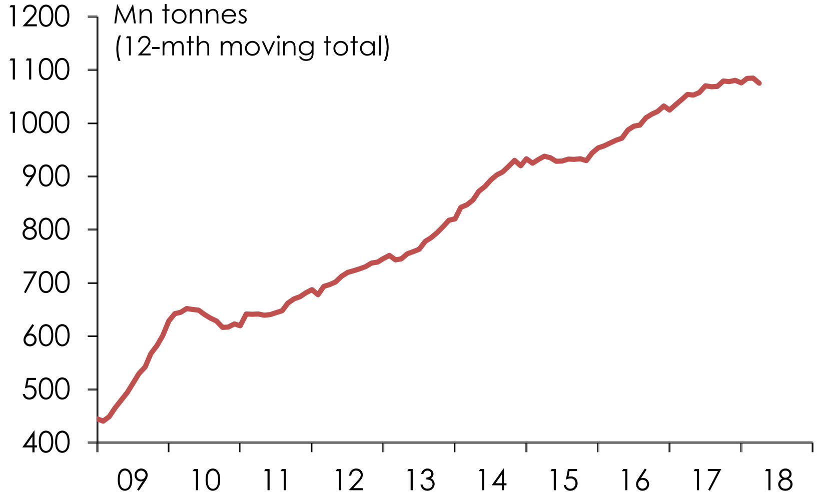
The main reason for continued growth in Chinese iron ore and coal imports is declining Chinese production

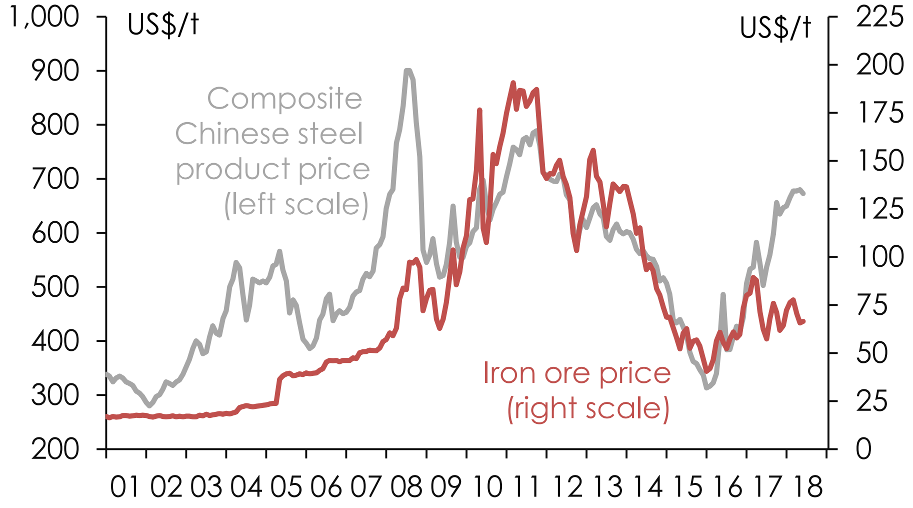
Chinese iron ore production



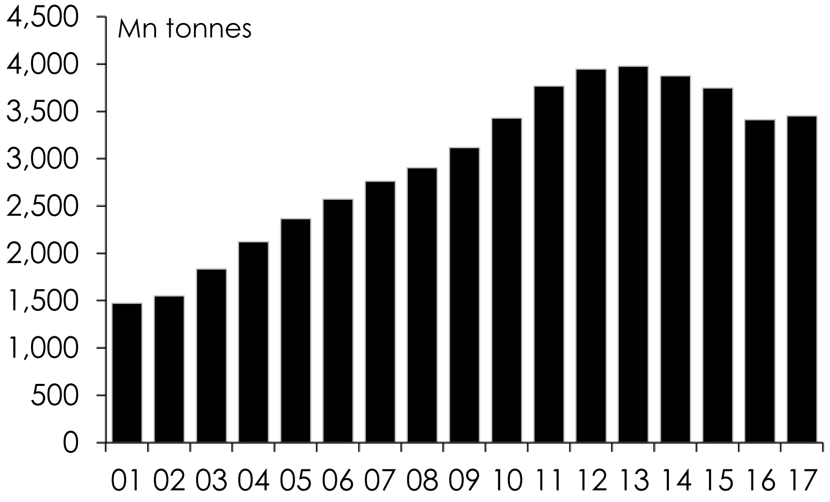
Chinese iron ore imports



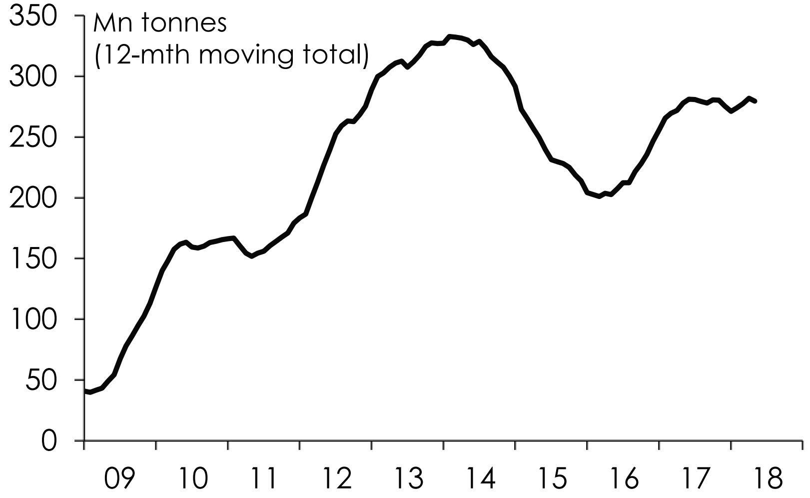
Steel and iron ore prices



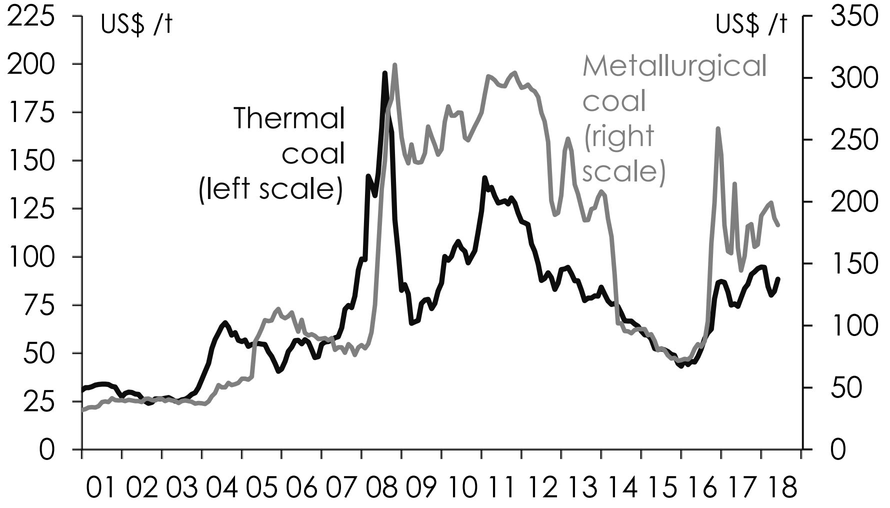
Chinese coal production



Chinese coal imports



Coal prices



Source: China National Bureau of Statistics; China Customs Information Center; Thomson Reuters Datastream.

