

ECONOMIC IMPACT OF THE CORONAVIRUS PANDEMIC

22ND AUGUST 2020

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CORINNA ECONOMIC ADVISORY PTY LTD

What's new?

The world

- ❑ 1778,753 new Covid-19 cases were confirmed this week, the smallest number in five weeks, taking the cumulative total to just over 22.7mn; while 39,920 people died (the smallest total in three weeks) taking the total number of deaths to 794,104 (slide 4)
- ❑ Nine countries (the US, India, Brazil, Mexico, Colombia, Peru, Iraq, Indonesia and the Philippines), with 33% of the world's population, accounted for 73% of last week's new cases – the rate of new infections appears to have stabilized in the US, Brazil & Mexico but is rising again in Peru, Iraq and the Philippines (slide 5)
- ❑ A growing number of countries – including in particular New Zealand – are experiencing a renewed rise in infections (slide 7) and are re-imposing restrictions (slide 14)
- ❑ Preliminary PMI data point to further recovery in the euro area, UK and (to a lesser extent) Japan (slide 31)
- ❑ Headline and 'core' inflation ticked up slightly in all the major 'advanced' economies in July, but remains well below central bank targets (slide 30): not too much should be read into the rapid growth of M2 (or its equivalent) in major 'advanced' economies (slide 29) as this is likely to prove temporary
- ❑ Thailand's economy shrank by 12.2% in Q2 from a year earlier, the largest decline since the Asian financial crisis of 1998 (slide 38)
- ❑ There's something fishy about the outsized increase in the implicit price deflator of GDP in the UK's Q2 national accounts (slide 48)
- ❑ New Zealand's general election has been pushed back by four weeks to 19th October as a result of the 'lockdown' prompted by the recent Covid-19 outbreak (slide 118)

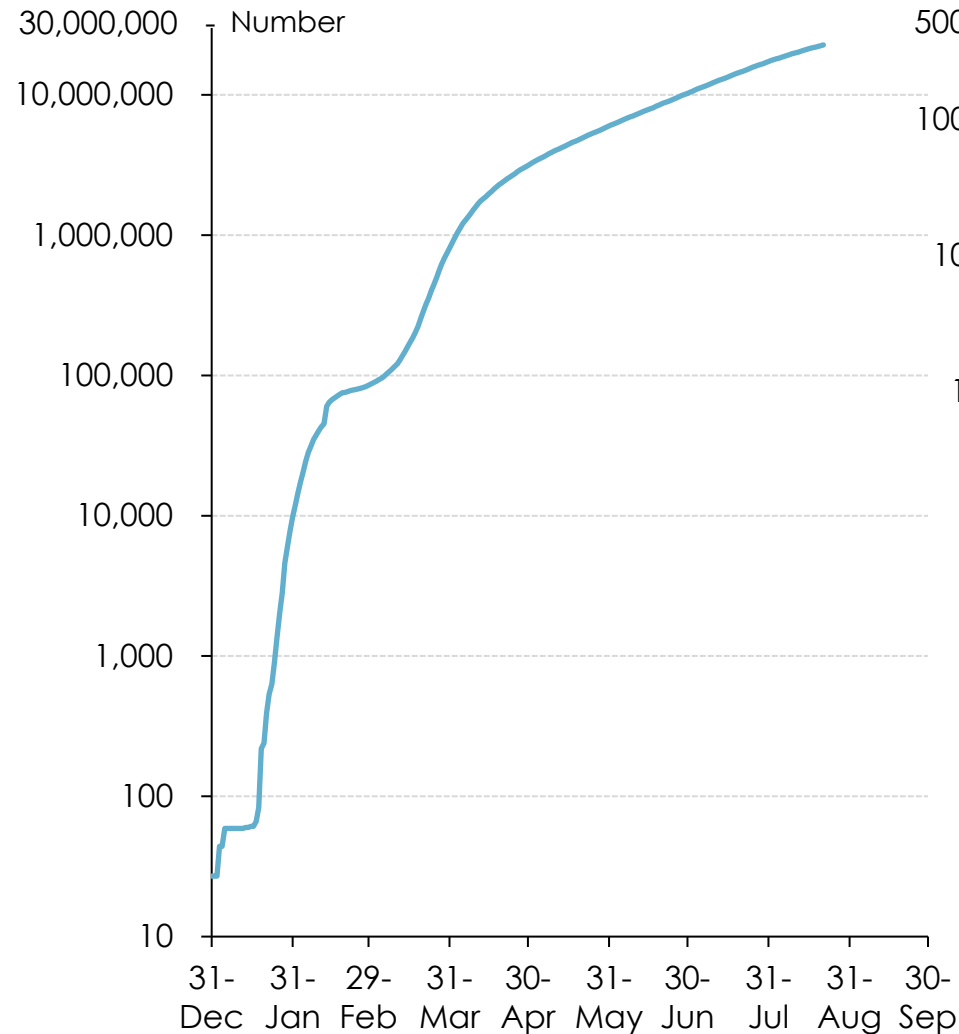
Australia

- ❑ Australia recorded 1,665 new Covid-19 cases this week, the lowest in 6 weeks; there were 4,677 active cases on Friday (down from 8,189 a week earlier) while 96 people died, bringing the death toll to 472 (slide 8)
- ❑ Victoria accounted for 1,618 (97%) of the new cases reported this week, bringing its total to 17,852 – but it now appears clear that infections have peaked in Victoria (slide 9) although the State Government is giving no indication as to when the current 'lockdown' might be eased
- ❑ Mobility data clearly show the drag which Victoria is now exerting on the national economy (slide 74)
- ❑ Retail sales rose by 3.3% in July according to preliminary ABS data, to be almost 11% above their pre-pandemic (February) level (slide 74), with sales rising in every state except Victoria, where they fell by 2%
- ❑ Iron ore prices hit a 6½ year high of US\$126.50/tonne this week (slide 82) although BHP (one of the two largest Australian iron ore exporters) warned that "prices are expected to ease as Brazilian supply recovers (slide 83)
- ❑ The non-partisan Parliamentary Budget Office updated its medium-term fiscal projections, using the RBA's latest economic forecasts and the revised population projections in last month's government Fiscal and Economic Update – these suggest that (all else being equal) the federal budget won't return to surplus until FY 2027-28, and that net debt will peak at around \$770bn (35% of GDP) in 2023 (slide 91)
- ❑ Of course 'all else' won't be equal – there will likely be further fiscal measures in the delayed 6th October budget; and this week the RBA Governor urged the states to do more infrastructure spending (slide 97)
- ❑ Electors in the Northern Territory go to the polls today (Saturday) – with the odds favouring the incumbent Labor Government

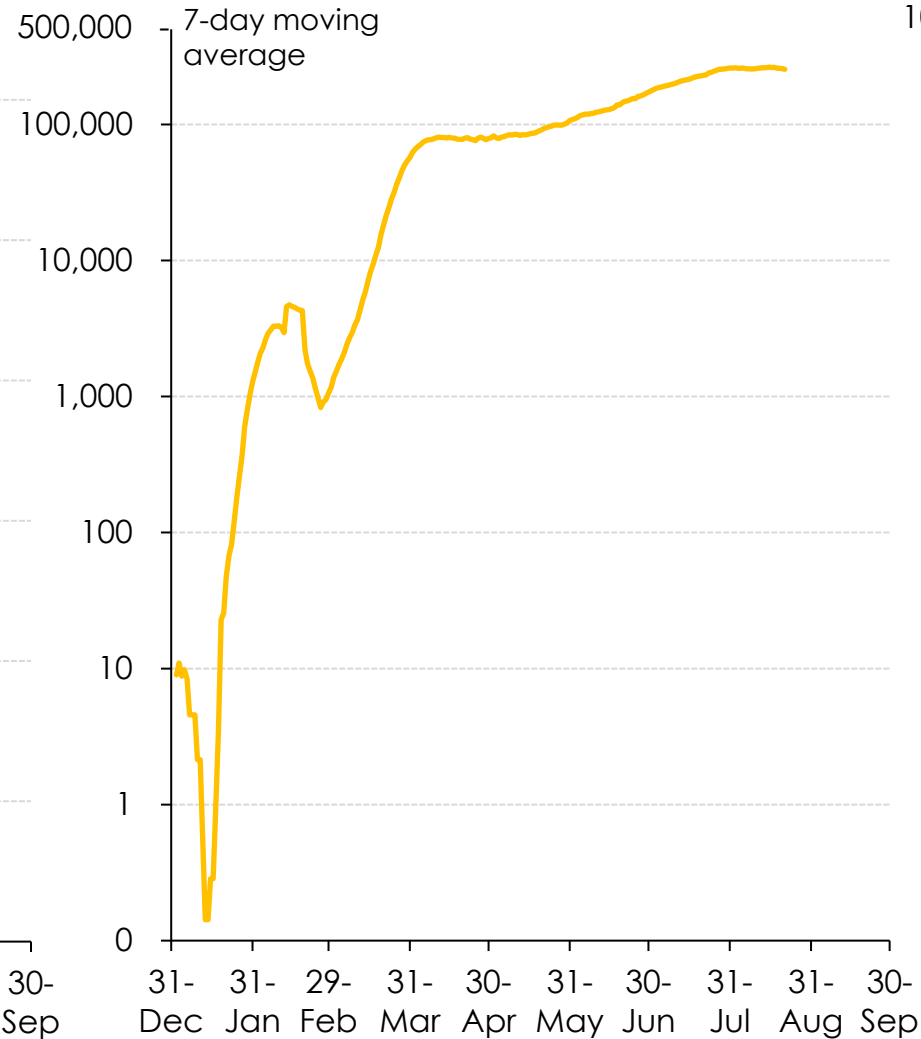
The virus

1.78mn new cases were recorded this week, bringing the cumulative total to 22.7mn – although the global infections curve now seems to be flattening

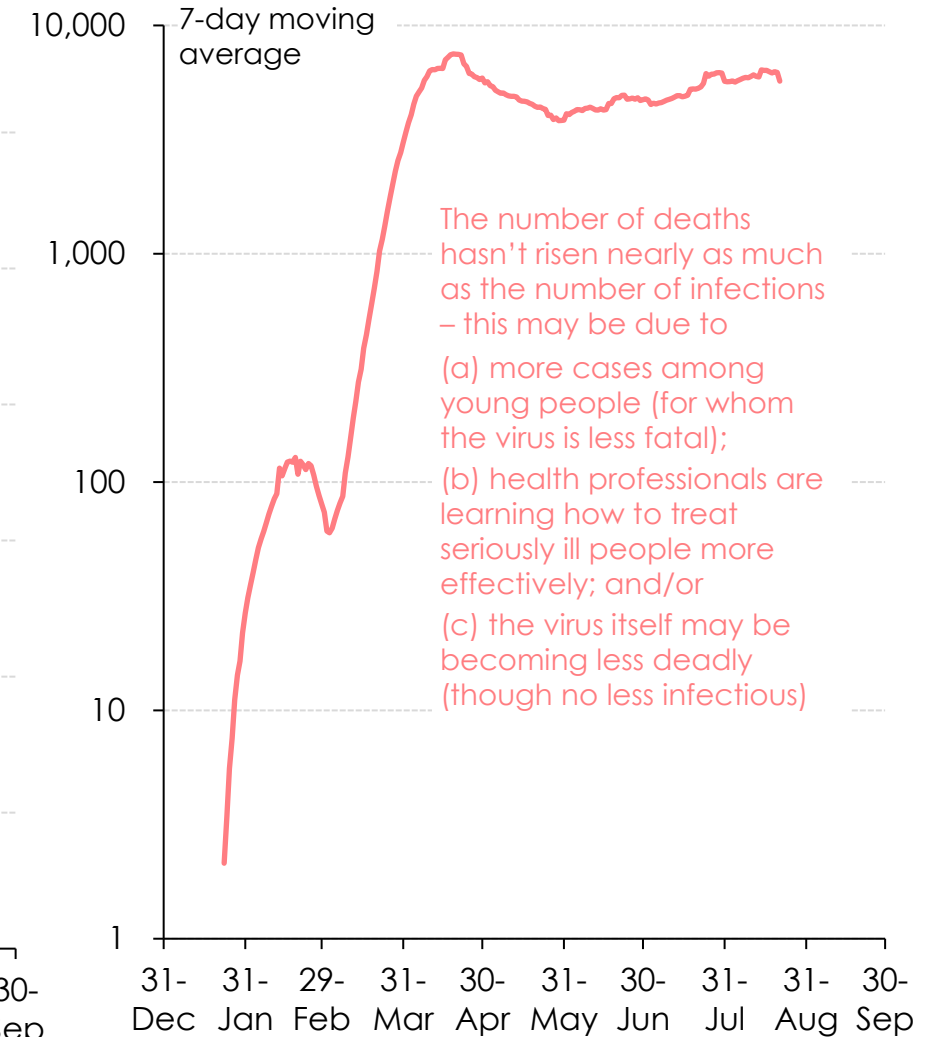
Cumulative confirmed cases – global total



New confirmed cases – global total



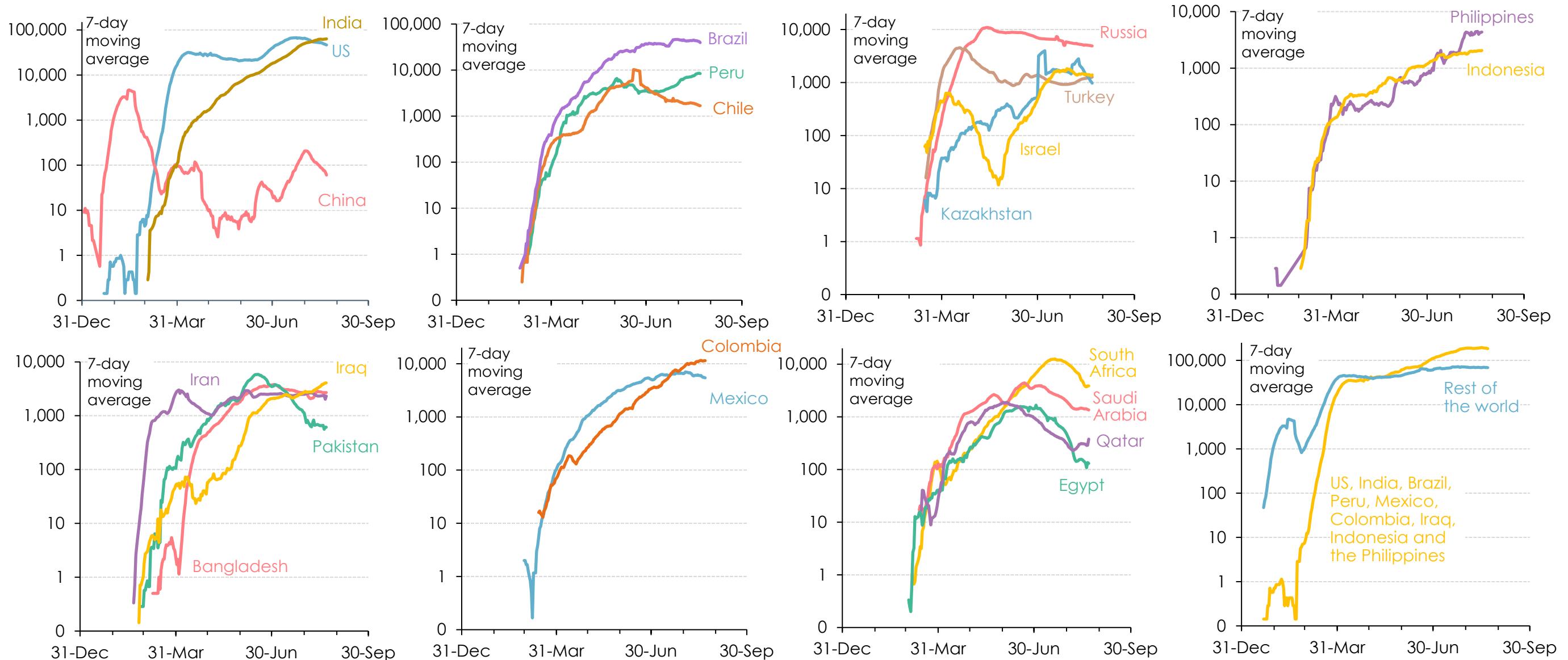
New deaths – global total



Note: All charts are on logarithmic scales. Data up to 21st August. Source: University of Oxford, *Our World in Data*.