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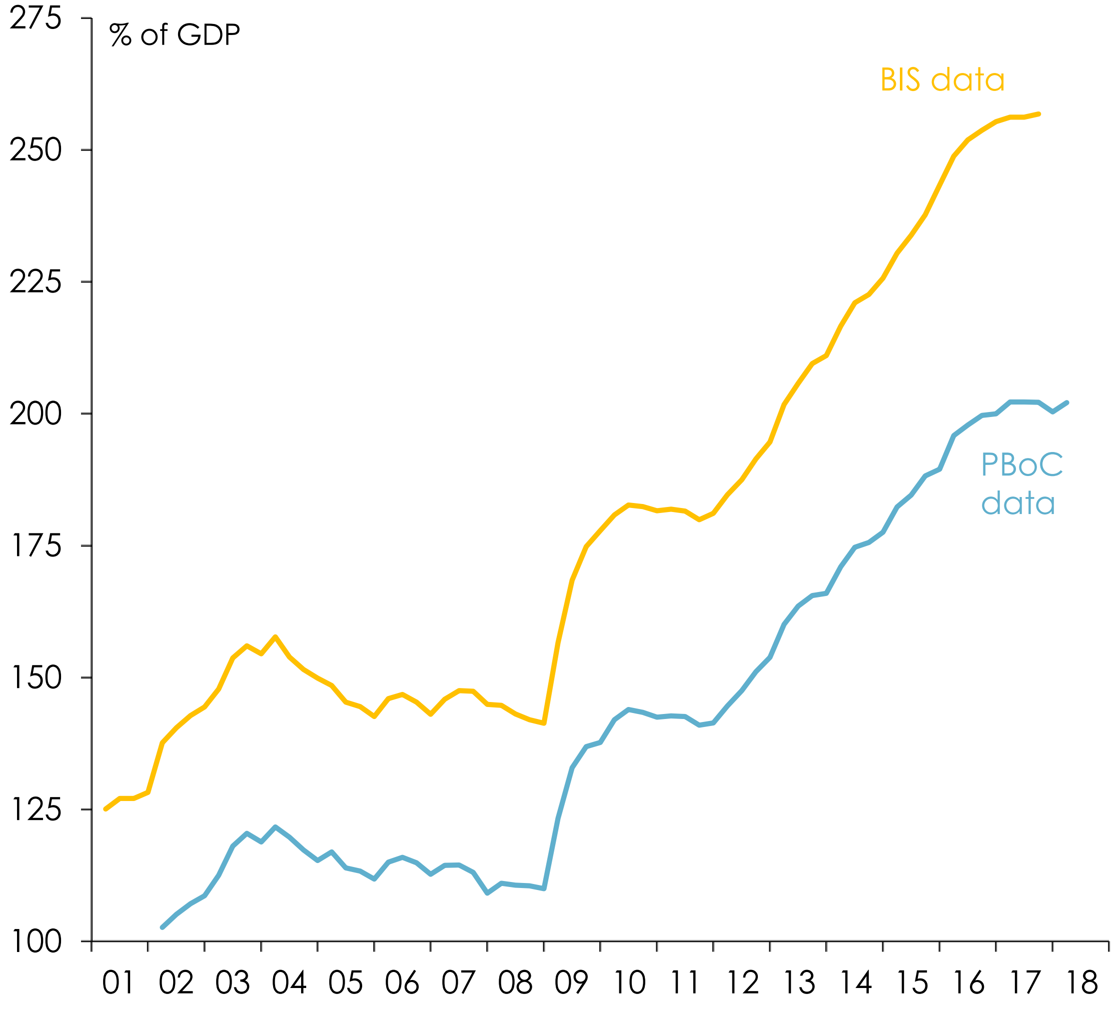
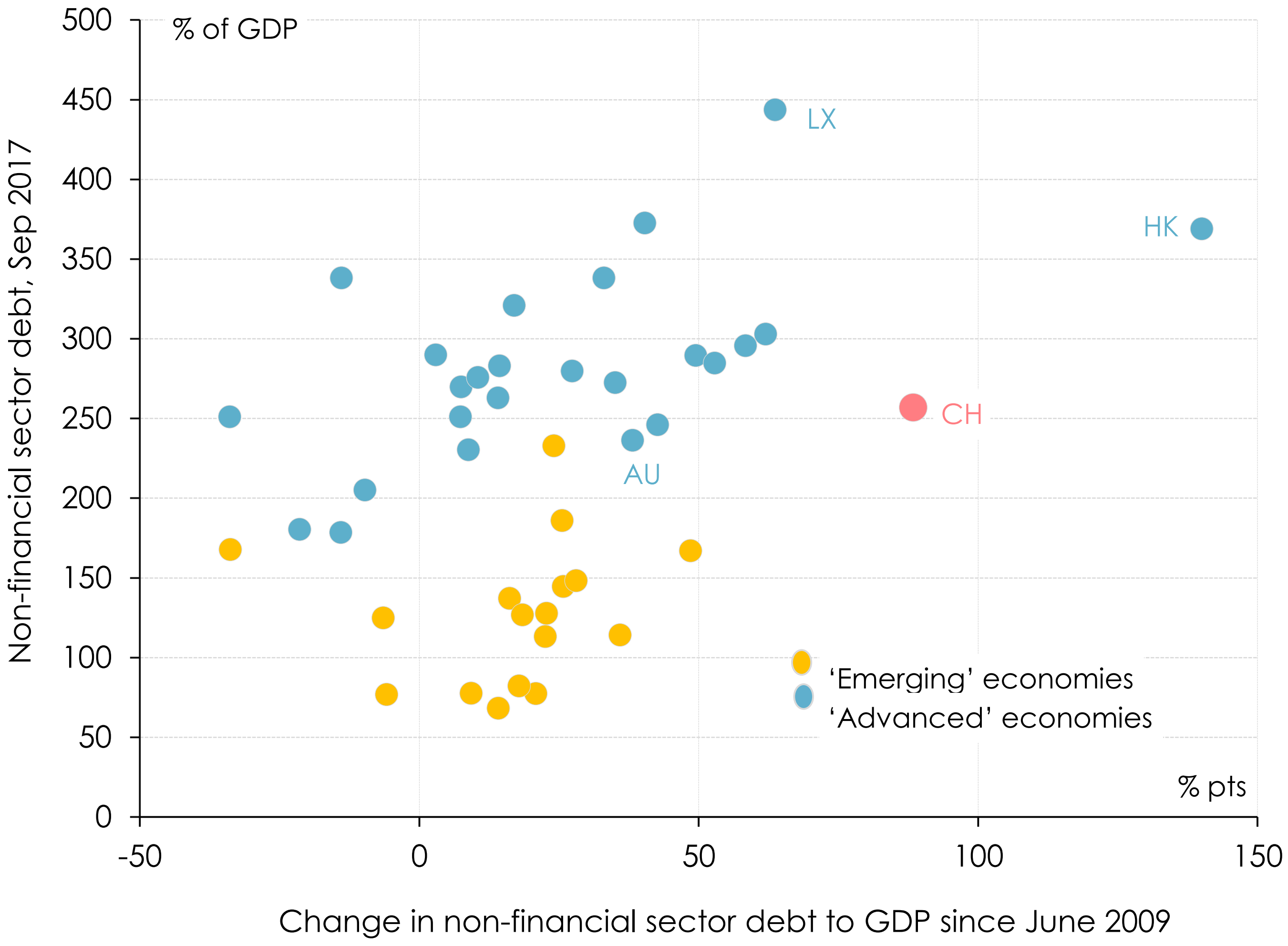
China's number one concern is its level of debt

China - total lending to all non-financial sectors



Level and change in non-financial sector debt to GDP, advanced & emerging economies



Sources: People's Bank of China; Bank for International Settlements.

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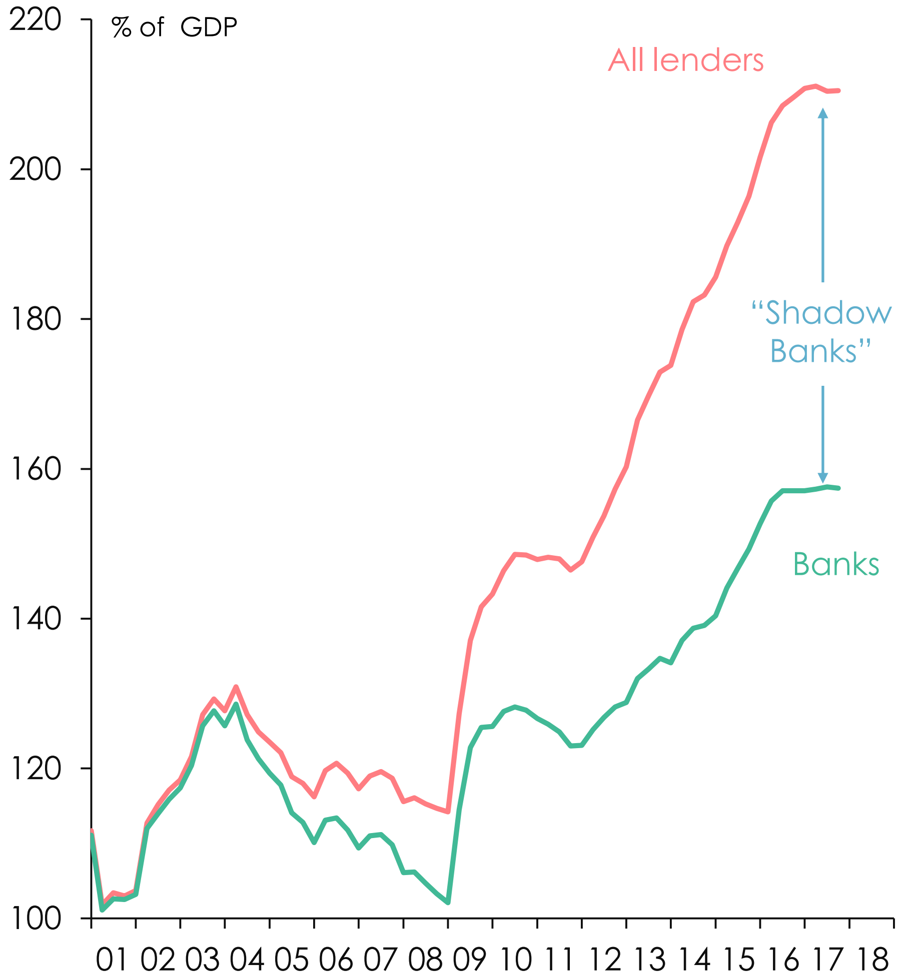
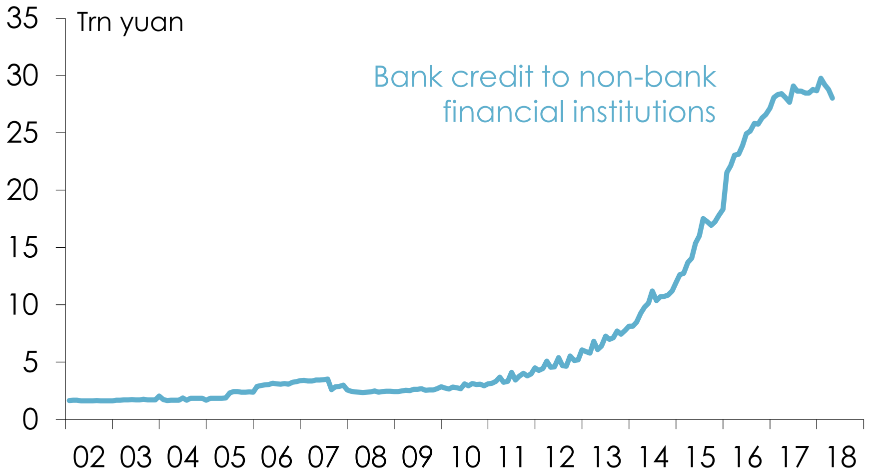
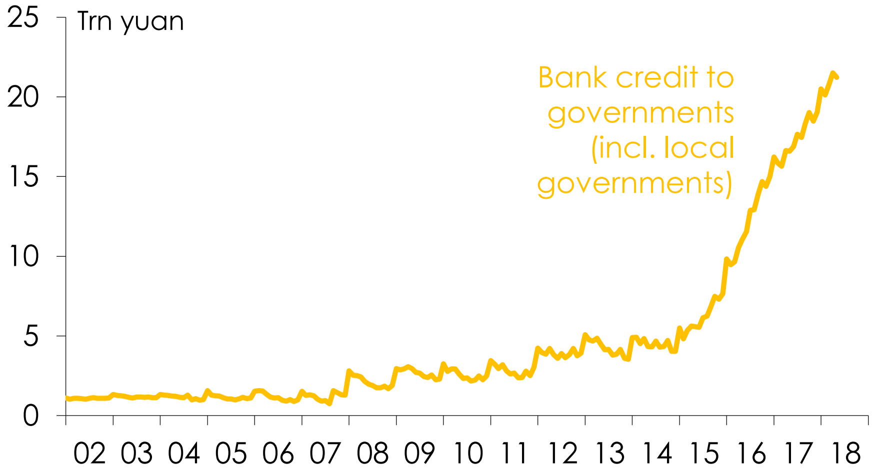
A particular area of concern is the rapid growth in 'shadow bank' lending – and shadow banks' connections with the banking system