Nine countries with 33% of the world's population accounted for 73% of last week's new cases

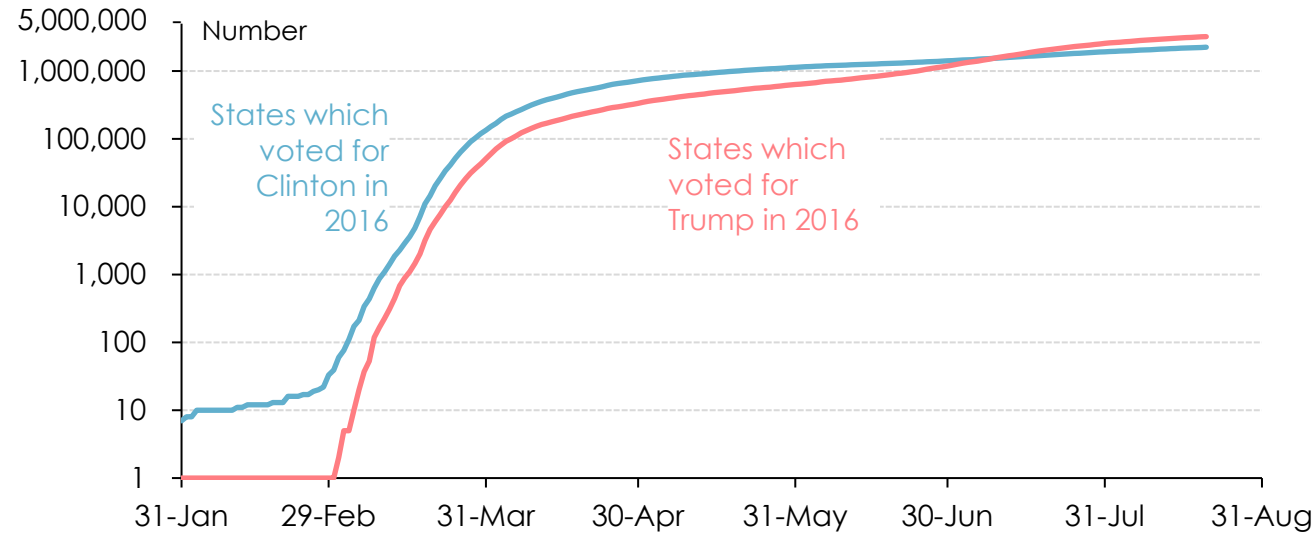
Daily new cases – 22 countries with (mostly) large populations and large numbers of new cases



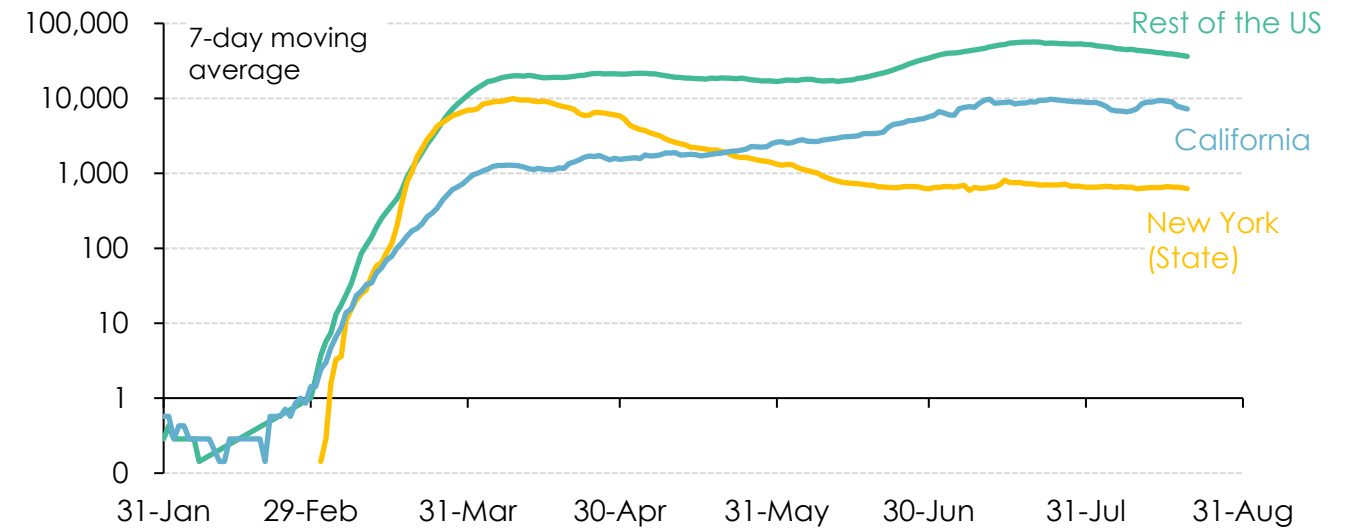
Note: All charts are on logarithmic scales. Data up to 21st August. Source: University of Oxford, Our World in Data; Corinna.

In the US, new Covid-19 cases in 'red states' continue to outnumber those in 'blue' states – although in aggregate new cases numbers are flattening

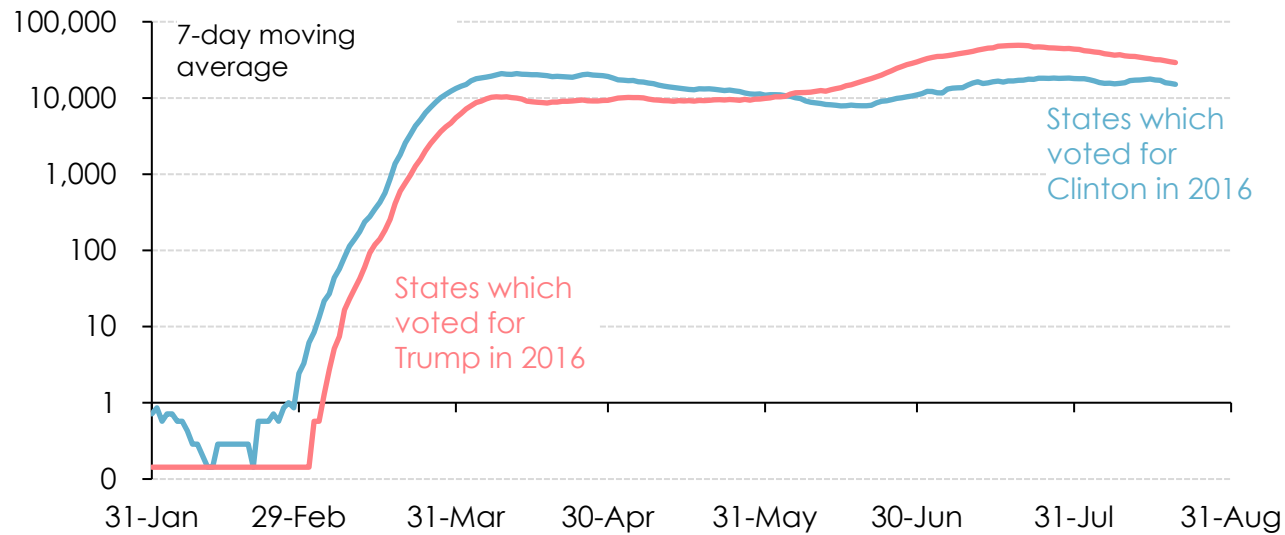
Cumulative cases, by 2016 Electoral College vote



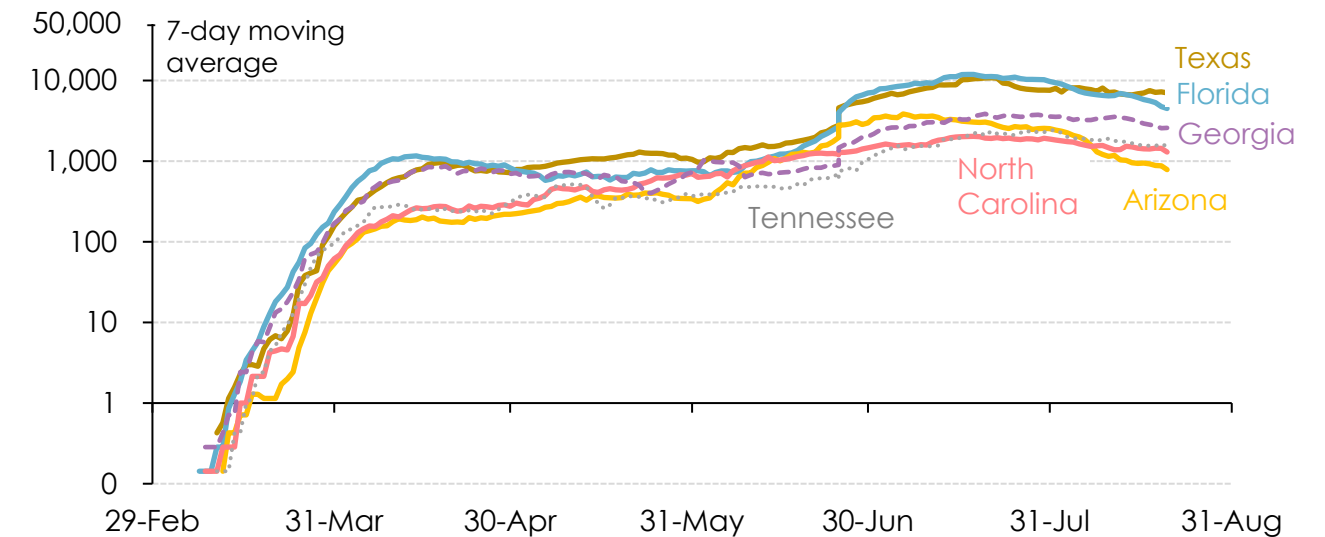
New cases – New York, California & the rest of the US



New cases, by 2016 Electoral College vote



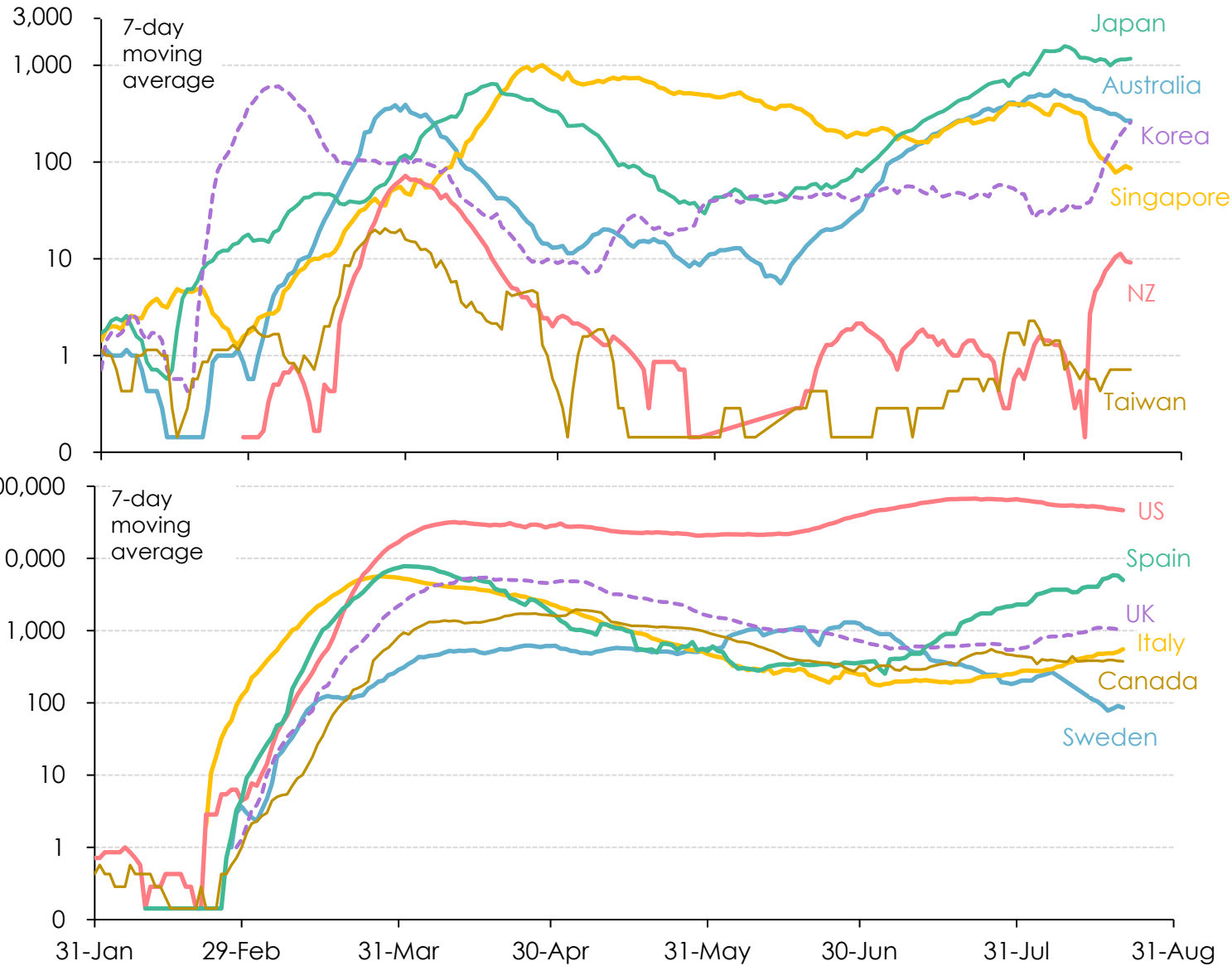
States with fastest recent increases in new cases



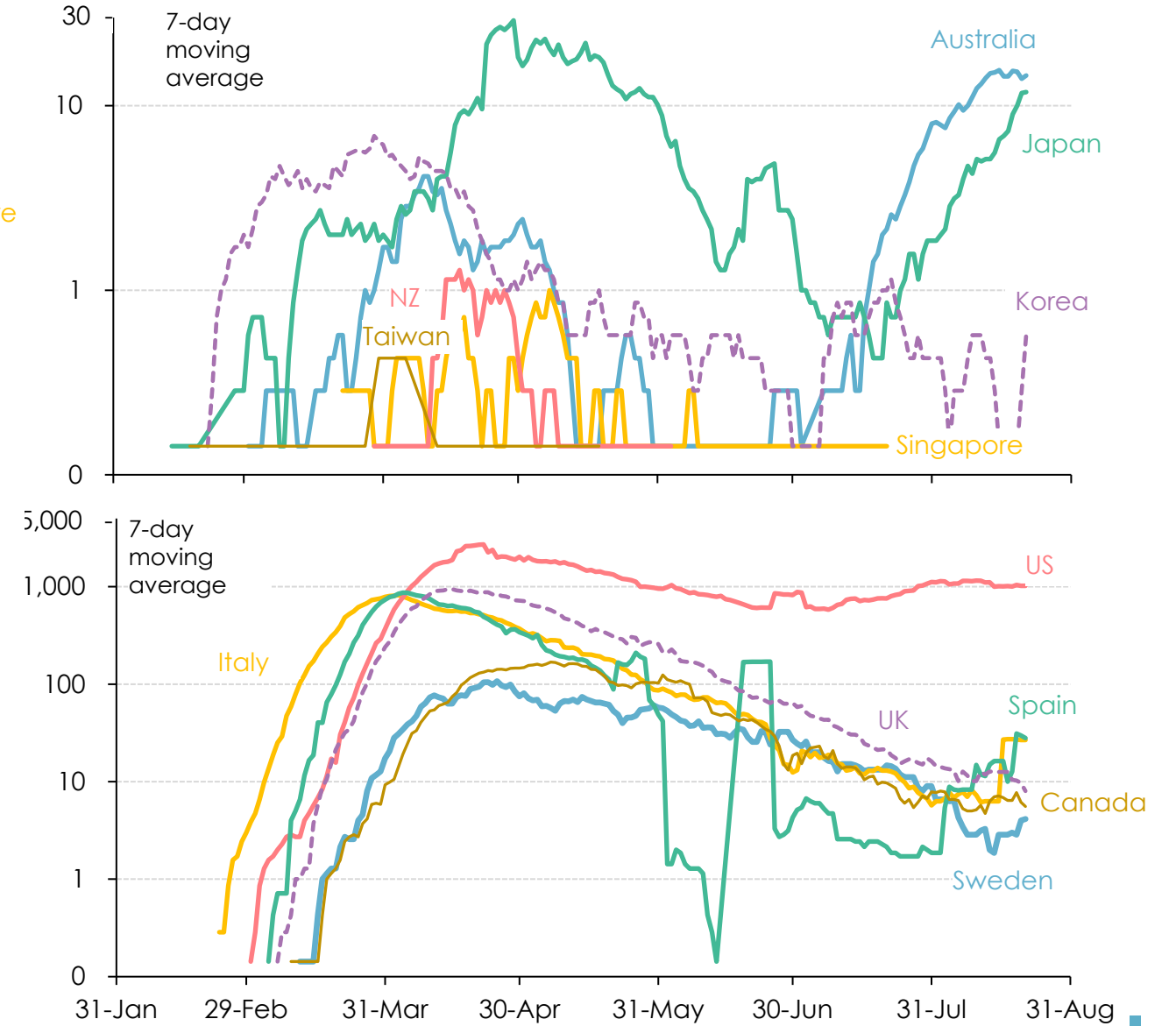
Note: All charts are on logarithmic scale. Cases for Maine (whose Electoral College votes are awarded separately by each of its two Congressional districts) are split by how each of its 16 counties voted in 2016. Sources: USAFacts.org; Centers for Disease Control and Prevention; Corinna. Latest data are for 20th August.

A growing number of 'advanced' nations are experiencing 'second waves' of new cases – but Australia is one of the few also with a surge in deaths

Daily new cases



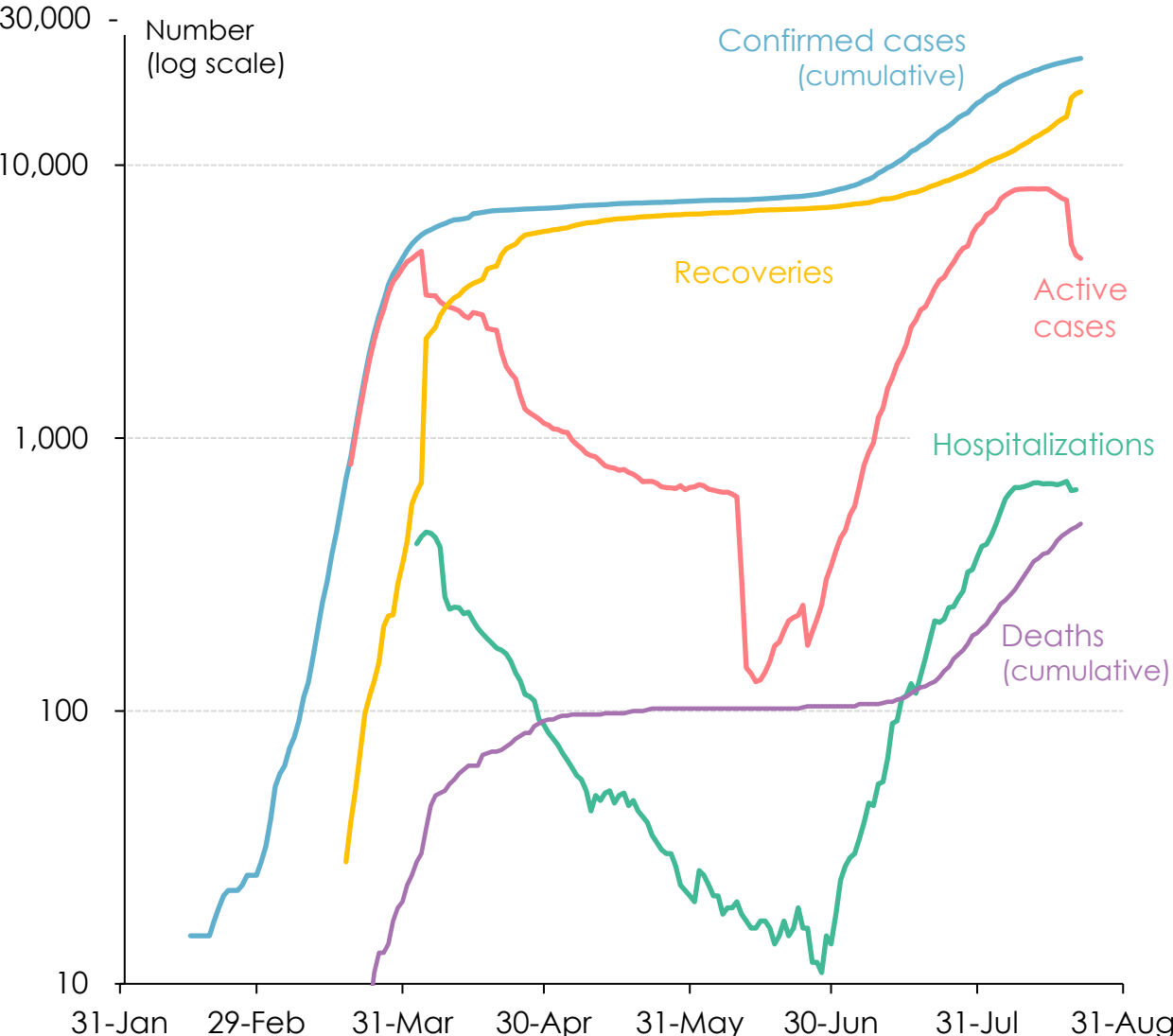
Daily new deaths



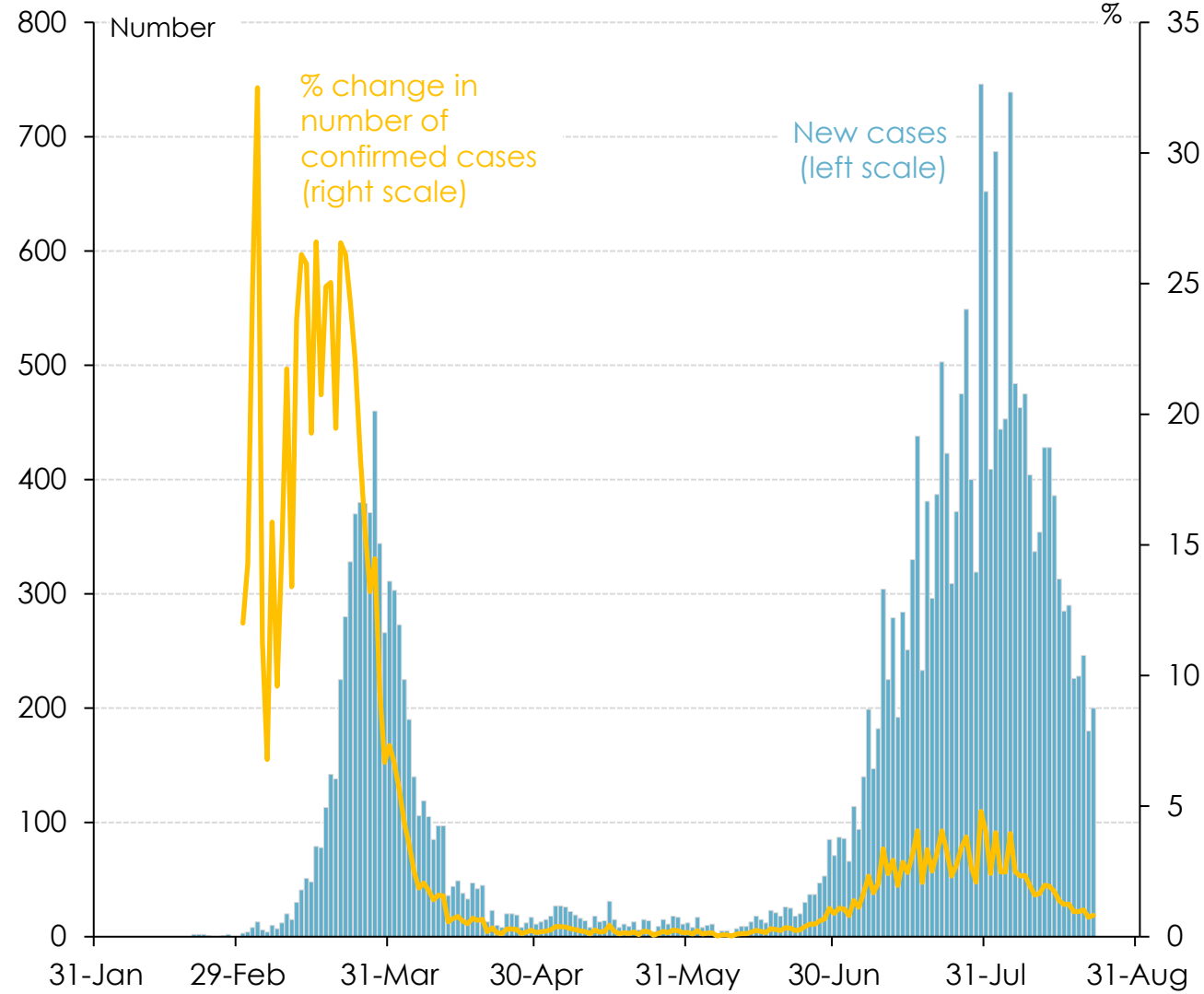
Note: All charts are on logarithmic scales. Data up to 21st August. Source: University of Oxford, Our World in Data; Corinna.

The number of new cases in Australia has slowed over the past couple of weeks, hospitalizations have plateaued and deaths should peak soon

Cases, recoveries, hospitalizations and deaths



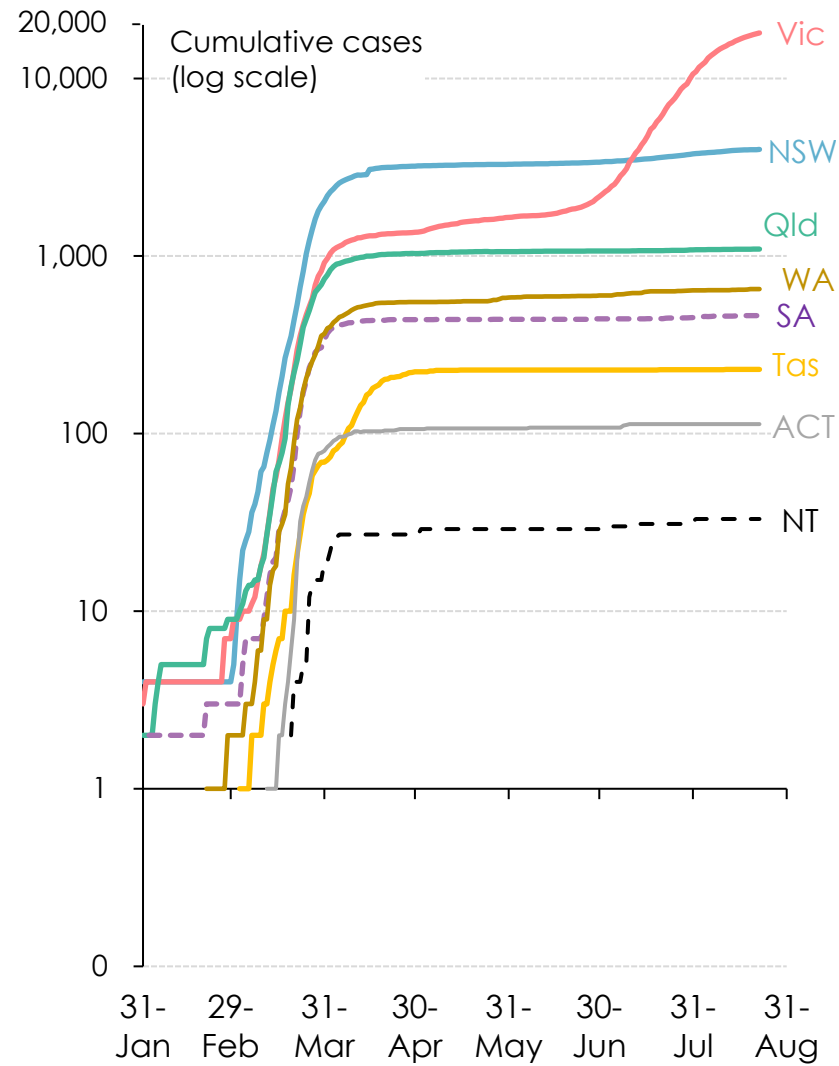
New cases



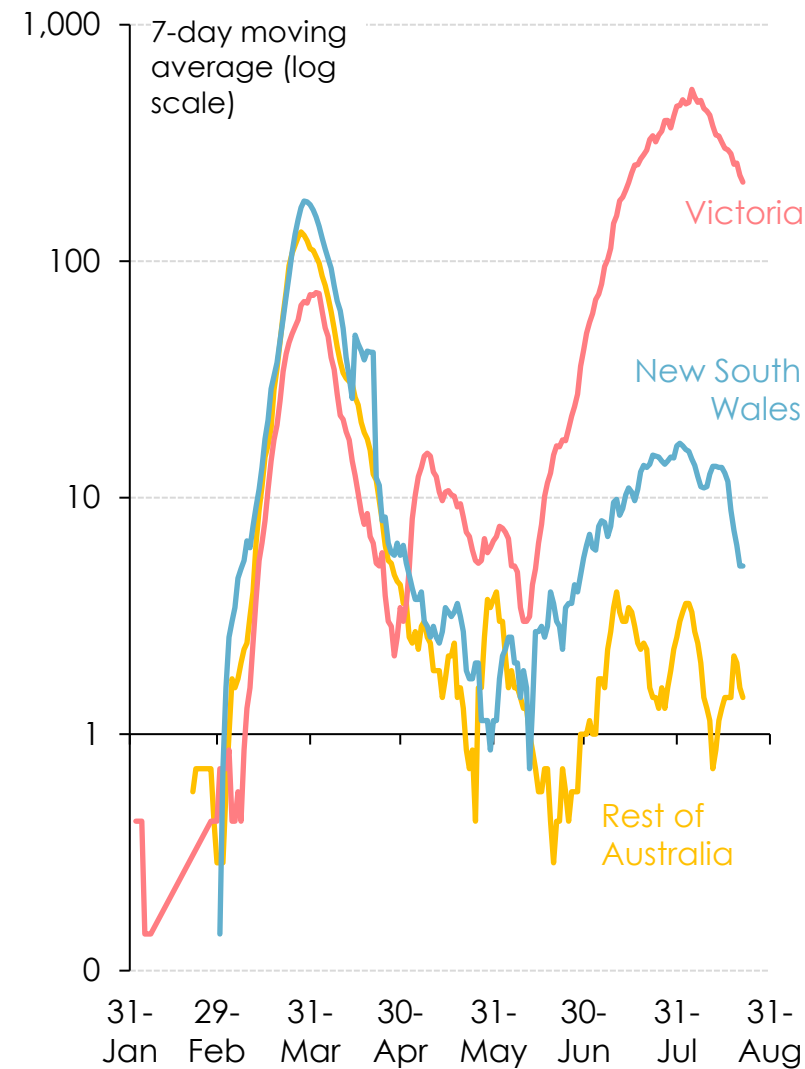
Note: Data up to 22nd August. Source: covid19data.com.au

96.4% of Australia's new cases over the past 5 weeks have been in Victoria (and most of the rest in NSW) – but Victoria's second wave has now peaked