Credit to the private non-financial sector, by source

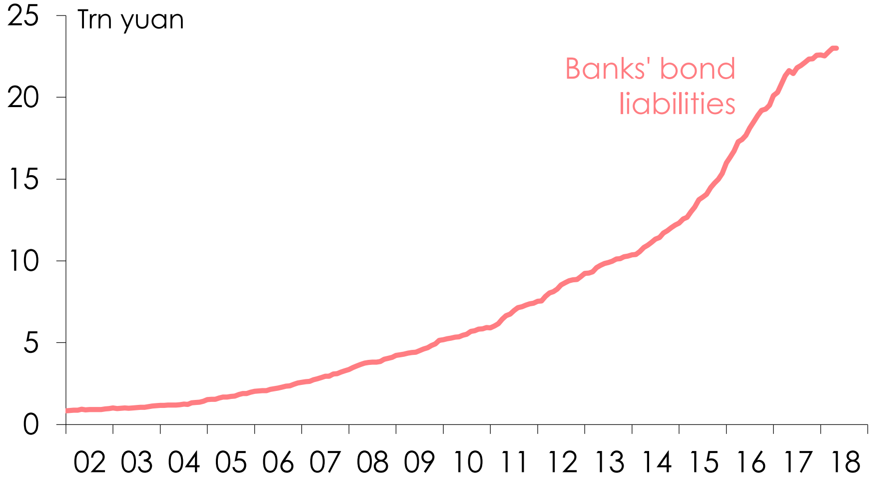


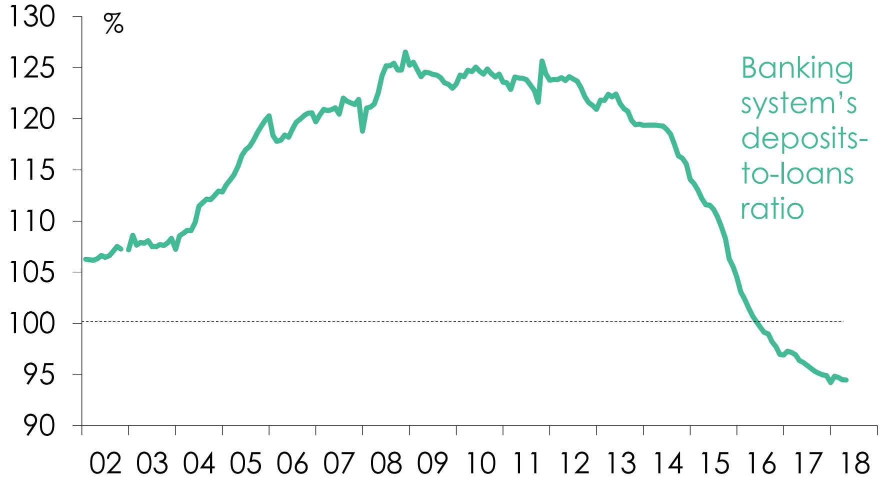
Bank lending to 'shadow banks' and governments





Bank liabilities





Sources: Bank for International Settlements; People's Bank of China.

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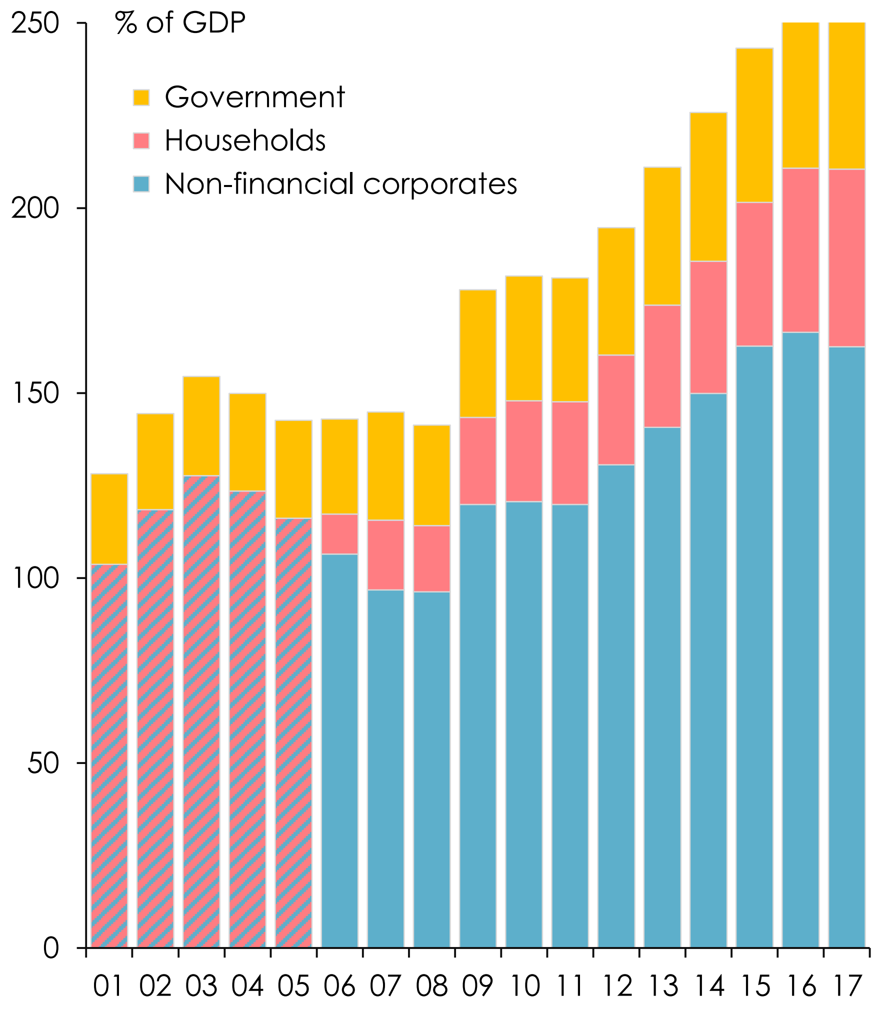
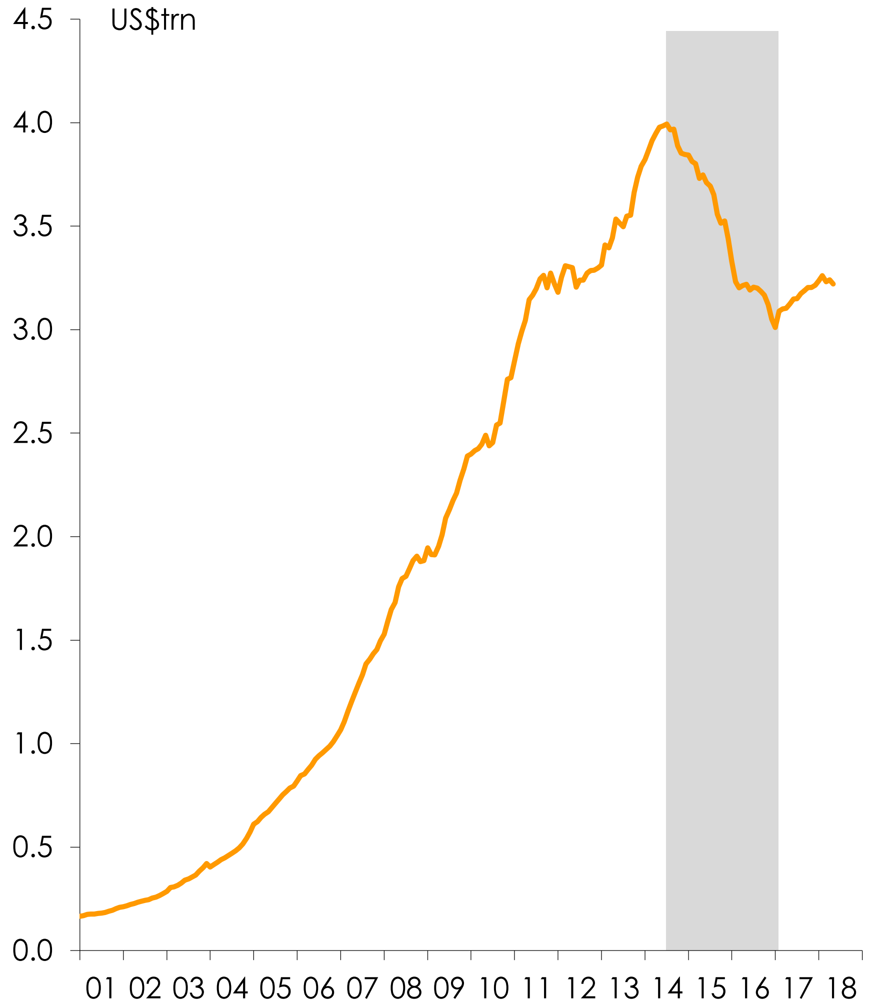
Most of China's debt is owed by state-owned enterprises to state-owned banks – but that may provide little comfort in a systemic financial crisis