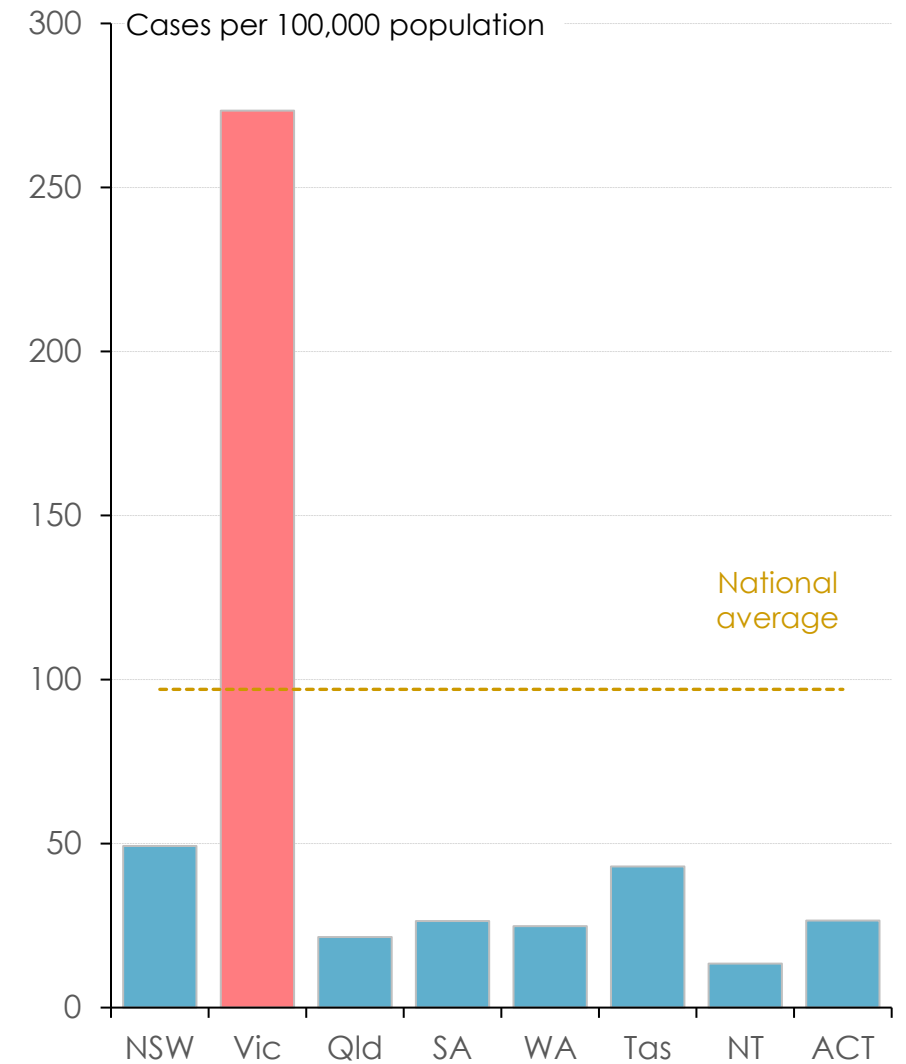
Cumulative cases, by State



New cases



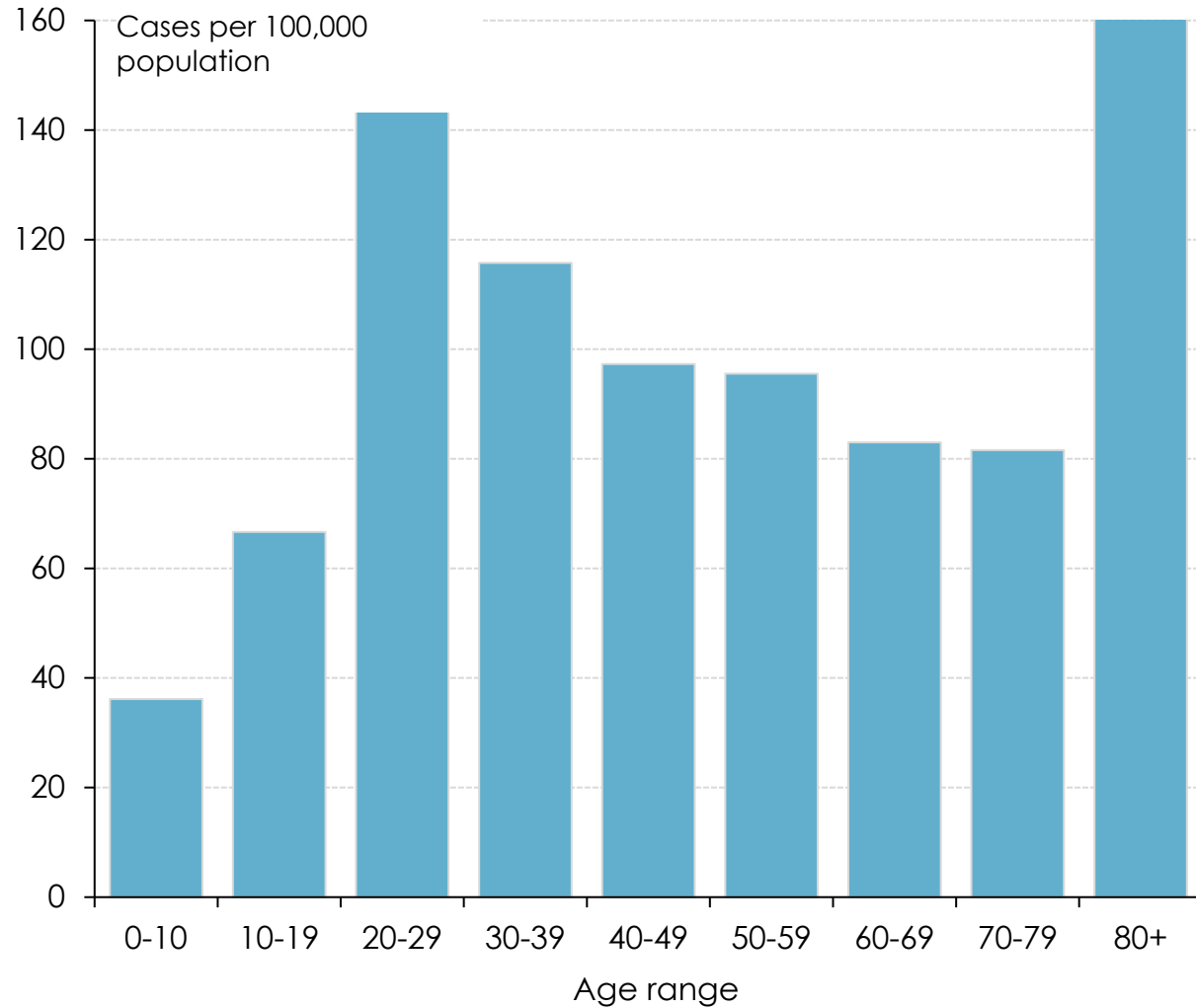
Cases per 100,000 population



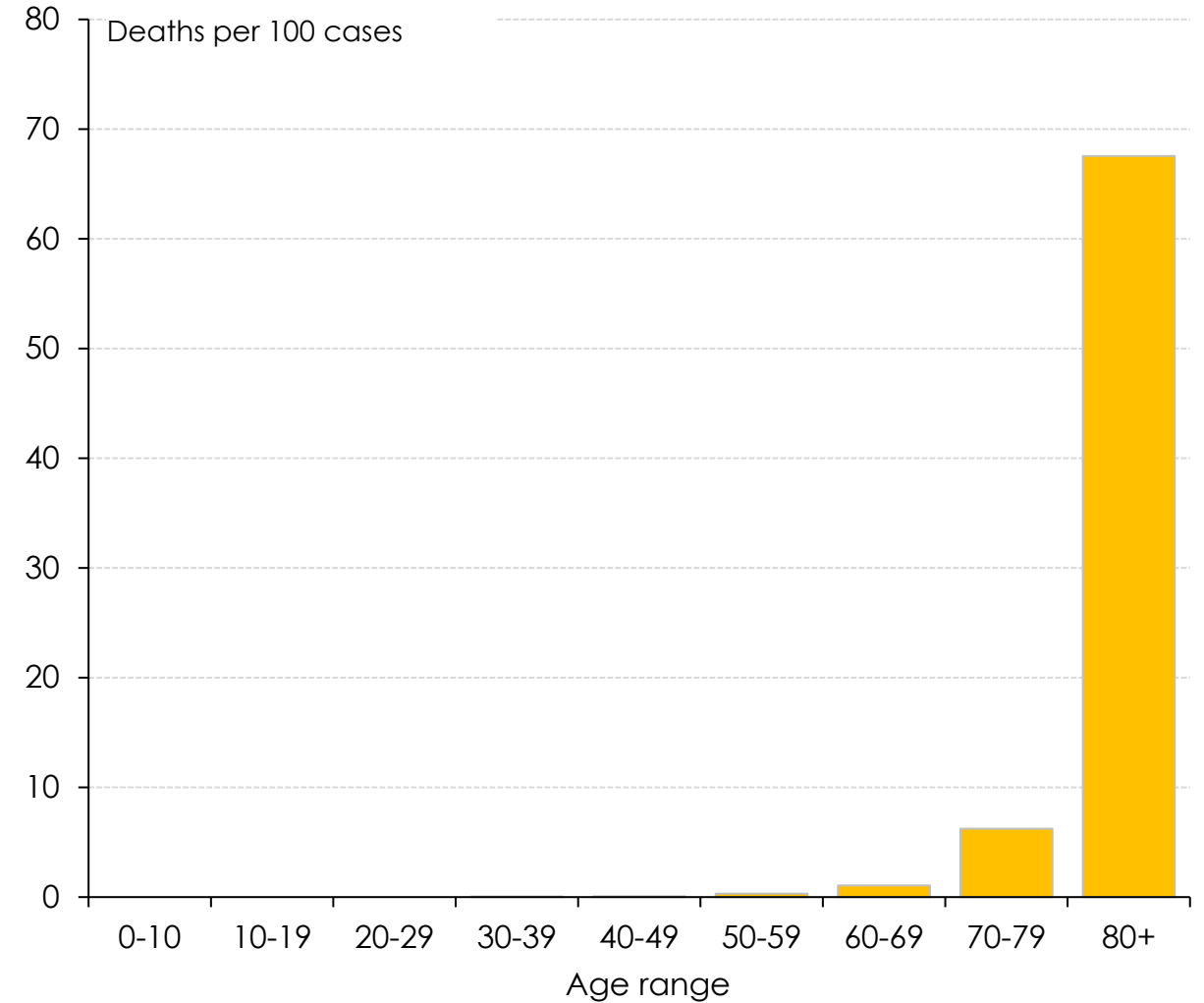
Note: Data up to 22nd August. Source: covid19data.com.au

Infection rates now higher among people in their 20s & 30s than among those in their 40s, 50s, 60s or 70s, though fatality rates are higher for over-60s

Cumulative confirmed cases per 100,000 population, by age group



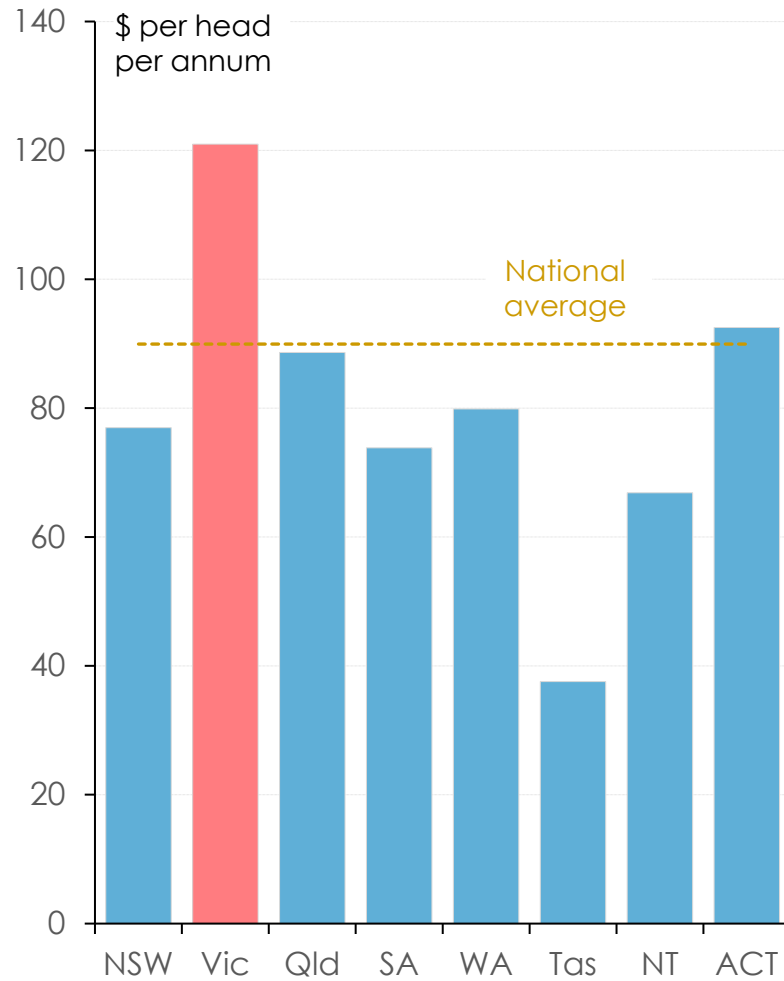
Deaths from Covid-19 per 100 cases, by age group



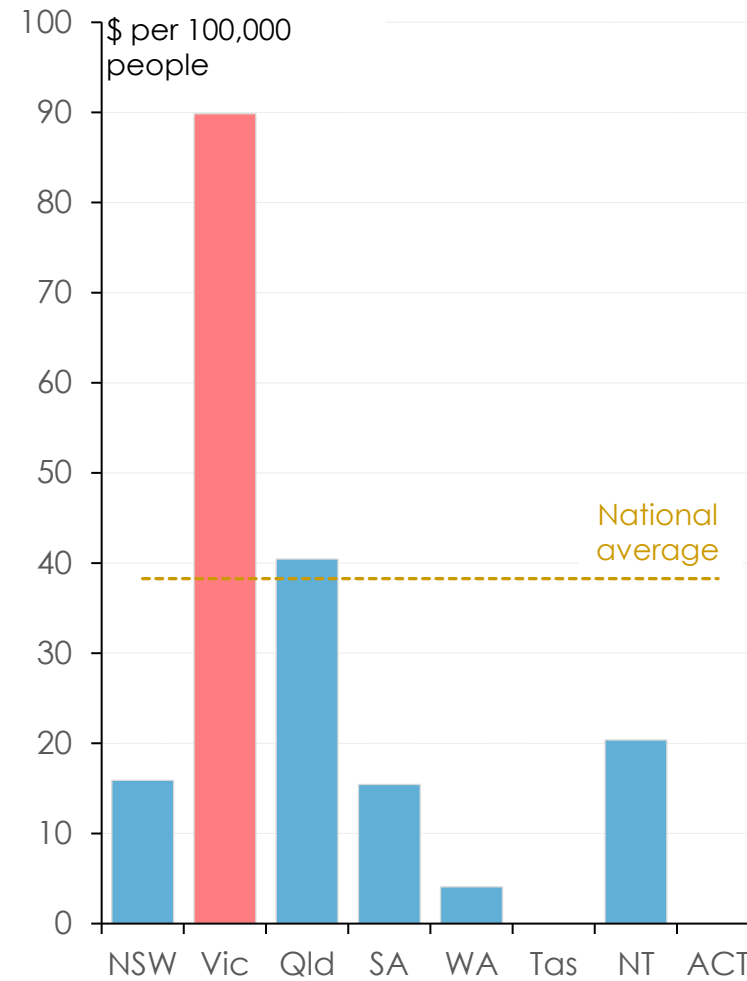
Note: Data up to 21st August. Source: Australian Government Department of Health, National Notifiable Diseases Surveillance System; ABS; Corinna.

Victoria just “doesn’t get” that its heavy-handed policing of restrictions hasn’t worked – rather, it has ‘doubled down’ on fining people

Revenue from fines per head of population, 2014-15 to 2018-19



Fines for breaches of lockdown regulations, per head

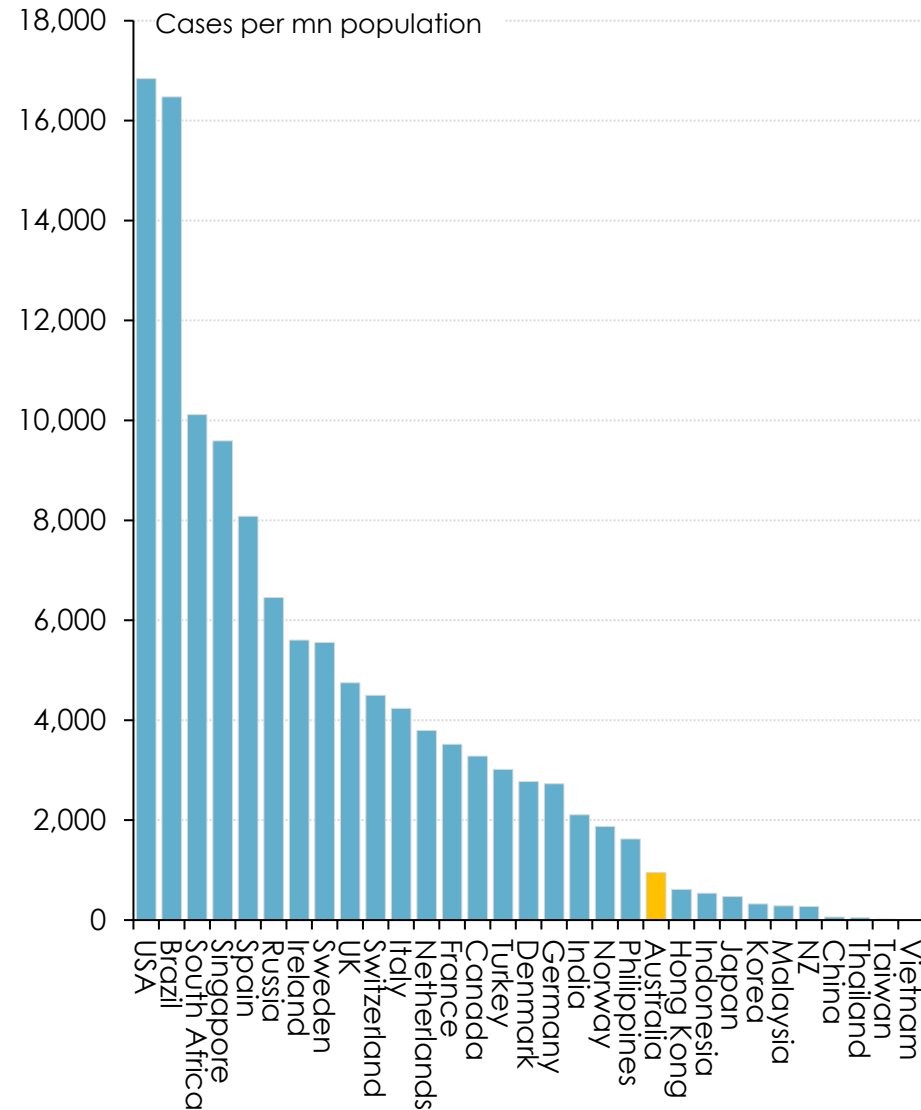


Note: fines for breaches of Covid-19 regulations are for the period between when ‘stage 3’ lockdowns started in late March and the last week of May when restrictions began to be eased. Sources: State and Territory annual financial reports and 2019-20 Mid-Year Budget Reviews; ABS; Tammy Mills, [‘Ahead on penalties: Victoria leads nation on COVID-19 lockdown fines’](#), *The Age*, 28th May 2020; Corinna.

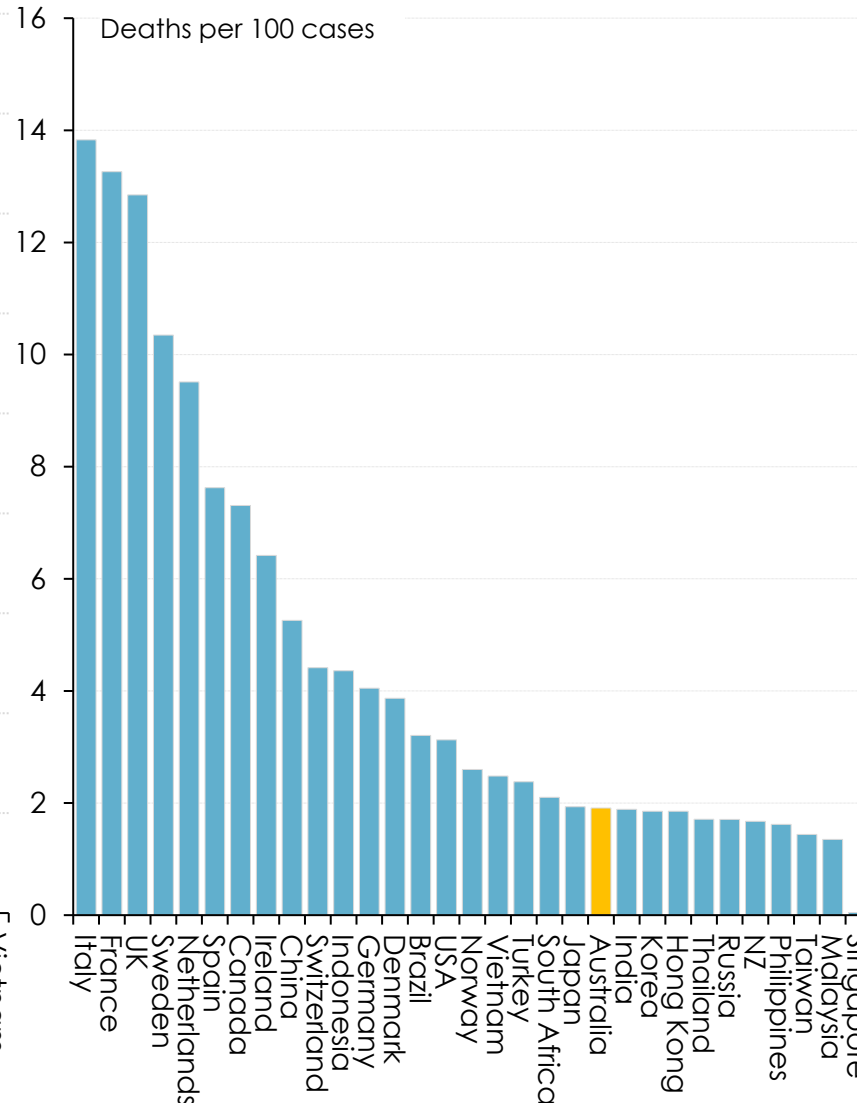
- ❑ Despite its image as Australia’s ‘most progressive’ state, Victoria has long extracted more money from its citizens through fines than any other jurisdiction (irrespective of which party is in power)
- ❑ This ‘authoritarian’ approach carried over into Victoria’s enforcement of the first ‘lockdown’
 - despite there being *no* evidence that Victorians are more likely to breach restrictions, or to be ‘sovereign citizens’ asserting their ‘constitutional rights’ not to wear masks (etc), than people living in other states
 - and yet it didn’t work (see slide 9)
- ❑ While the major reason for Victoria’s ‘second wave’ appears to be failures in the system of hotel quarantine for arrivals from overseas
 - Victoria outsourced this task to ‘security firms’ rather than taking up the Federal Government’s offer of defence force personnel (as NSW did)
- ❑ ... another reason for the ‘complacency’ of which the Victorian Premier accuses his citizens (“it’s your fault, not mine”) may have been a sense of ‘relief’ at getting ‘out from under’ a more oppressive policing regime than anywhere else in Australia
- ❑ Yet when announcing the current lockdown the Victorian Premier boasted about the ‘opportunity’ (his words) that it created to impose ‘even bigger fines’

Australia's infection and fatality rates remain, along with NZ's and most East Asian countries', low by international standards

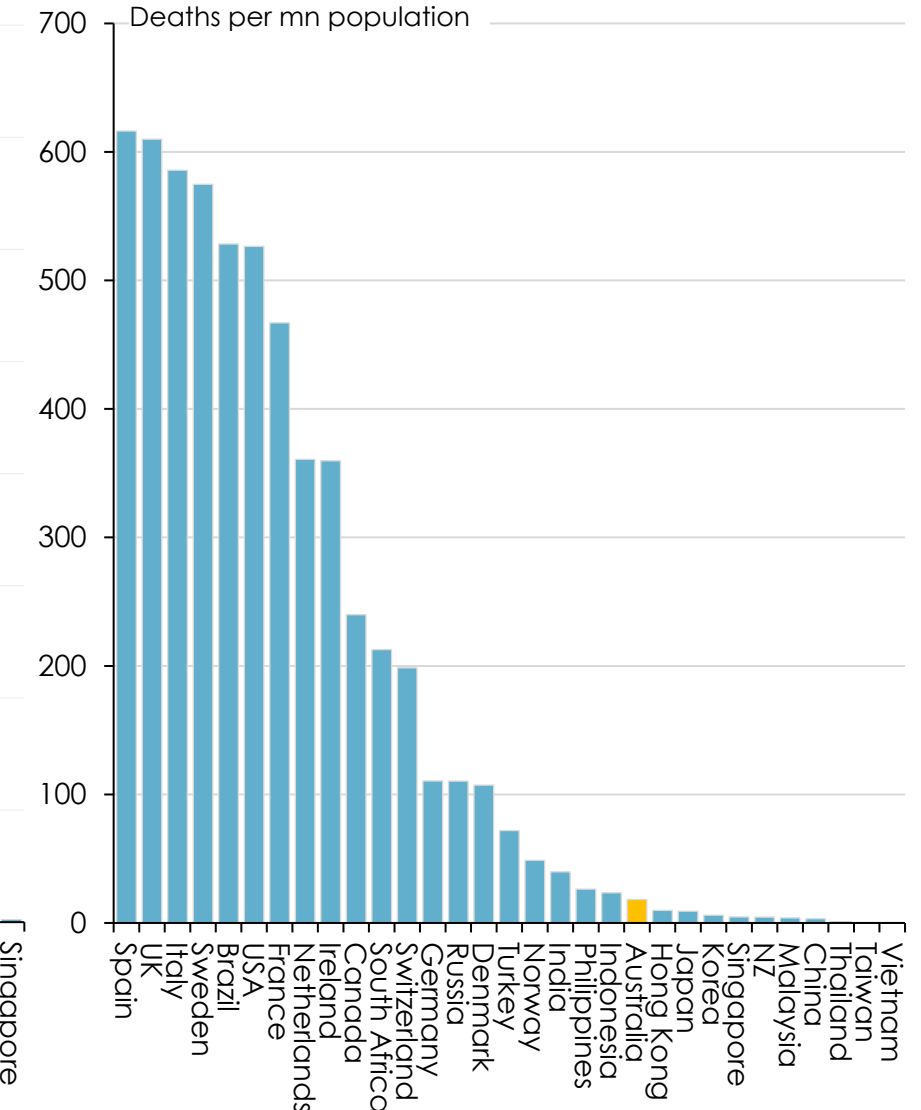
Apparent infection rate



Apparent death rate



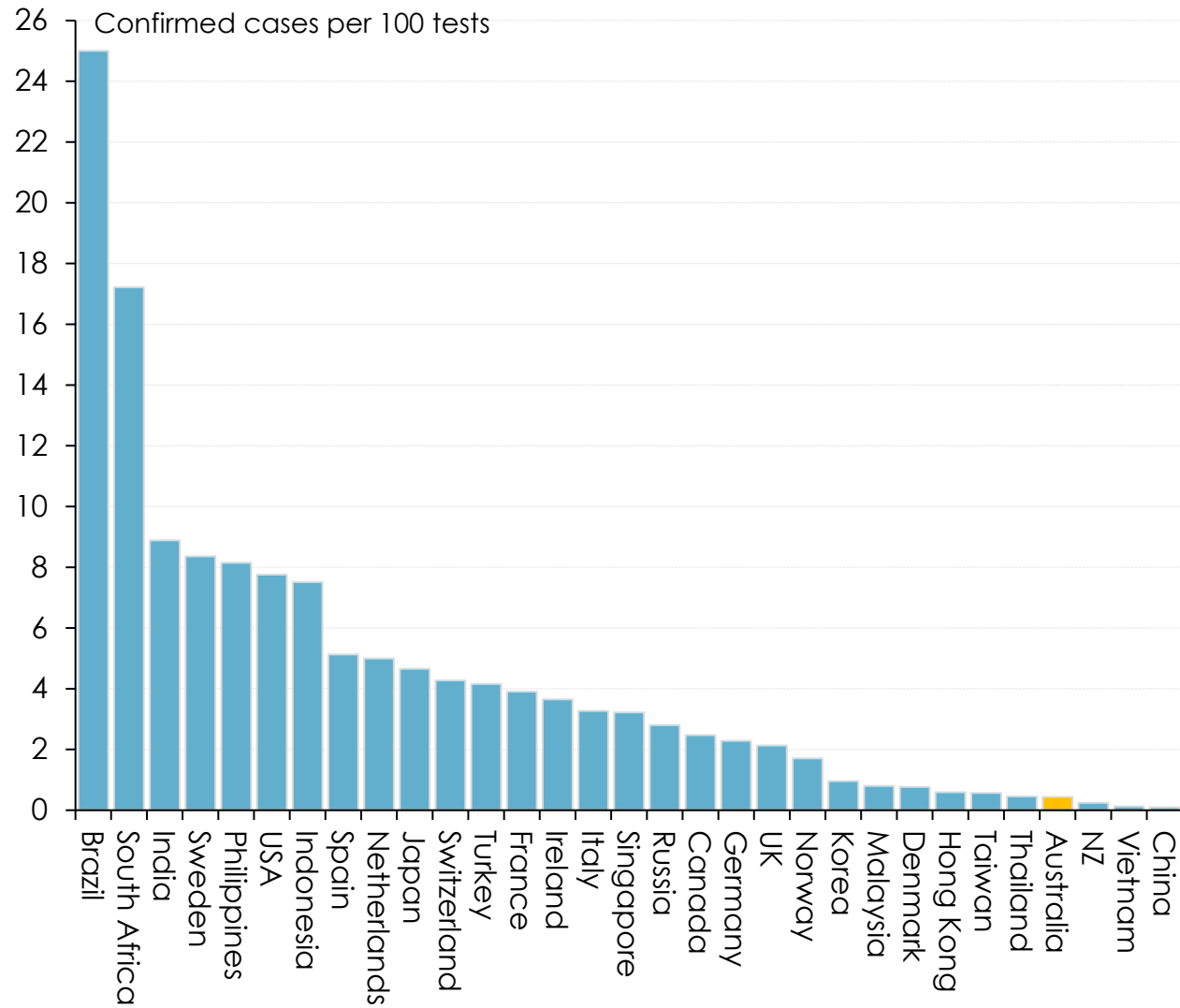
Deaths per mn population



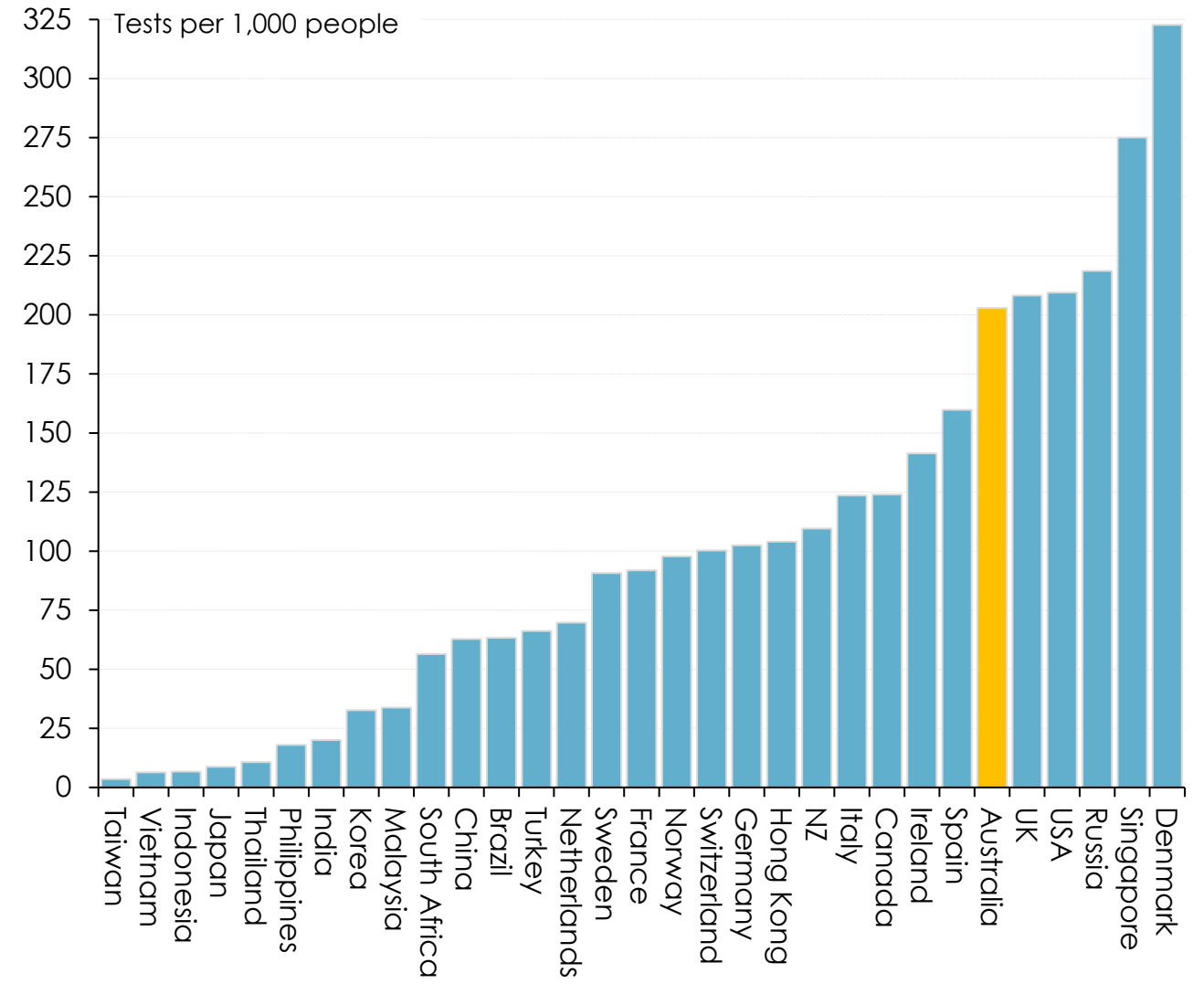
Note: Data up to 21st August. Source: University of Oxford, Our World in Data; Corinna.

Australia's testing regime appears sufficiently broad for the low infection and death rates to be seen as 'credible' (ie not due to low testing)

Confirmed cases per 100 tests



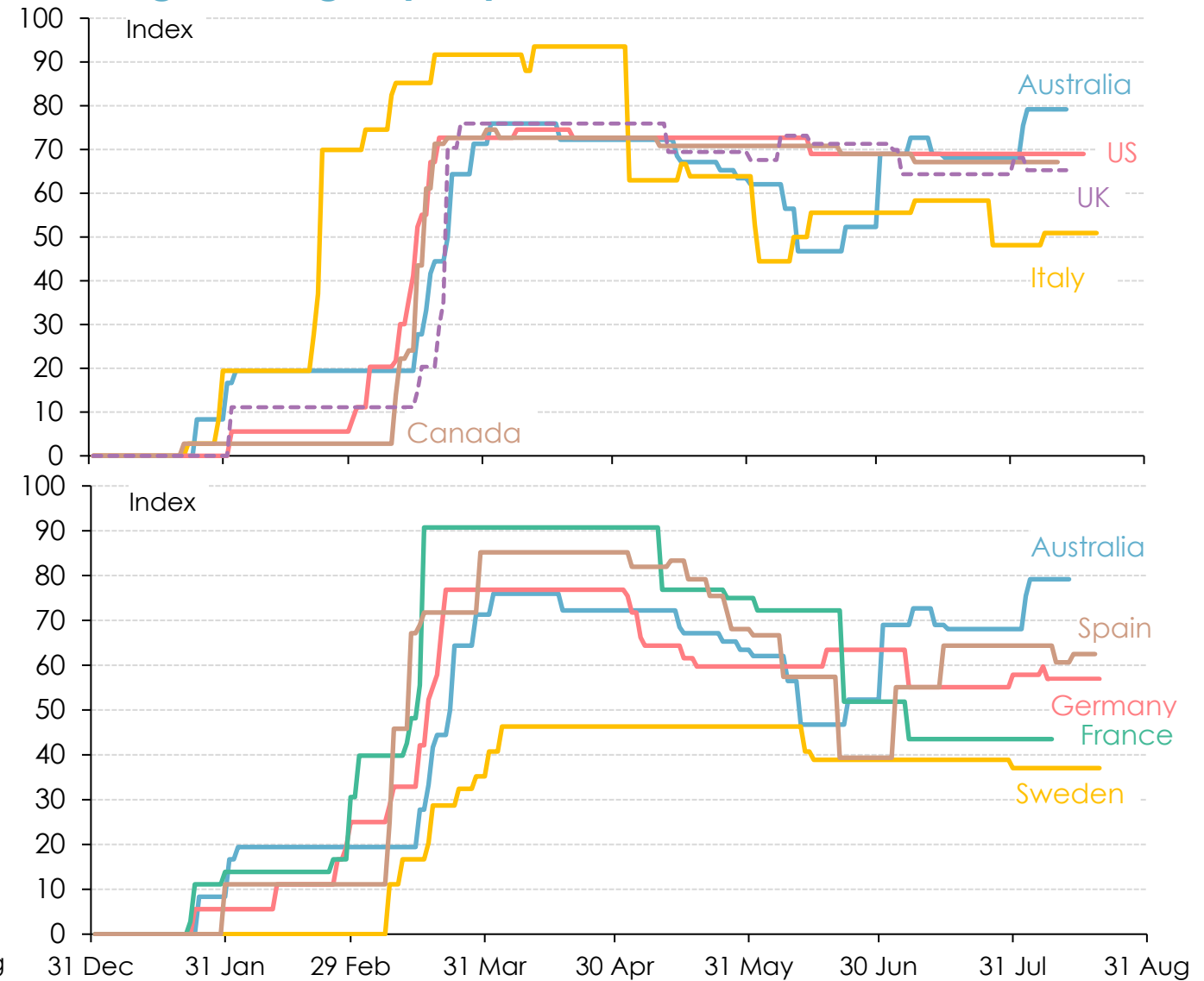
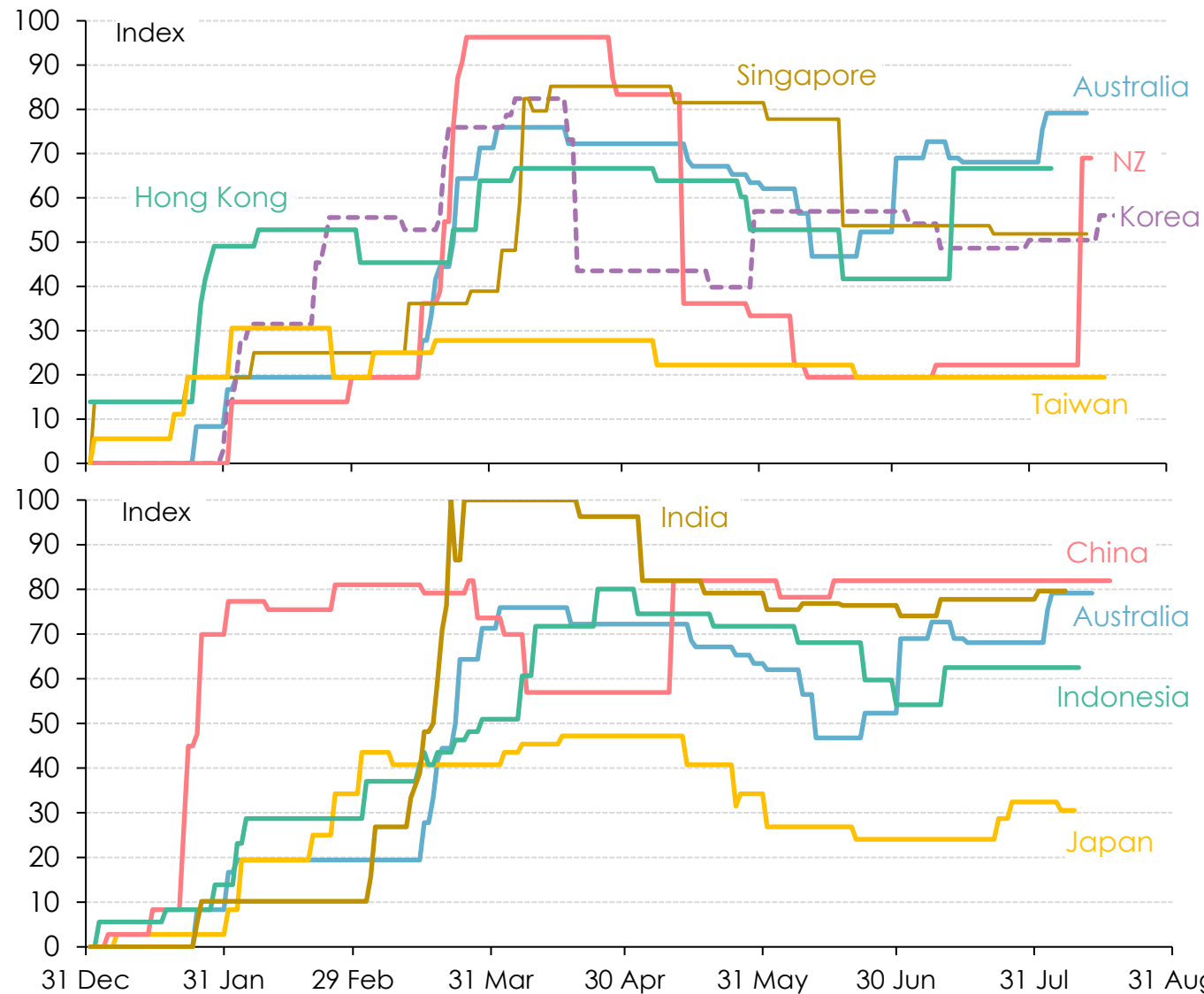
Tests per thousand of population



Note: Data up to 21st August. A high number of confirmed cases per 100 tests combined with a low number of tests per 000 population is *prima facie* evidence of an inadequate testing regime. Source: Worldometers; Corinna.