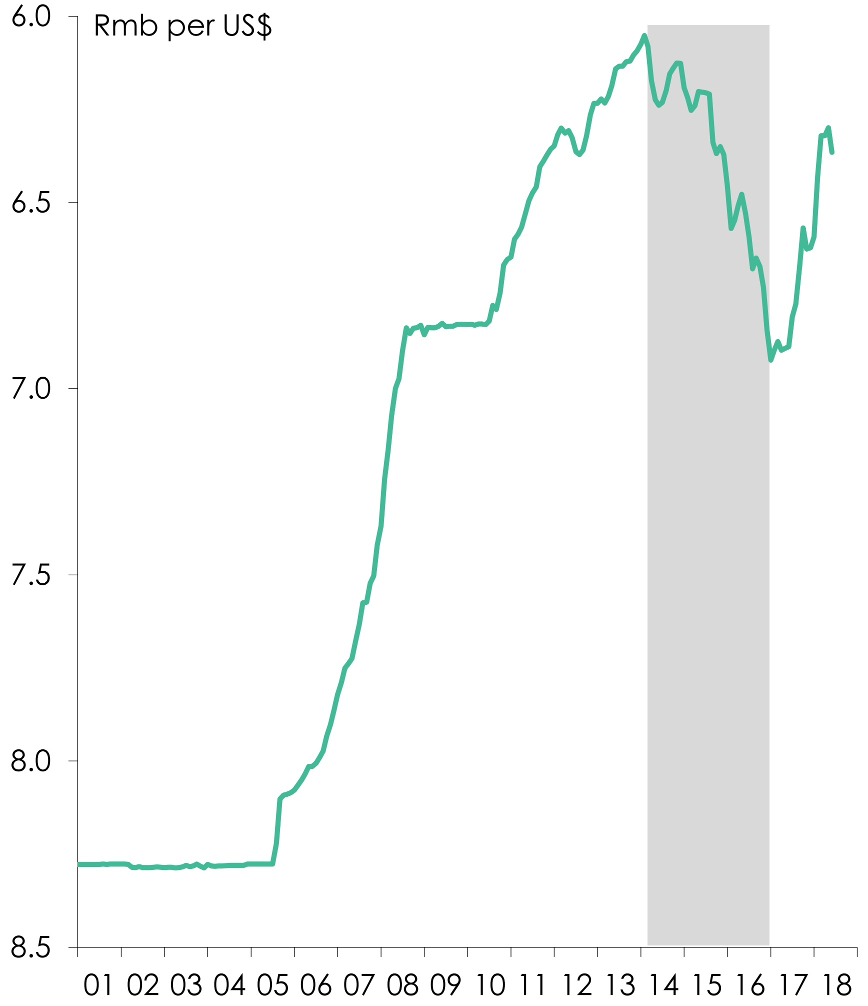
Credit by sector



China's FX reserves



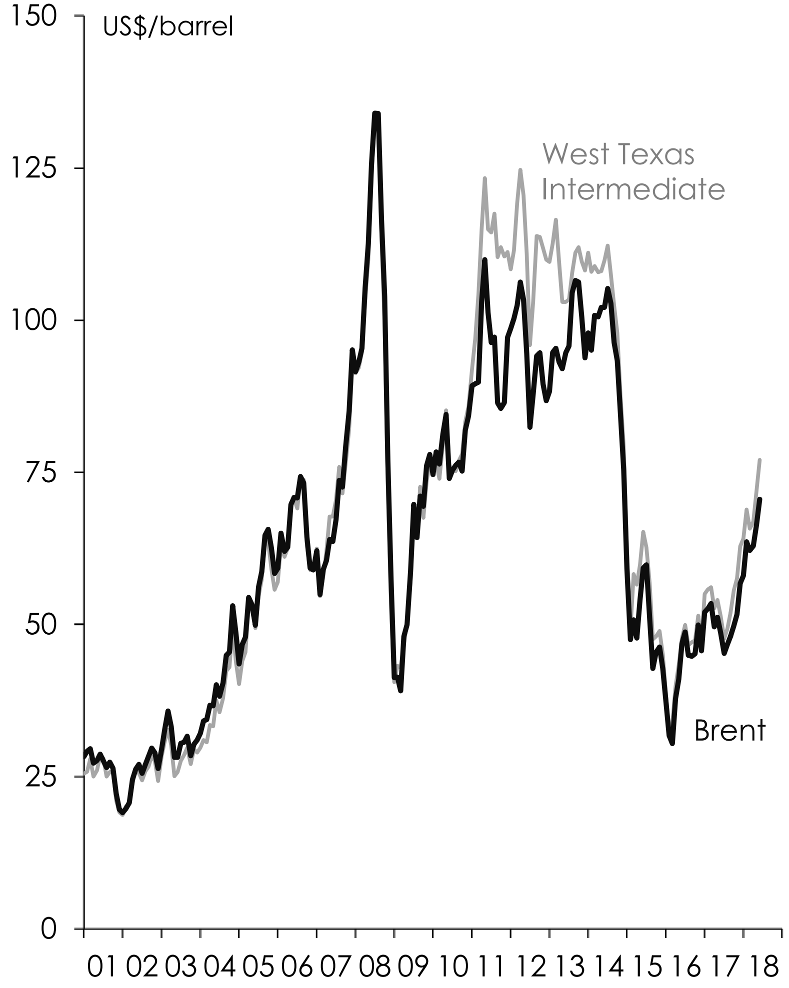
Chinese yuan vs US dollar



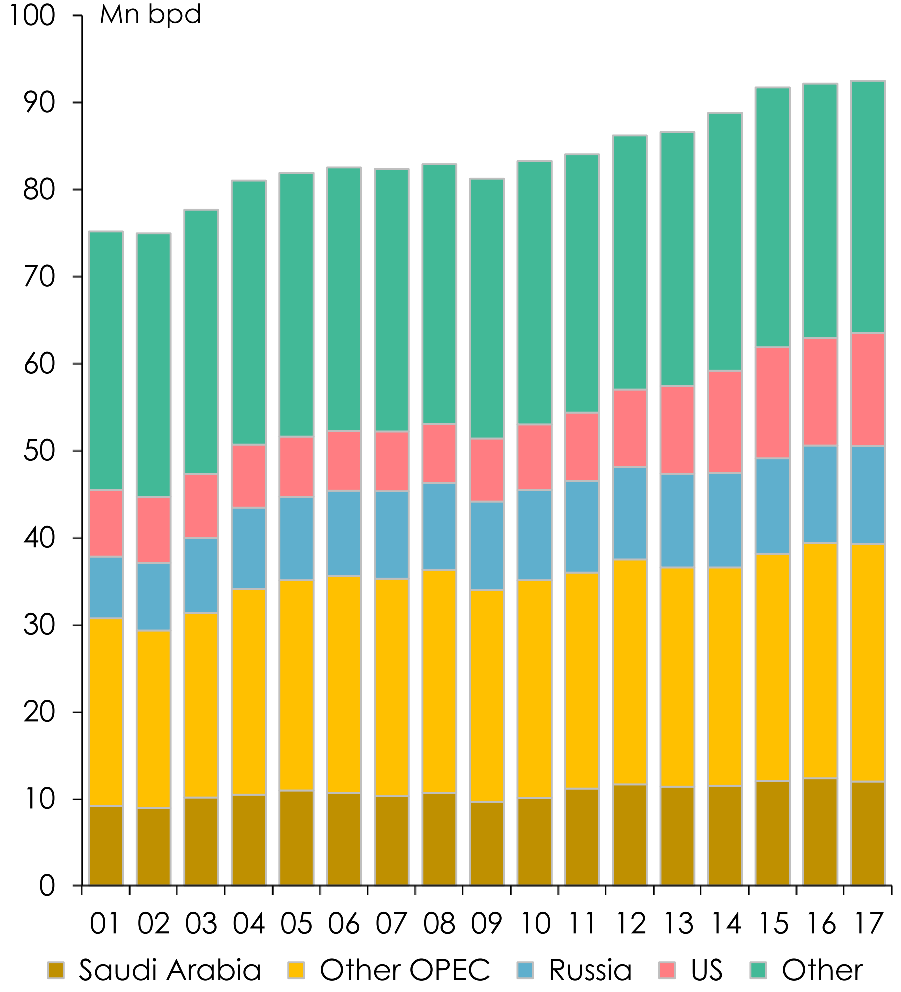
Sources: Bank for International Settlements; People's Bank of China.

This year's run-up in oil prices largely reflects supply constraints – which could be exacerbated by geo-political developments

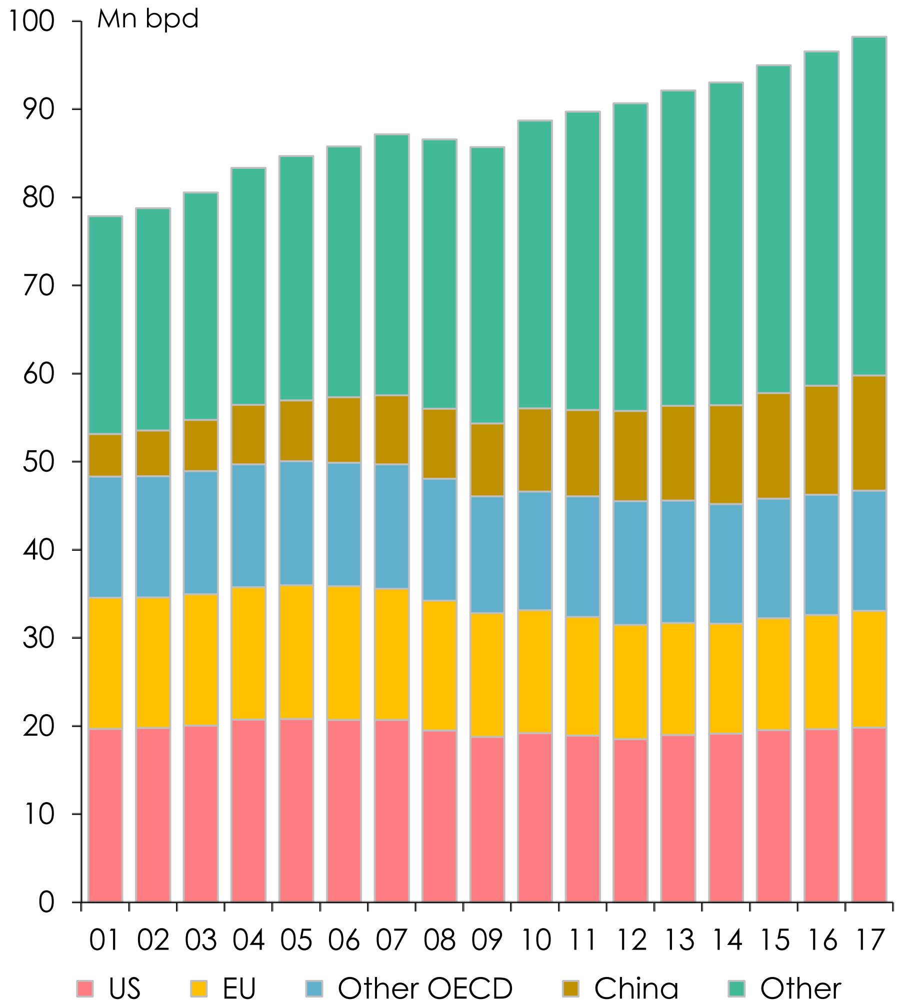
Crude oil prices



Oil supply



Oil consumption



Sources: Thomson Reuters Datastream ; BP; US Energy Information Administration.