A growing number of countries have re-imposed restrictions, usually on a regional or local basis, in response to renewed outbreaks of the virus

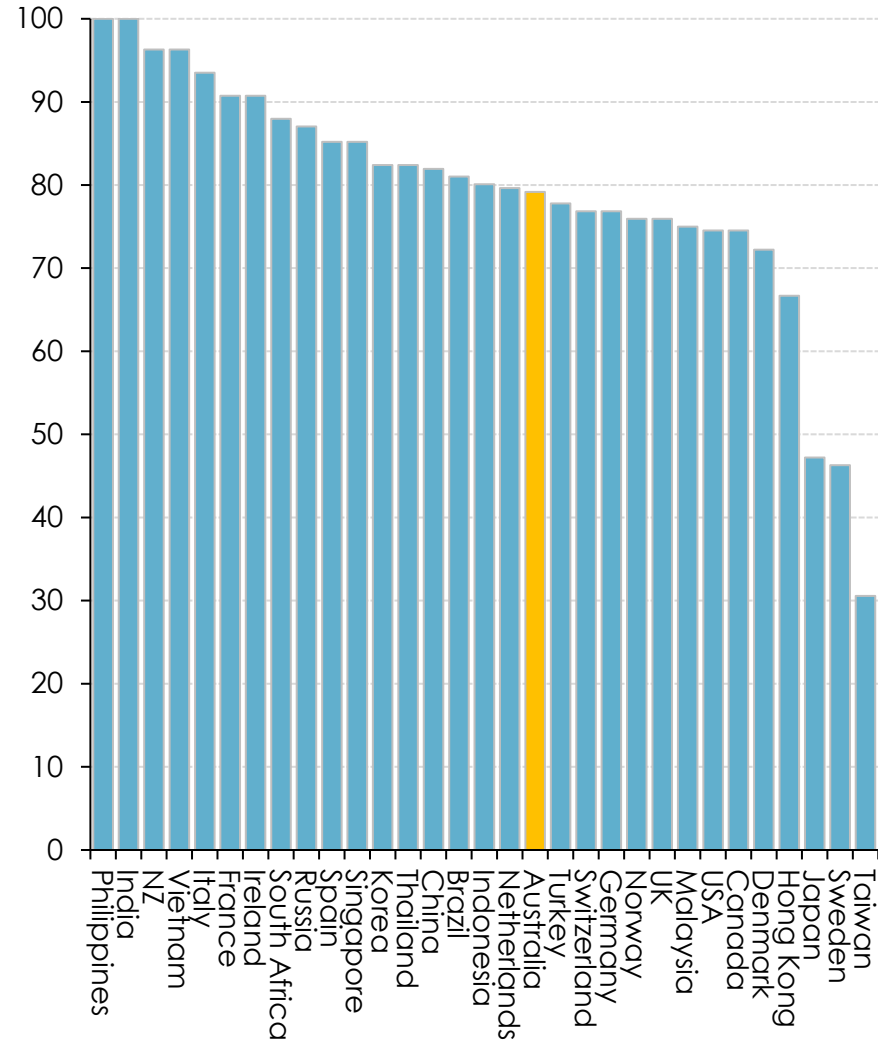
Timing and severity of government restrictions on movement and gathering of people



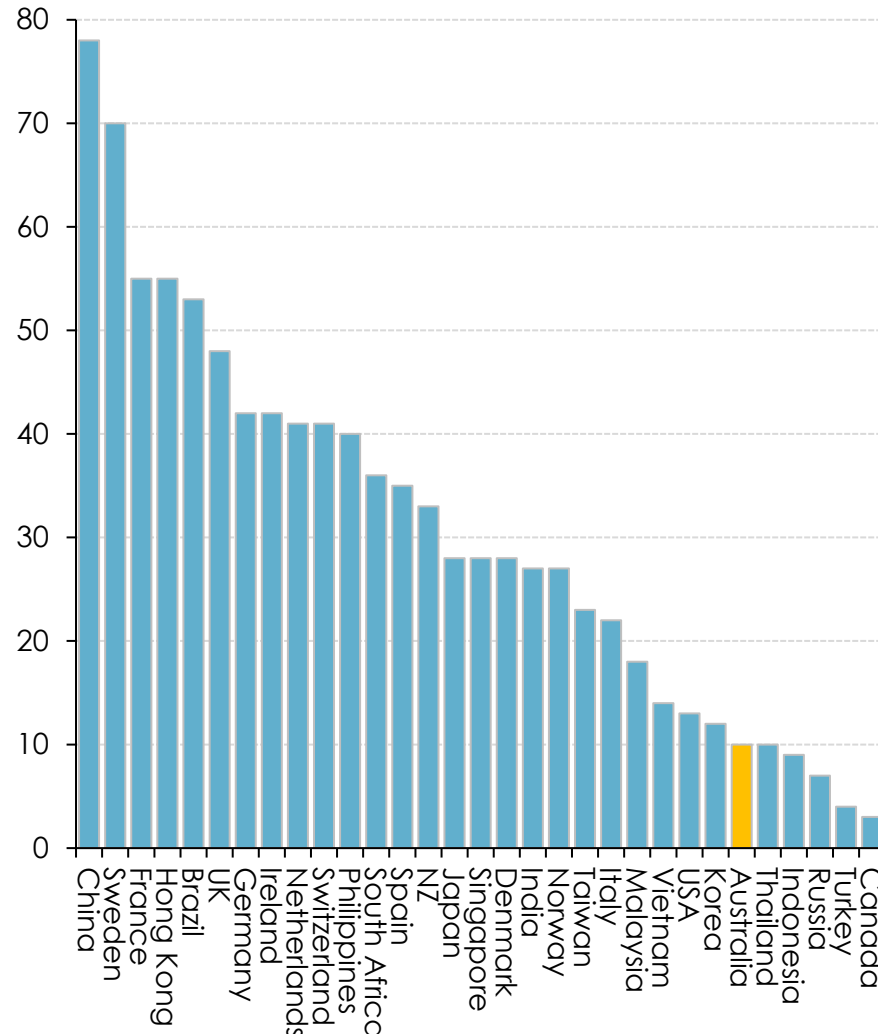
The Oxford COVID-19 Government Response Tracker collects publicly available information on 11 indicators of government response including school and workplace closures, public events cancellations, restrictions on public gatherings, stay at home requirements, public transport closures, domestic and international travel restrictions, public information campaigns, testing and contact tracing. The increase in the index for Australia since 1 July reflects the lockdown imposed on 36 Melbourne suburbs in response to outbreaks there. Source: Blavatnik School of Government, Oxford University. Data up to 7th – 20th August.

Australia's restrictions have been, on average, less stringent than in most other 'advanced' economies, or other economies in our region

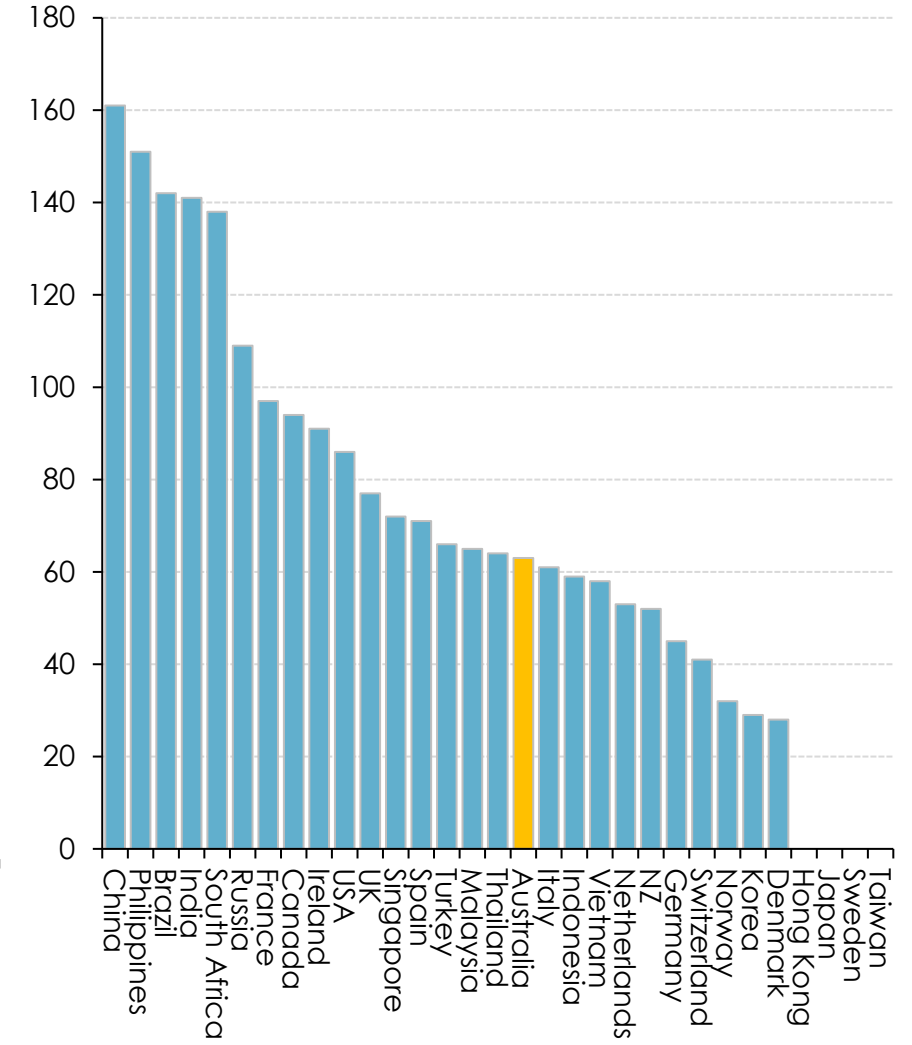
Highest level of restrictions imposed



Number of days restrictions at highest level



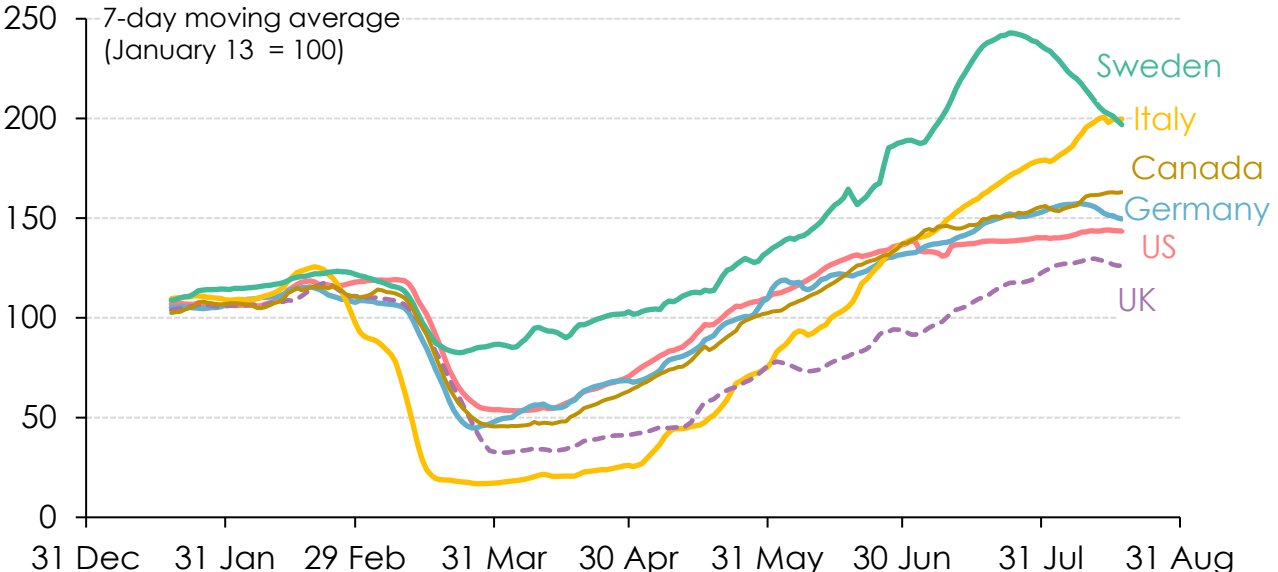
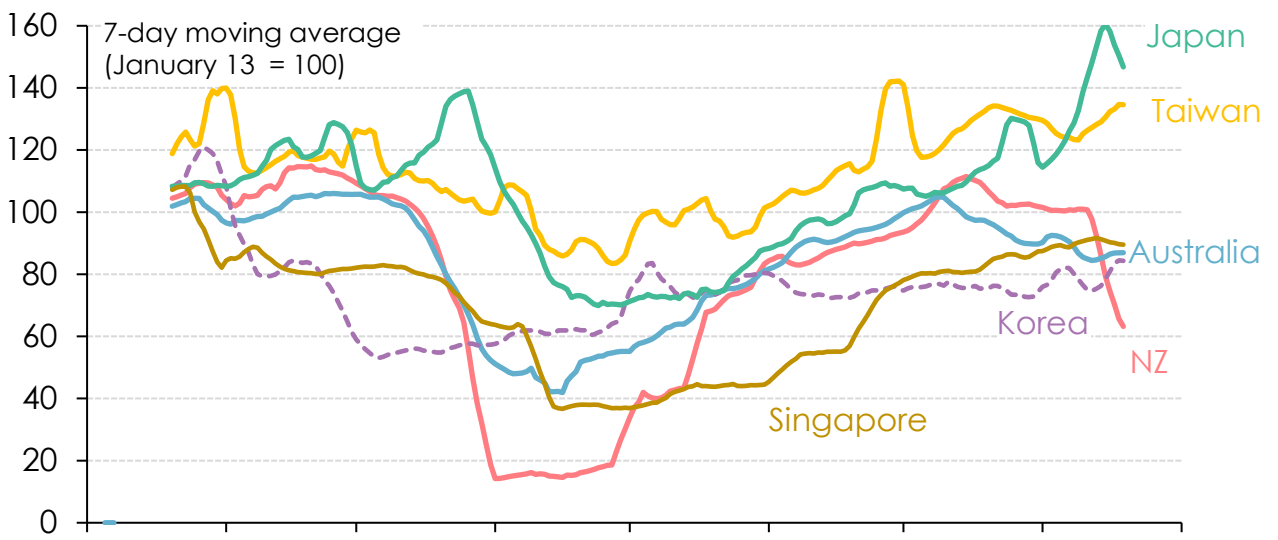
Number of days restrictions above 70 on Oxford index