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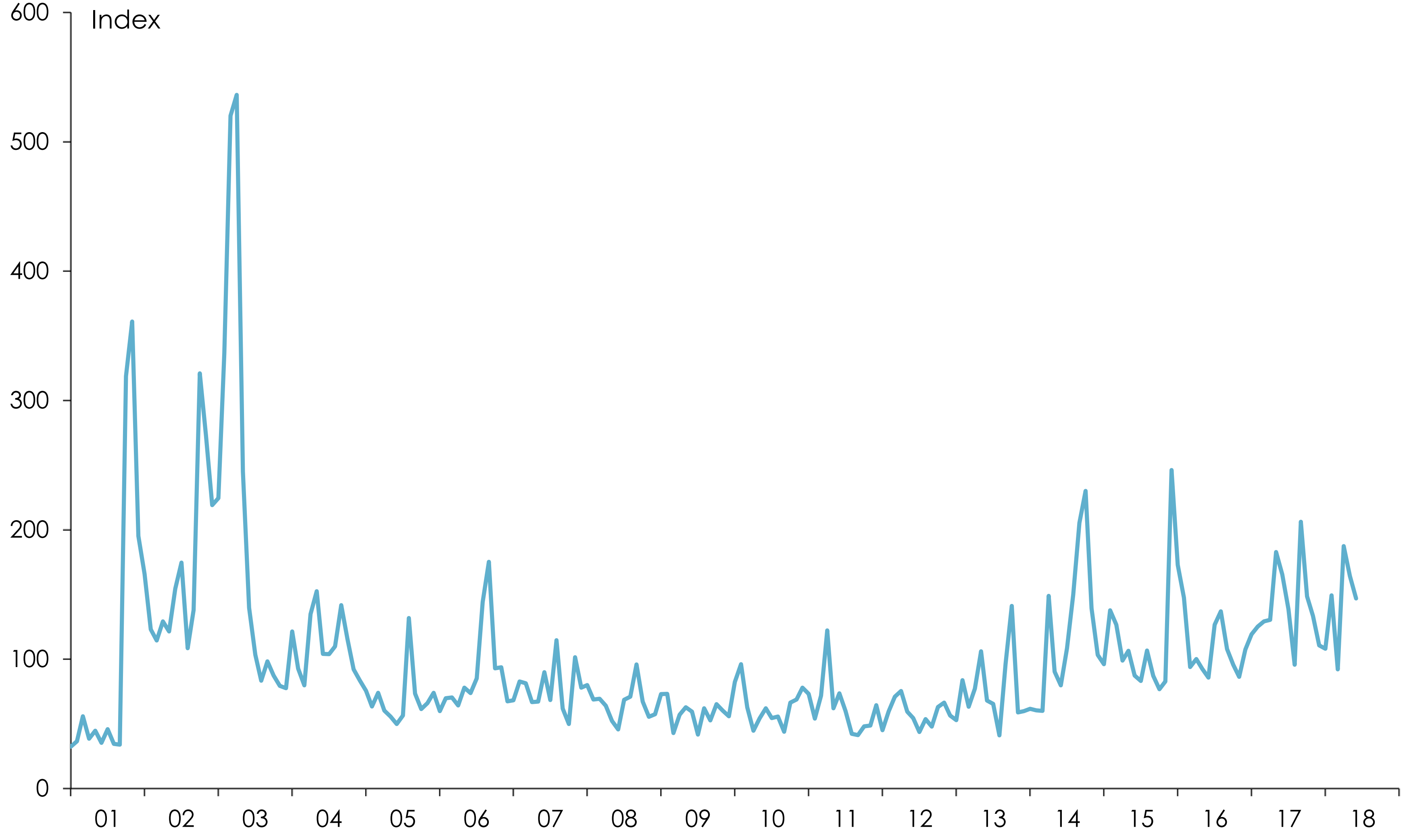
Geo-political risks could be one of the most important factors affecting commodity prices

Geopolitical risk index



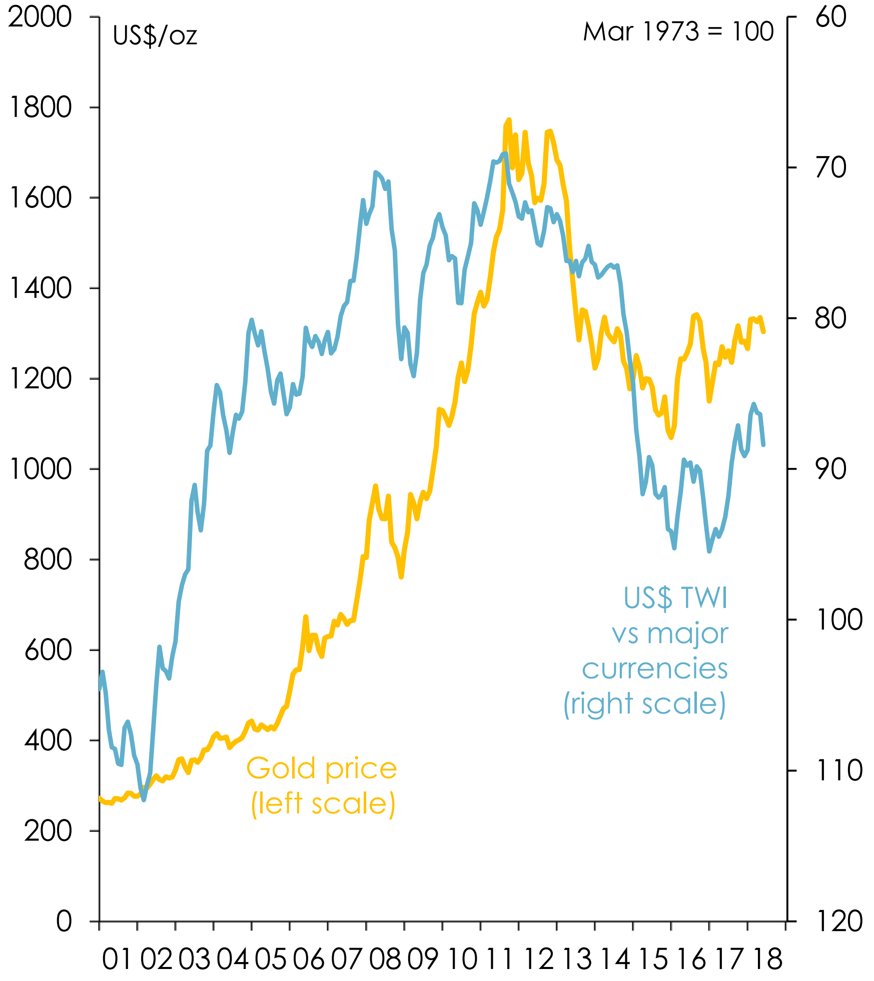
Any number of plausible sources of geopolitical risk

- North Korea
- Iran
- Russia
- South China Sea
- Taiwan
- United States
  - Outcome of the Mueller inquiry
  - Mid-term elections in November
- Brexit
- Italy
- On going erosion of the post-war international economic and political order

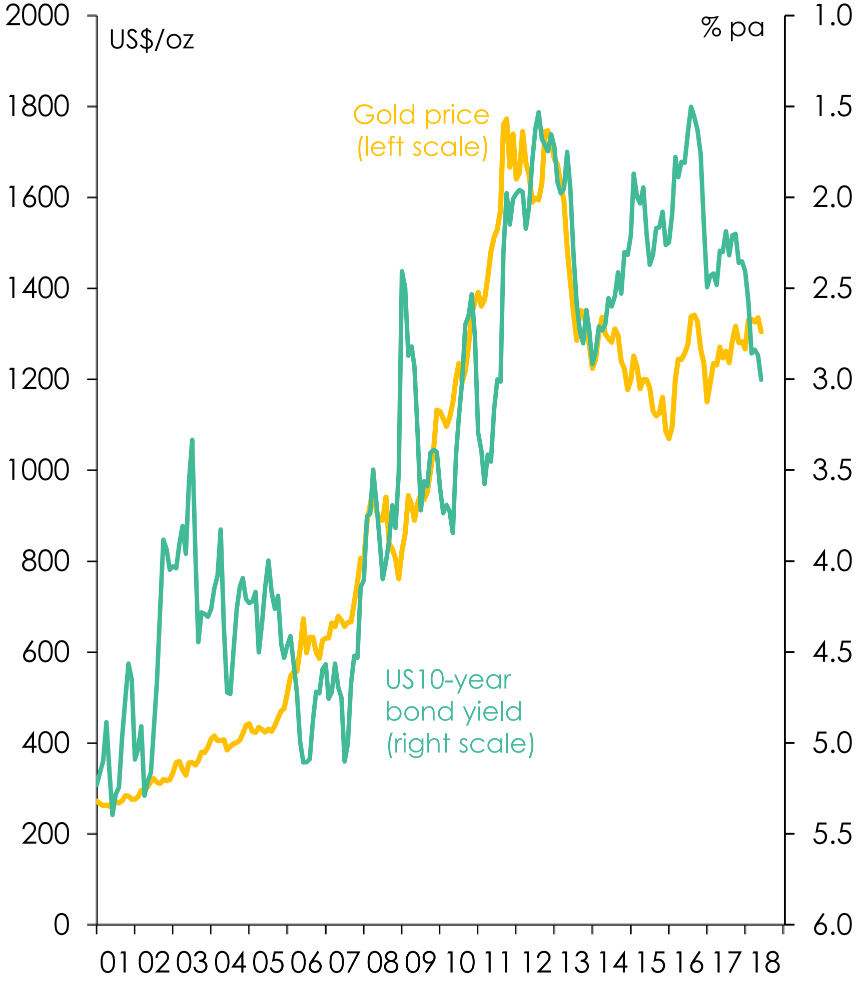
Note: The index is based on a count of the occurrence of words relating to geopolitical tensions in 11 US and UK newspapers.
Source: Dario Caldaro and Matteo Iacovellio (US Federal Reserve and North Carolina State University), *Geopolitical Risk Index* (www2.bc.edu/matteo-Iacoviello/gpr.htm).

A stronger US dollar and higher US interest rates would be a dampener on gold prices, but oil could work in the other direction