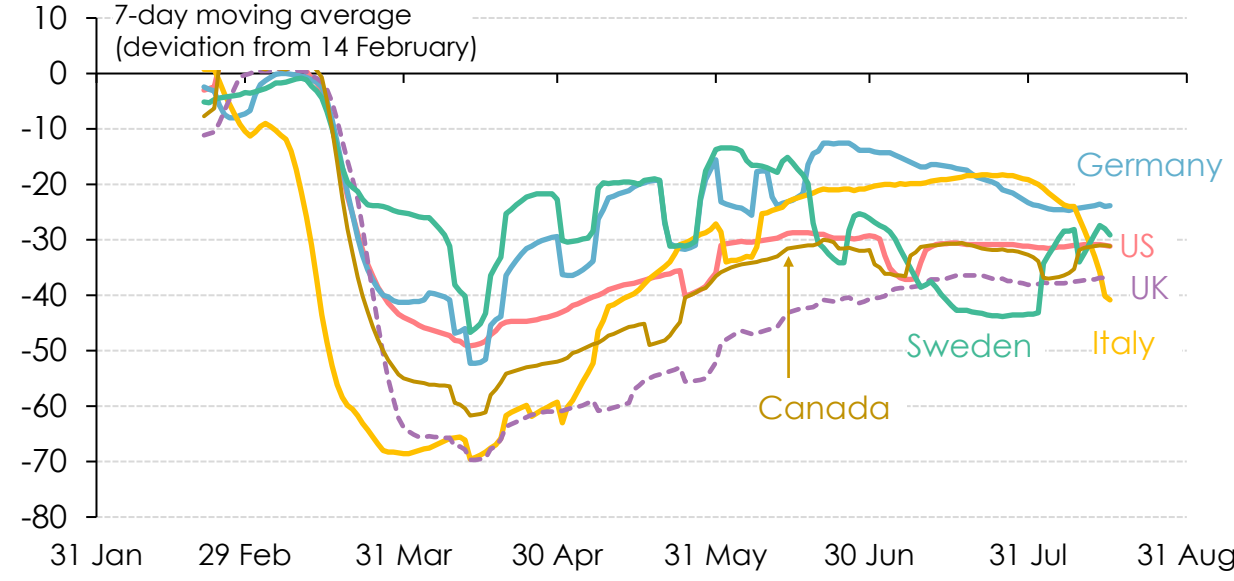
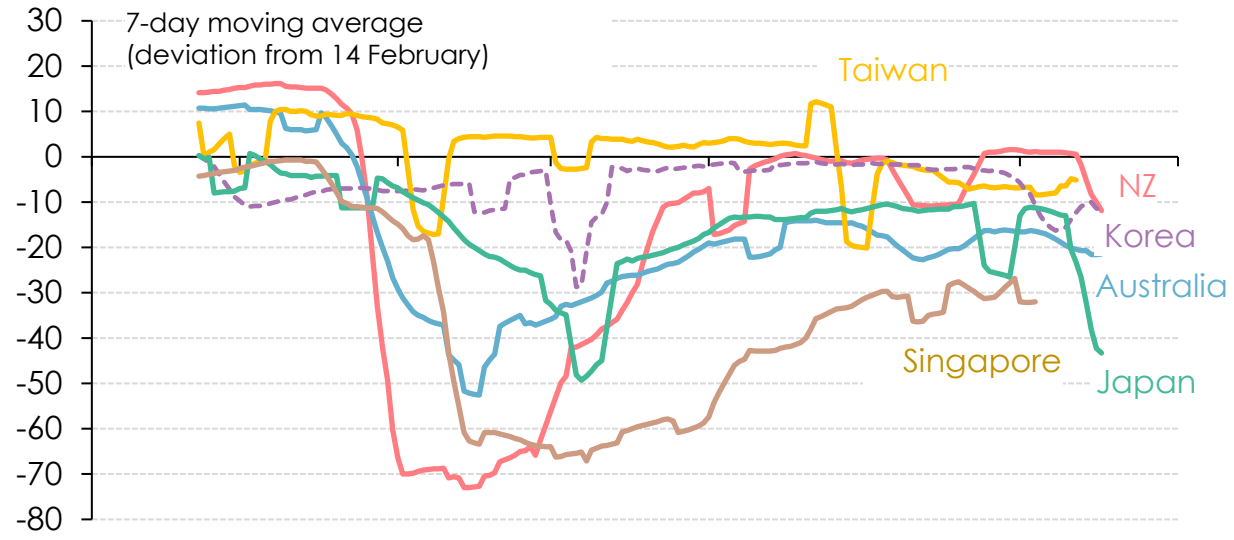
The Oxford COVID-19 Government Response Tracker collects publicly available information on 11 indicators of government response including school and workplace closures, public events cancellations, restrictions on public gatherings, stay at home requirements, public transport closures, domestic and international travel restrictions, public information campaigns, testing and contact tracing. Source: Blavatnik School of Government, Oxford University. Data up to 7th – 20th August.

The uptrend in mobility since April has begun to peter out in countries where restrictions have been re-imposed

Time spent driving



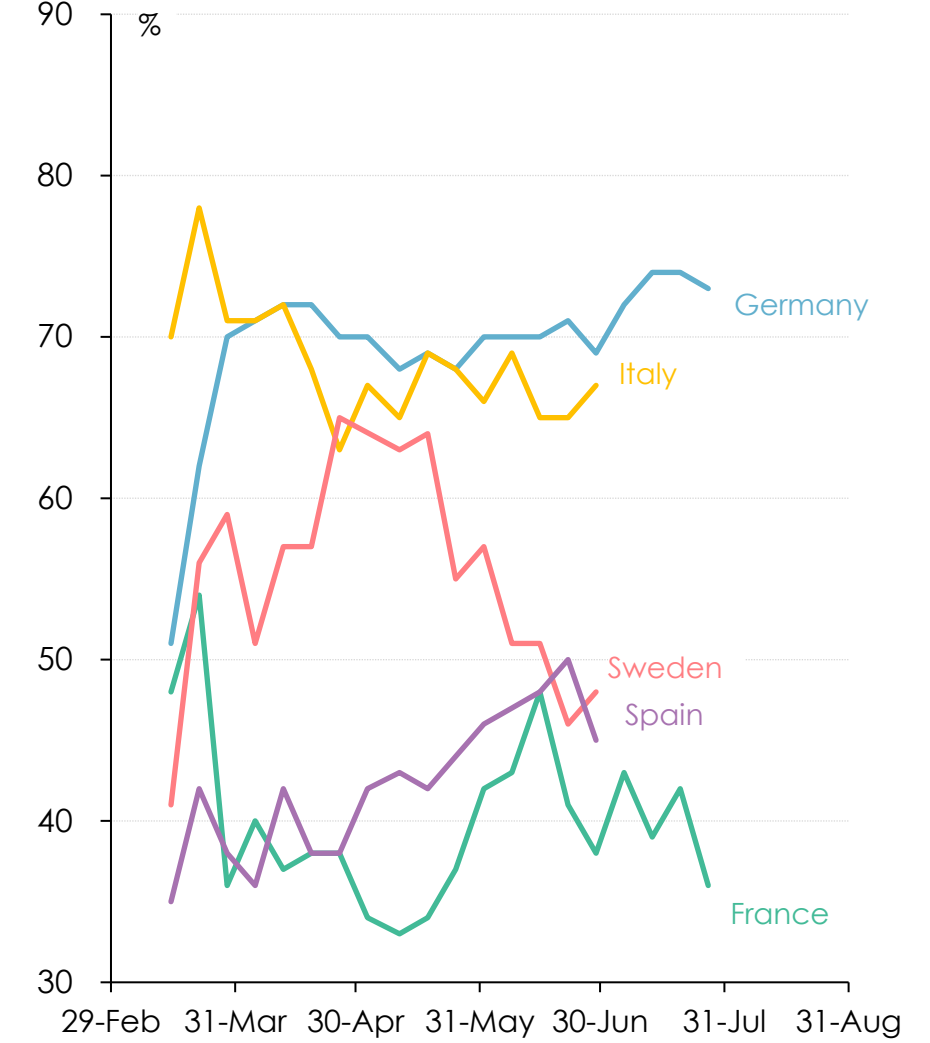
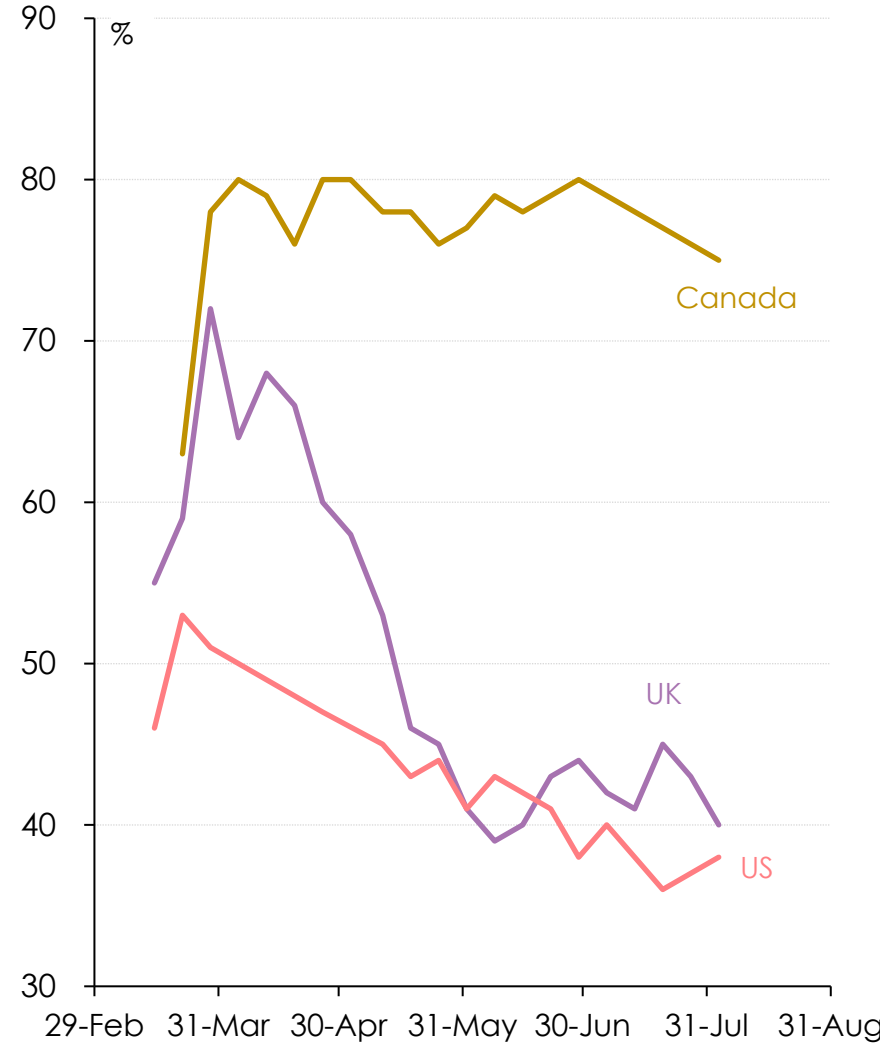
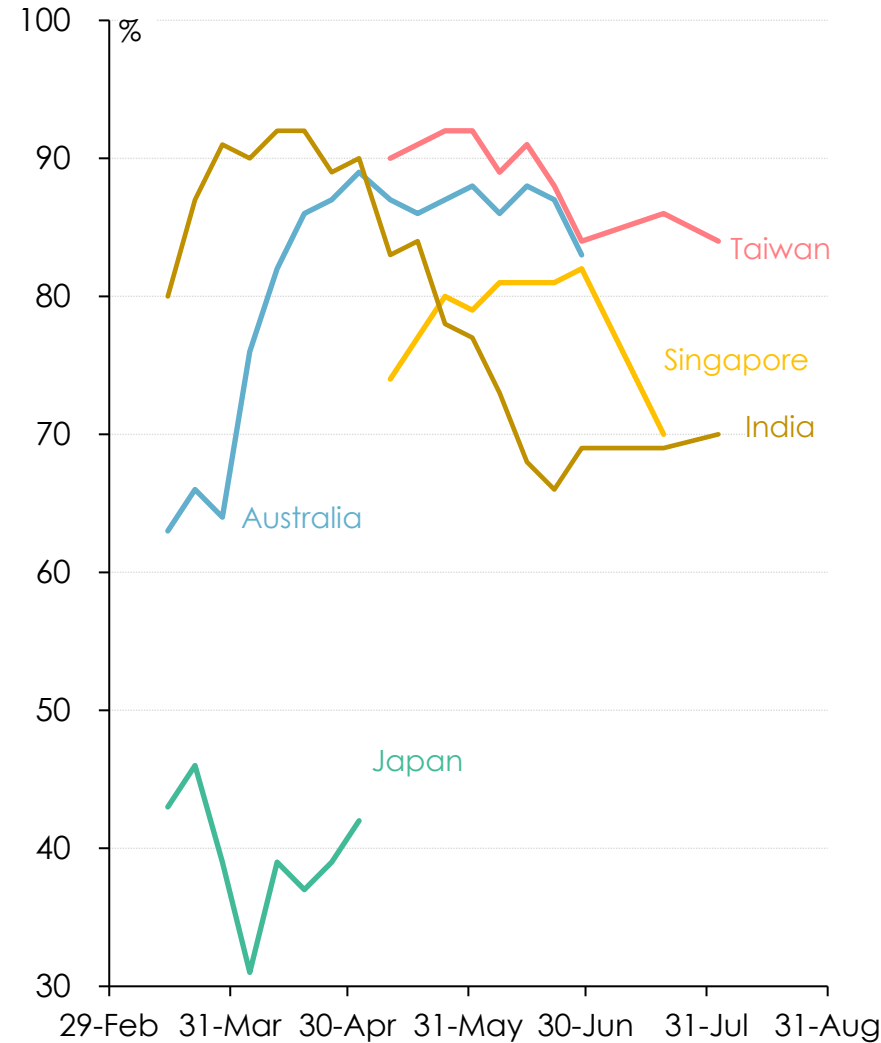
Time spent in work places



Note: these data will reflect normal seasonal variations in activities as well as the effects of government restrictions and individual responses to the risks posed by the virus. Sources: Apple Mobility Trends Reports (data up to 18th August); Google Covid-19 Community Mobility Reports (data up to 16th August). For some unknown reason data for Taiwan and Singapore is no longer included in the csv file of Google mobility data.

Voters are becoming less satisfied with governments' handling of the pandemic in a growing number of countries

Percentage of opinion poll respondents who think their government has handled the coronavirus outbreak 'well' or 'very well'

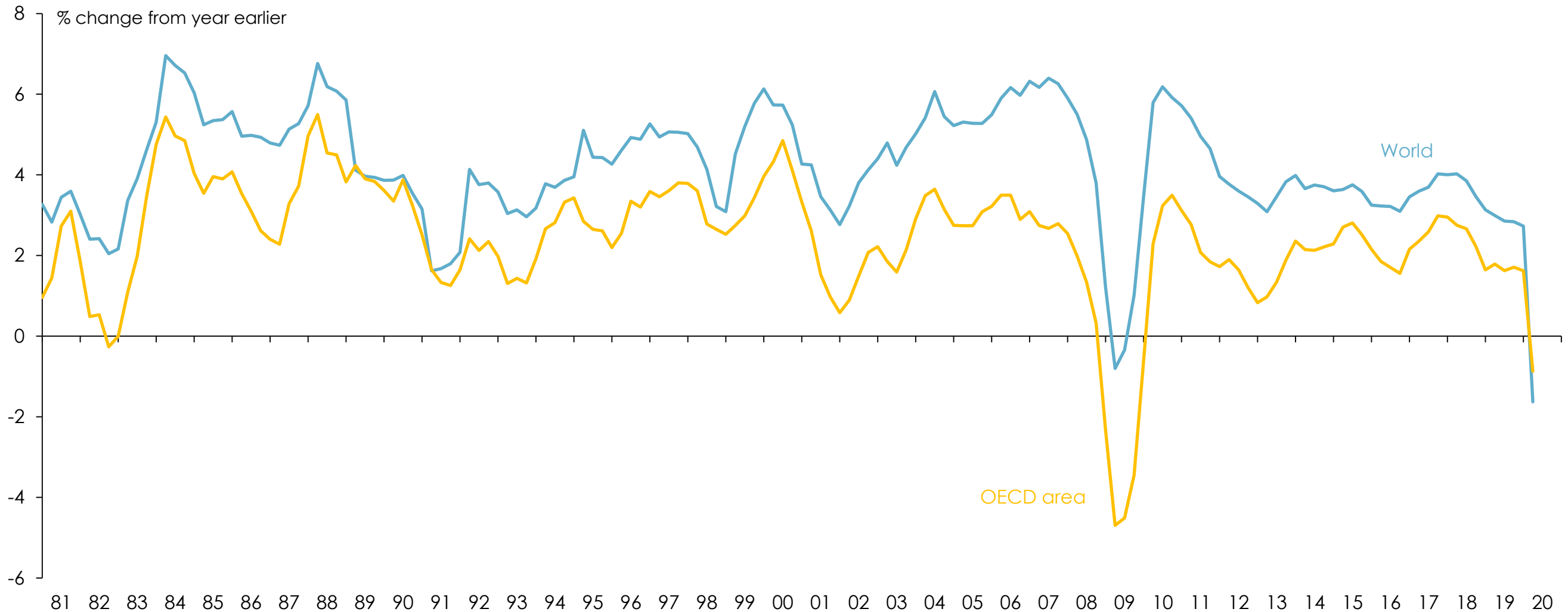


Source: YouGov. There have been no updates during the past week, so latest data is week ended 3rd August (or earlier).

The world

The world economy experienced its sharpest year-on-year contraction for at least 40 years in Q1 this year – with worse to come in Q2

World and OECD area real GDP growth



Note: Estimates of global GDP growth compiled by Corinna using data for 95 countries accounting for 90% of 2018 world GDP as measured by the IMF; excludes constituents of the former USSR before 1993, the former Czechoslovakia before 1995, and the former Yugoslavia before 1998.
Sources: national statistical agencies and central banks; Eurostat; OECD; IMF.