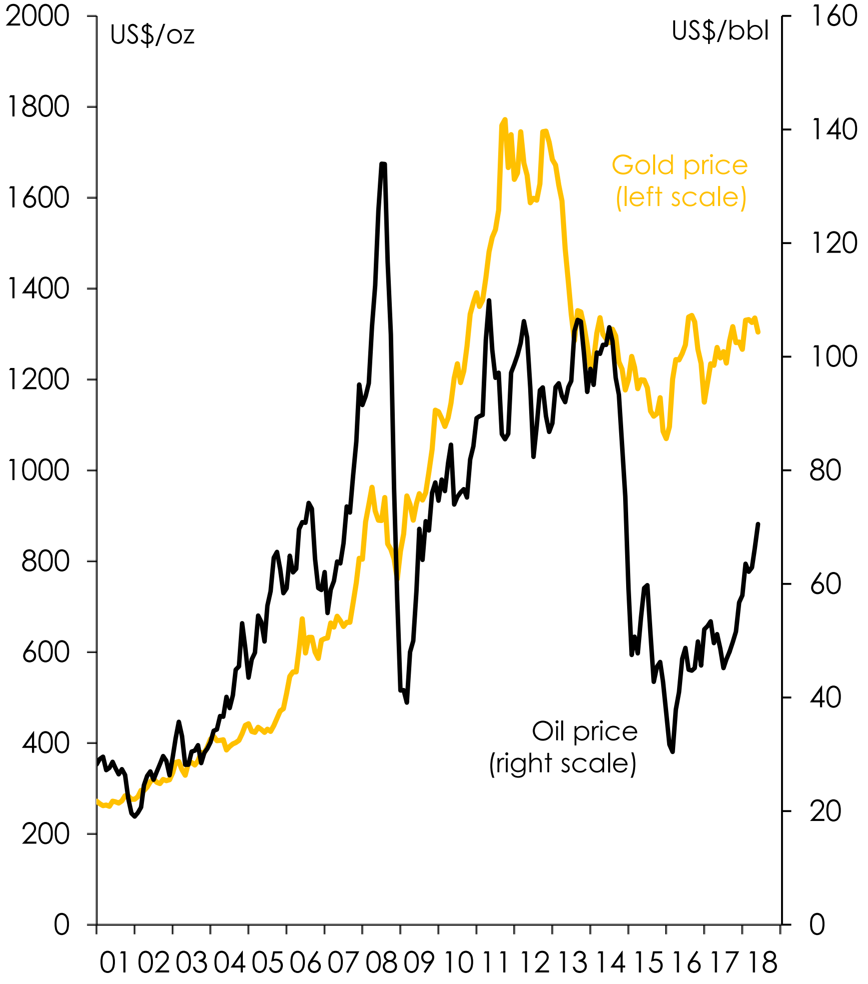
Gold and the US dollar



Gold and US bond yields



Gold and oil



Source: Thomson Reuters Datastream

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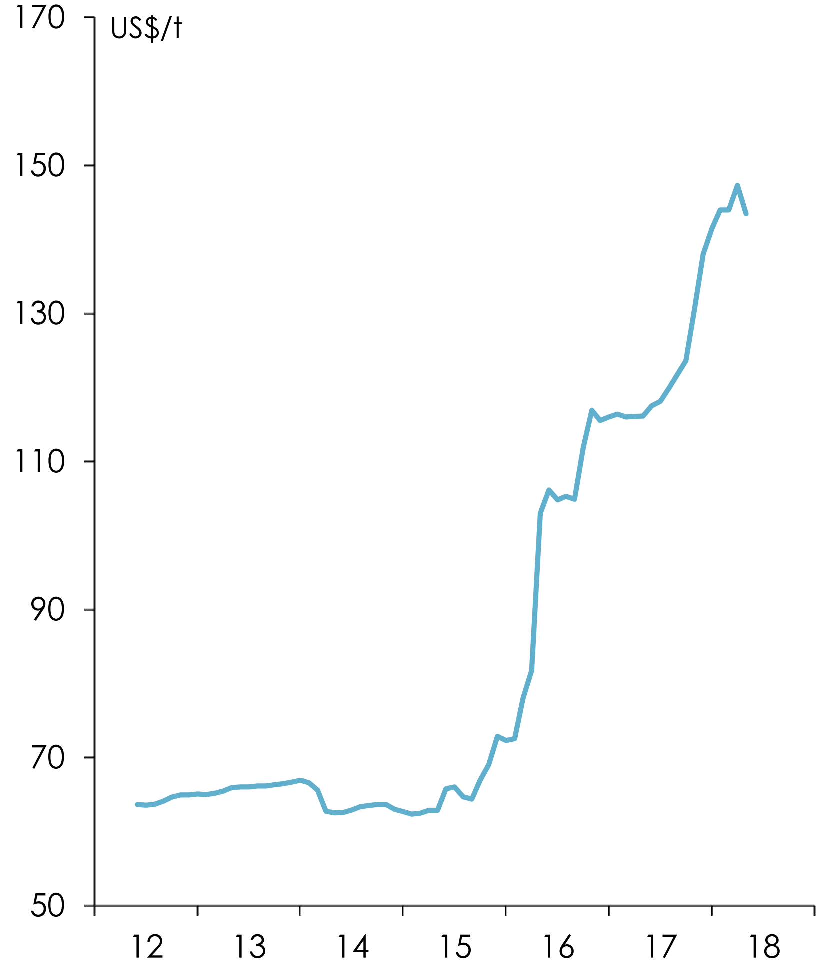
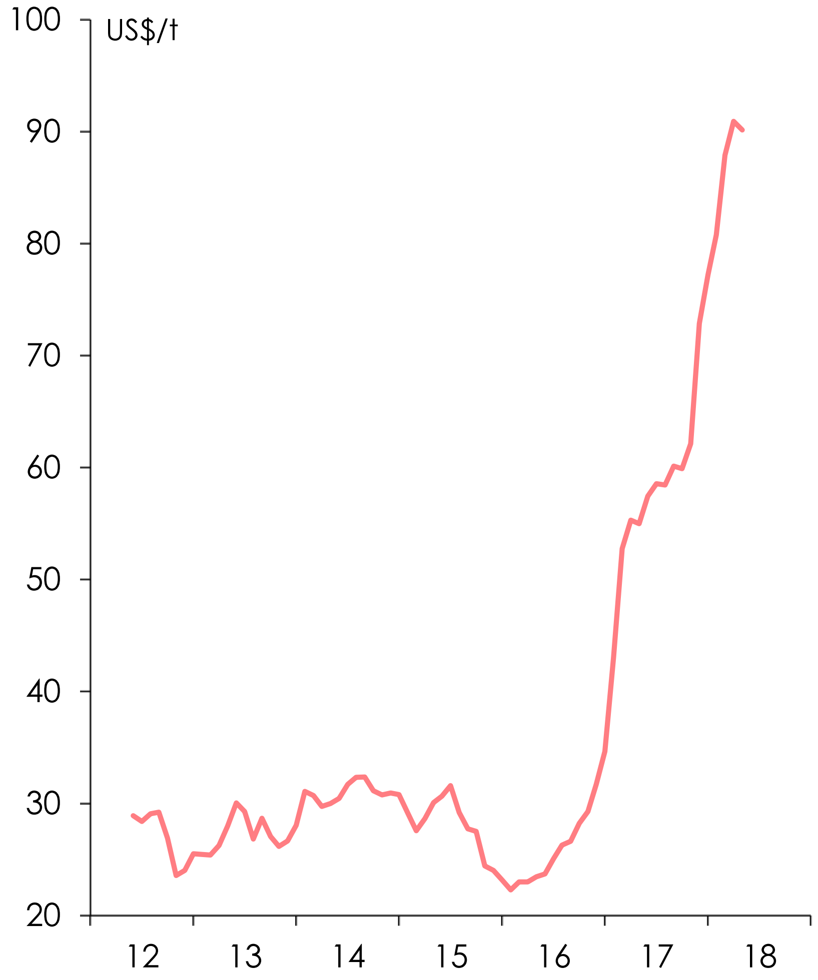
Metals which are crucial to new or emerging technologies may represent the next frontier

Lithium



Cobalt



Nickel

Note; Lithium price quoted by source (Shanghai Metal Market) in Rmb per tonne and converted to US$.
Source: Thomson Reuters Datastream

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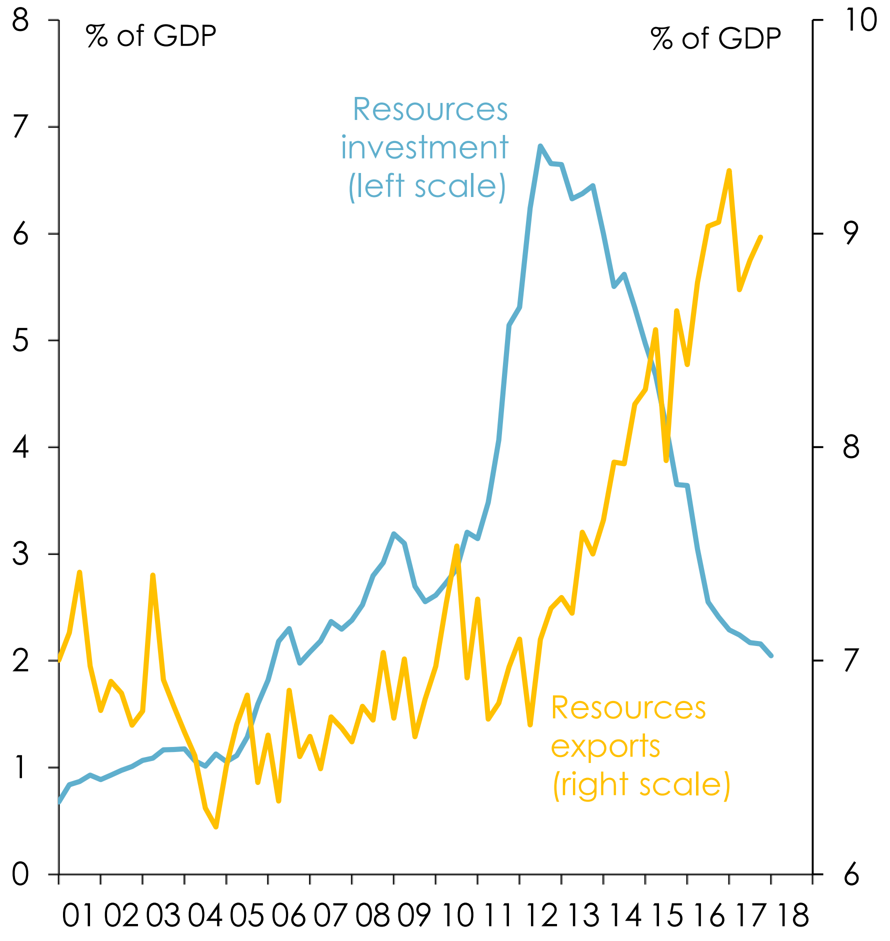
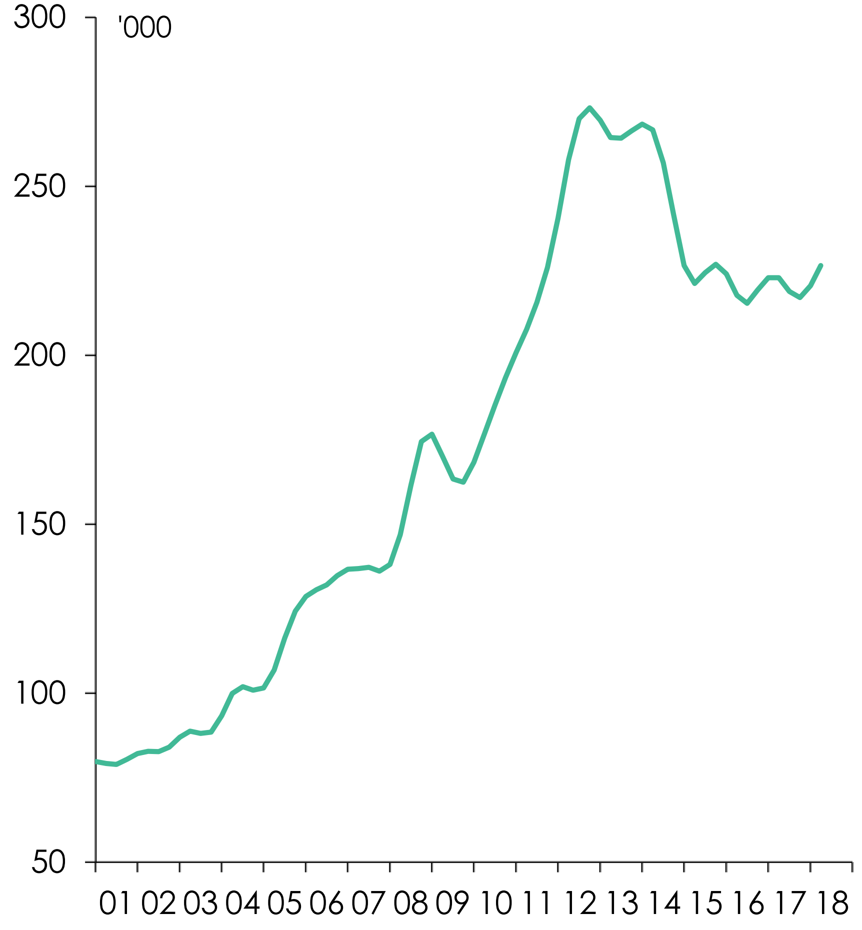
The rebound in commodity prices since 2016 has put a floor under mining industry employment and prompted a rebound in profitability

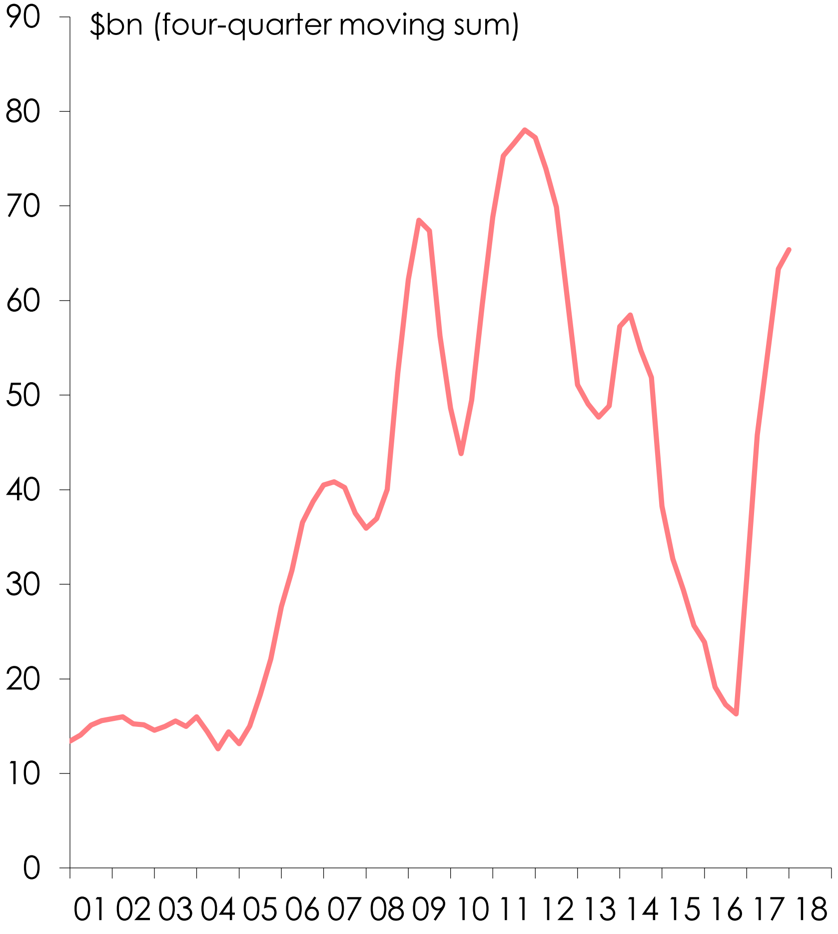
Mining sector capex and exports



Mining sector employment



Mining industry pre-tax profits



Source: ABS.

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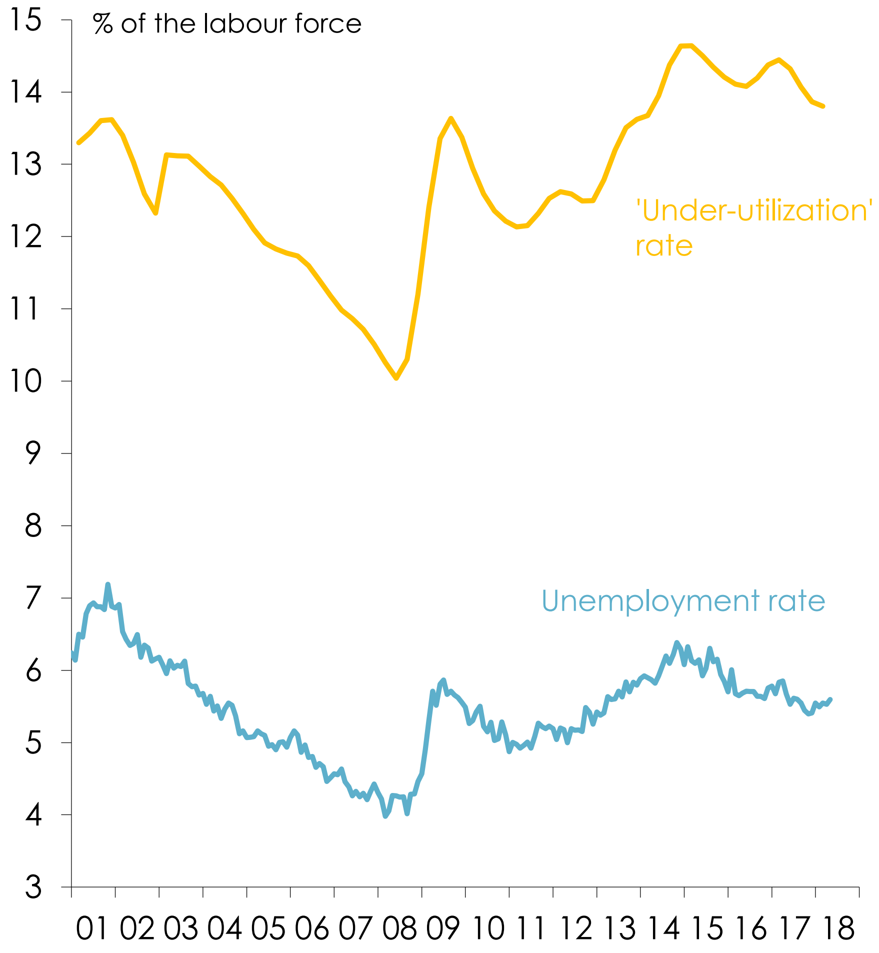
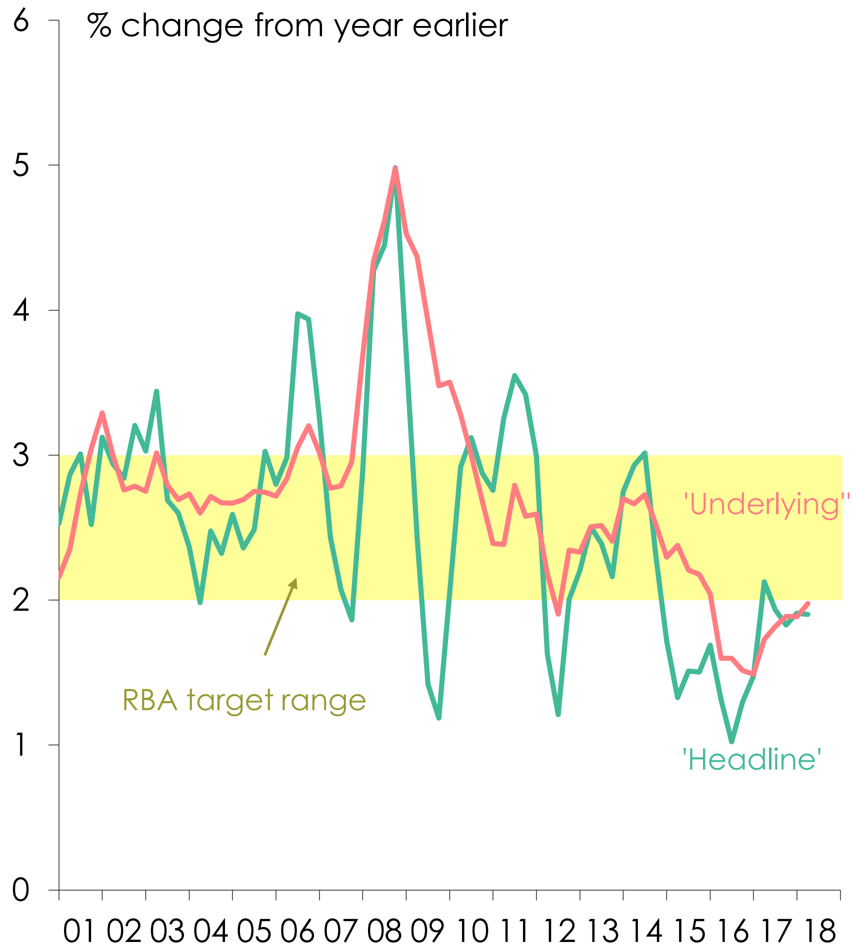
Australian economic growth is still below trend, there is still a lot of spare capacity in the labour market and inflation is still (just) below-target

Economic growth

Unemployment and under-employment



Consumer prices

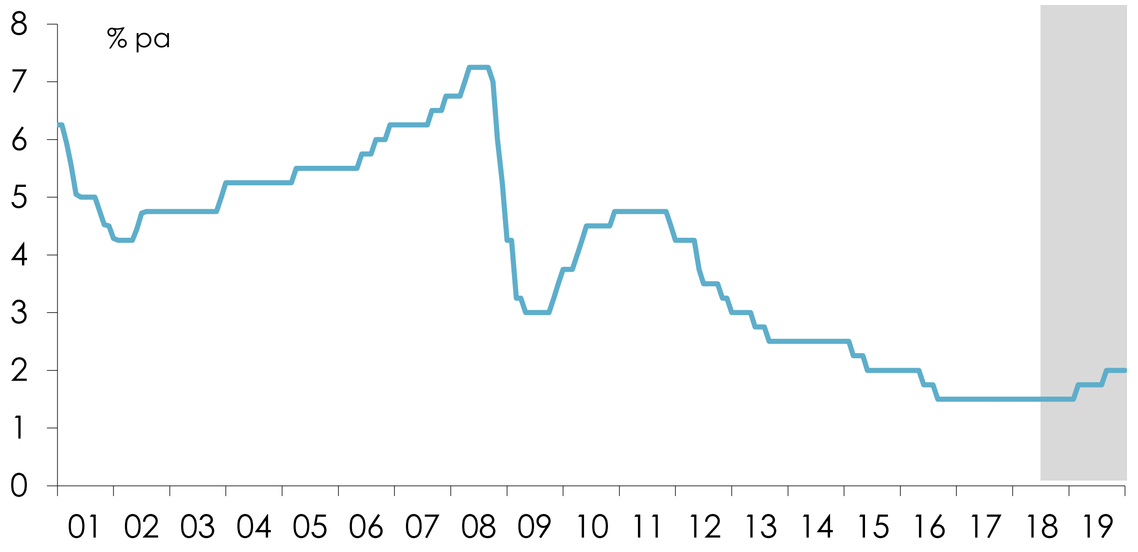


Note: The labour force 'under-utilization' rate includes people employed part-time who are willing and able to work longer hours (and weights them equally with people who are 'unemployed' in the conventional sense). 'Underlying' inflation abstracts from the impact of volatile items (typically items such as petrol, or fruit and vegetables) on the CPI.

Source: Australian Bureau of Statistics.

The next movement in RBA rates will be upwards – but not in any hurry

RBA cash rate



RBA forecasts

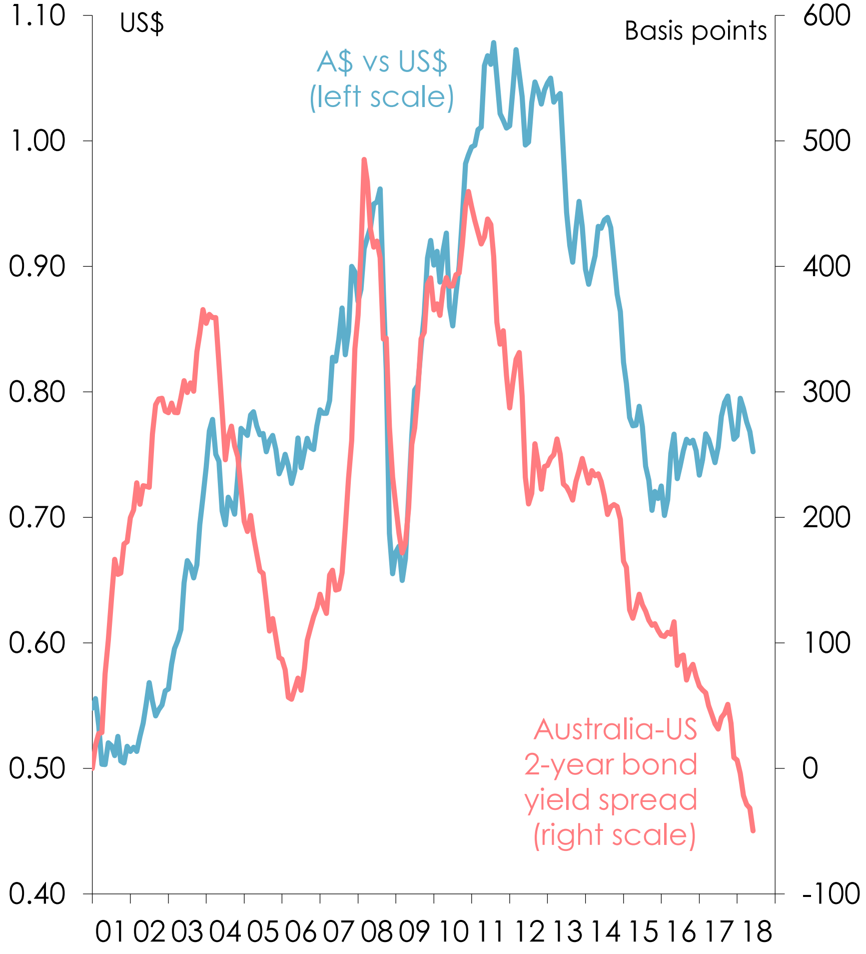
	Year-ended					
	Dec 2017	Jun 2018	Dec 2018	Jun 2019	Dec 2019	Jun 2020
GDP growth	2.4	2¾	3¼	3½	3¼	3
Unemployment rate[b]	5.5	5½	5½	5¼	5¼	5¼
CPI inflation	1.9	2	2¼	2¼	2¼	2¼
Underlying inflation	1¾	2	2	2	2	2¼

Source: RBA, Statement on Monetary Policy, May 2018.

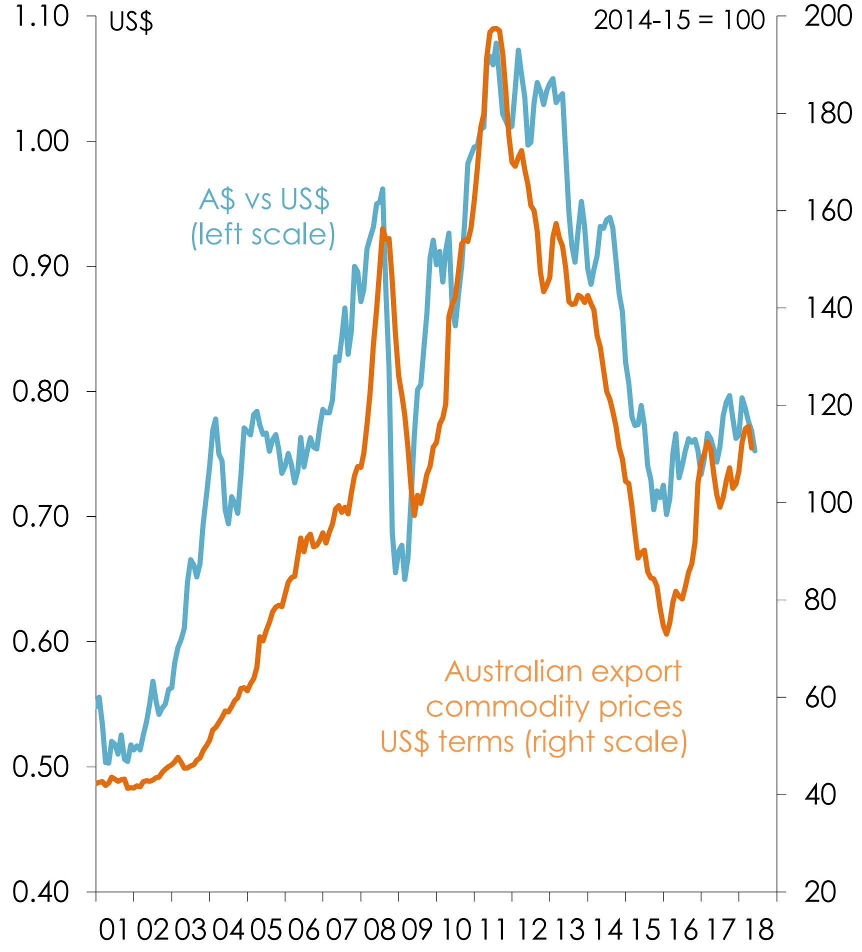
- The RBA expects economic growth to remain 'below trend' until the second half of 2018, 'spare capacity' in the labour market to persist until after 2019, and 'underlying' inflation to remain below its target band until mid-2019
- These are not the forecasts of a central bank that is on the cusp of tightening monetary policy
- Of course, the RBA need not keep interest rates at current record lows until all of the key economic variables are where they want them to be
- But the RBA's current set of forecasts does not impel any urgency about moving away from current monetary policy settings
- The RBA would be delighted to see [further] increases in foreign interest rates while it 'stands pat' reflected in a decline in the A$
- First move now seems unlikely before next year

Australian rates are now below US rates – but the effect of that on the A$ has been offset by stronger commodity prices

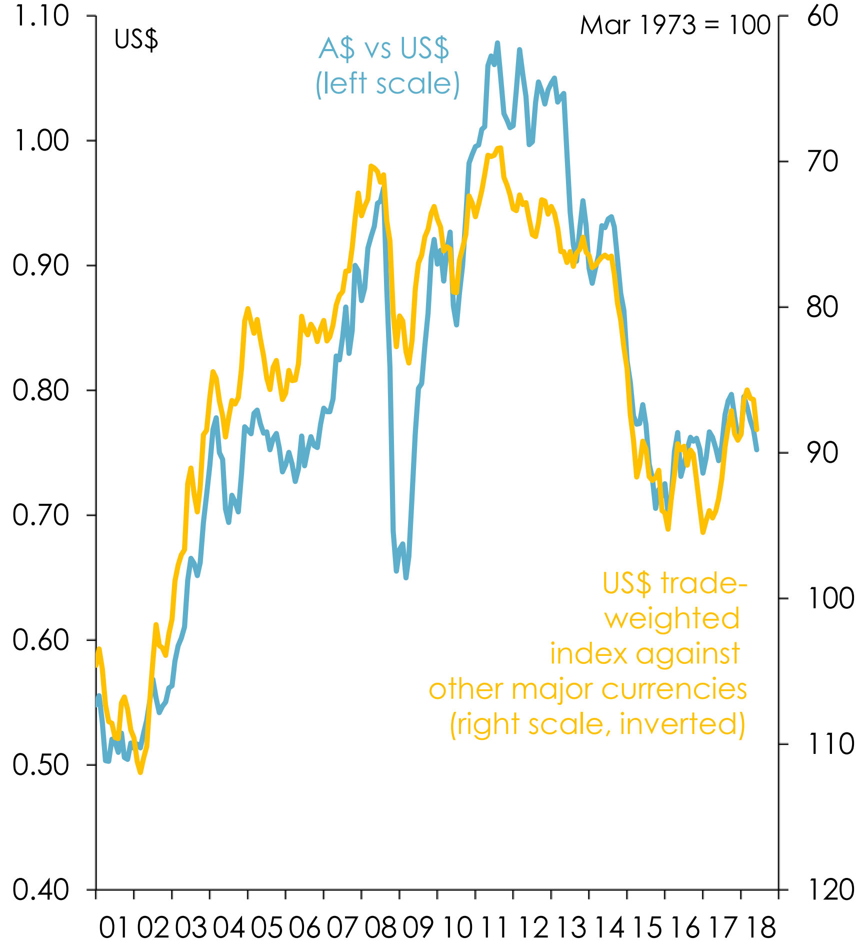
A$-US$ rate and Australia-US interest rate spreads



A$-US$ rate and commodity prices



A$-US$ rate and US$ vs other major currencies



Sources: Thomson Reuters Datastream; Federal Reserve Board; RBA.

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