All of the major international economic forecasting institutions expect 2020 to be the worst year for global growth since the 1930s

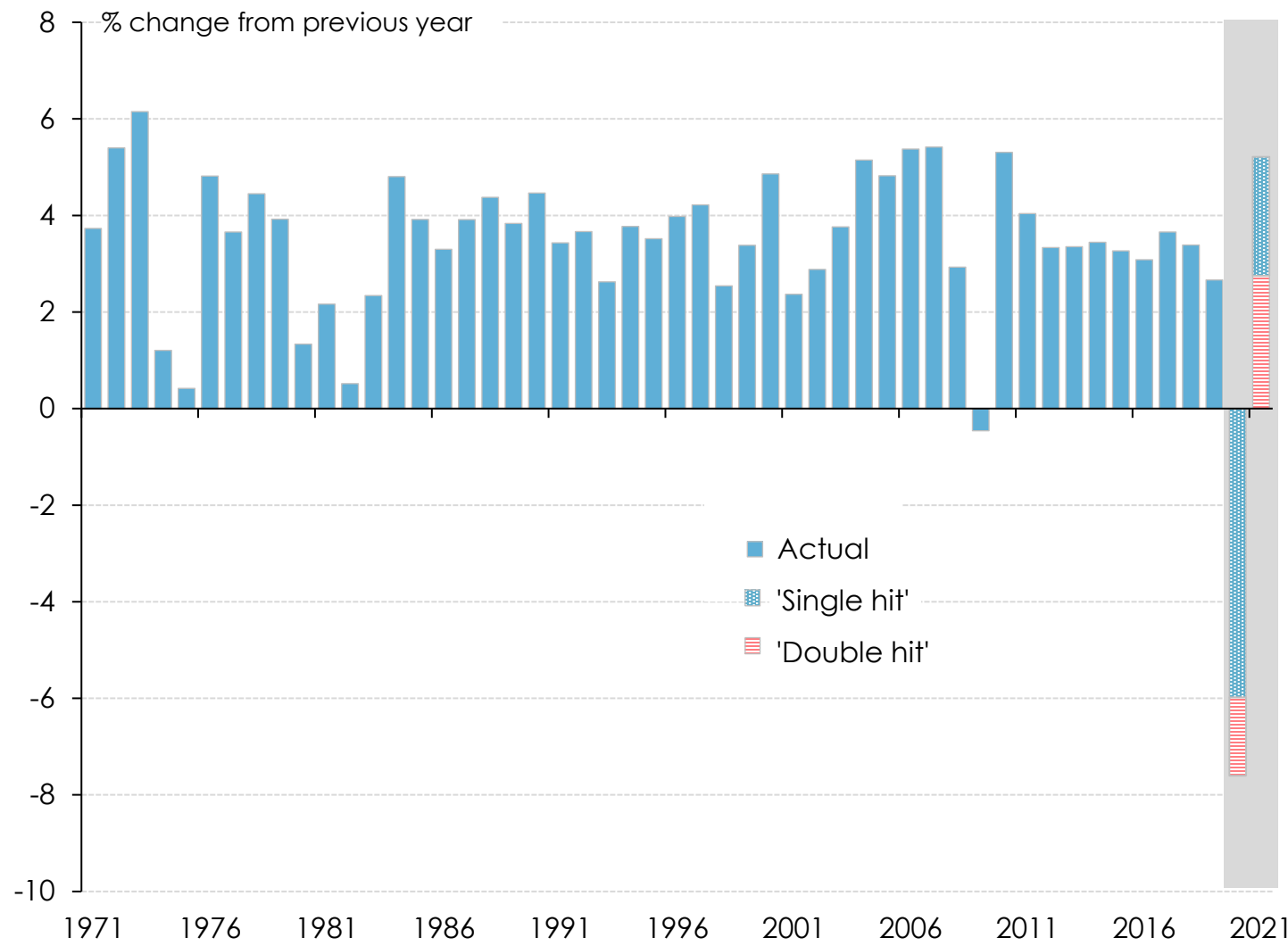
Major global institutions' growth forecasts for 2020 and 2021 compared

| | <i>Actual</i> | <i>IMF</i> | | <i>World Bank</i> | | <i>OECD*</i> | | <i>Australian Treasury</i> | |
|-------------|---------------|-------------------|------------------|-------------------|------|--------------|------|----------------------------|------|
| | 2019 | 2020 | 2021 | 2020 | 2021 | 2020 | 2021 | 2020 | 2021 |
| US | 2.3 | -6.1 | 4.5 | -6.1 | 4.0 | -7.3 | 4.1 | -8.0 | 4.8 |
| China | 6.1 | 1.2 | 9.2 | 1.0 | 6.9 | -2.6 | 6.8 | 1.8 | 8.3 |
| Euro area | 1.2 | -7.5 | 4.7 | -9.1 | 4.5 | -9.1 | 6.5 | -8.8 | 5.0 |
| India | 4.2 | 1.9 | 7.4 | -3.2 | 3.1 | -3.7 | 7.9 | -4.0 | 4.3 |
| Japan | 0.7 | -5.2 | 3.0 | -6.1 | 2.5 | -6.0 | 2.1 | -6.3 | 2.8 |
| UK | 1.4 | -6.5 | 4.0 | na | na | -11.5 | 9.0 | na | na |
| Australia | 1.8 | -6.7 | 7.1 | na | na | -5.0 | 4.1 | -3.8 | 2.5 |
| New Zealand | 2.2 | -7.2 [†] | 5.9 [†] | na | na | -8.9 | 6.6 | na | na |
| World | 2.9 | -3.0 | 5.8 | -5.2 | 4.2 | -6.0 | 5.2 | -4.8 | 5.0 |
| World trade | 0.9 | -11.0 | 8.4 | -13.4 | 5.3 | -9.5 | 6.0 | na | na |

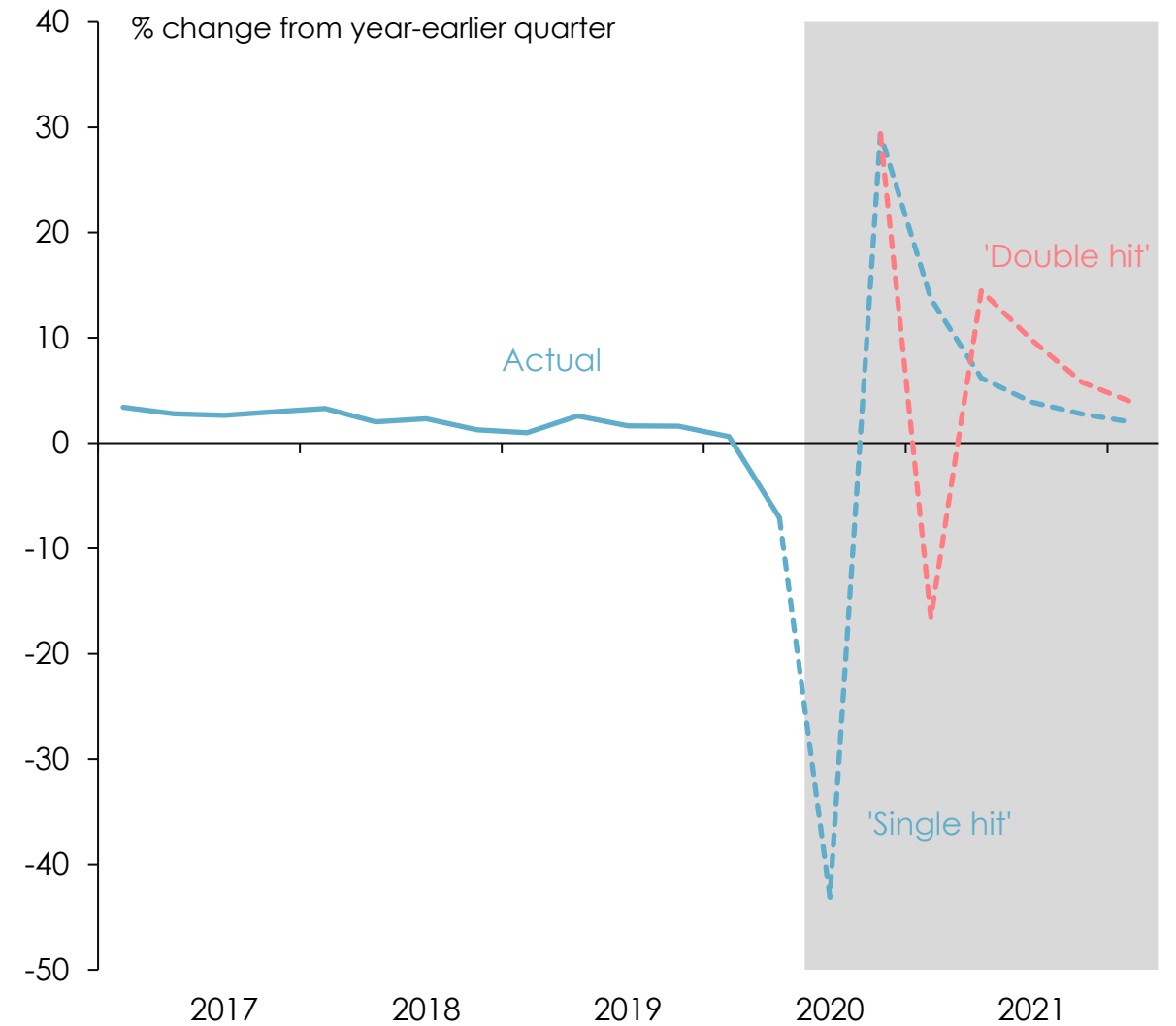
* OECD forecasts are their 'single hit' scenario to be consistent with the assumptions of the other institutions. † The IMF did not publish revised forecasts for New Zealand in its latest WEO publication. Sources: International Monetary Fund (IMF), *World Economic Outlook*, 24th June 2020; The World Bank, *Global Economic Prospects*, 8th June 2020; Organization for Economic Co-operation & Development (OECD), *Economic Outlook*, Volume 2020 Issue 1, 10th June 2020; Australian Treasury, *Economic and Fiscal Update*, 23rd July 2020.

The OECD forecasts a 6% decline in world GDP this year, followed by a 5.2% rebound in 2021 – or -7.2% followed by +2.8% if there's a 'second wave'

Annual growth in global real GDP, 1961-2021



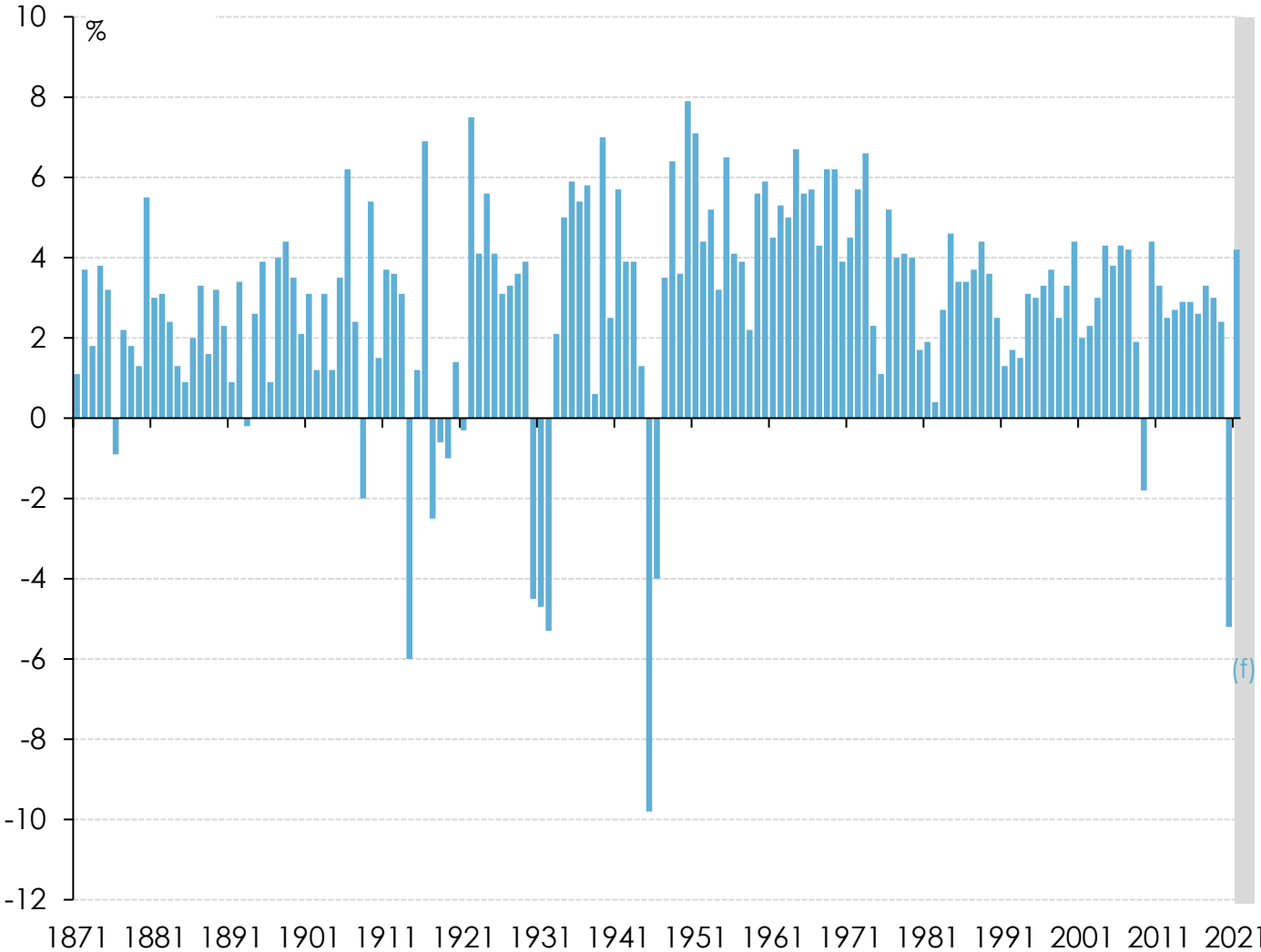
Quarterly growth and forecasts, 2017-2021



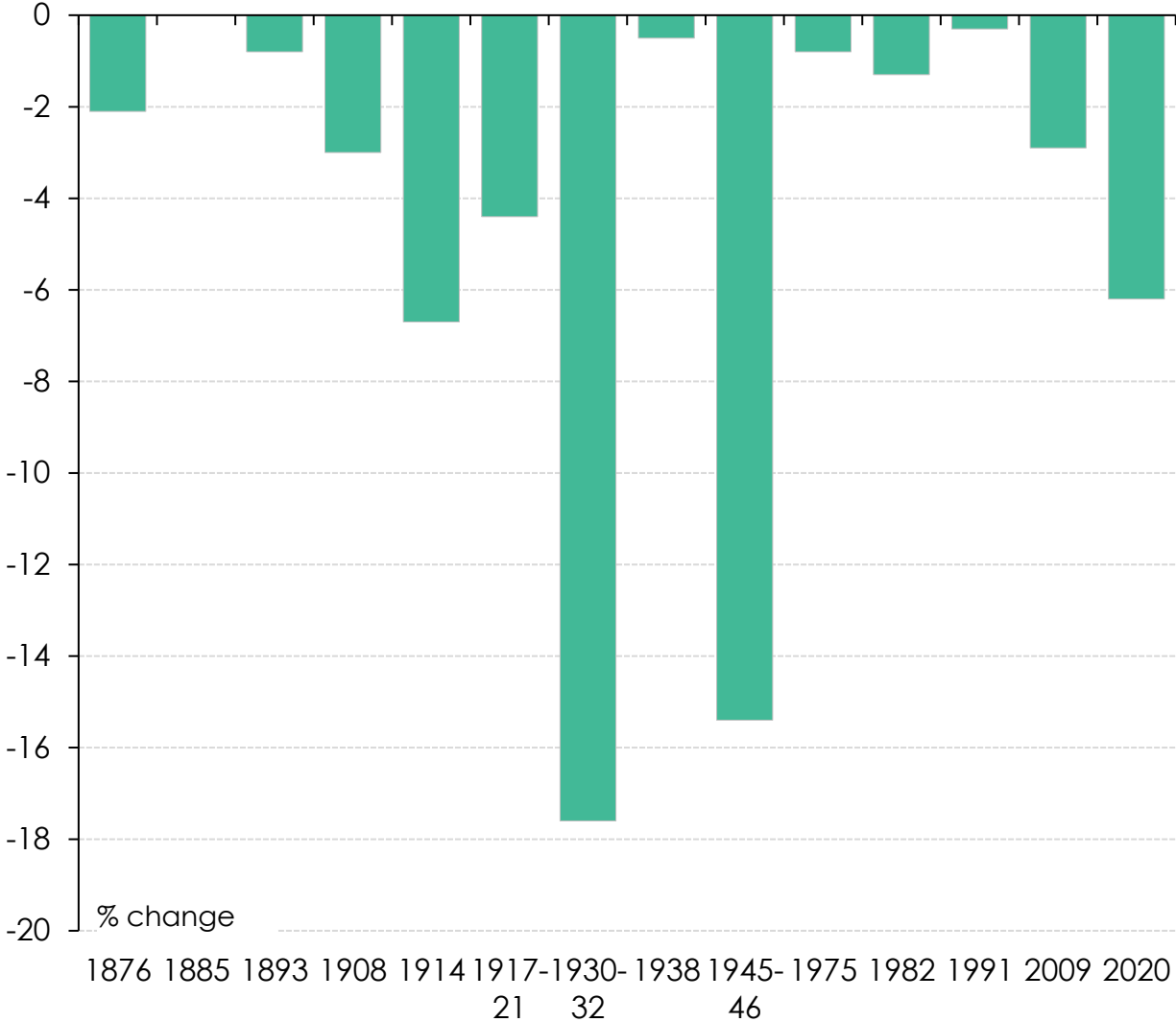
Note: The 'double hit' scenario assumes a 'second wave' of Covid-19 infections and deaths "in all economies towards the end of this year", while the 'single hit' scenario assumes this 'second wave is avoided'. The OECD regards each scenario as "equally likely". Source: OECD, *Economic Outlook*, No. 107, Volume 2020 Issue 1, 10th June 2020.

The World Bank forecasts a 5.2% decline in world GDP this year, with a 4.2% increase in 2021 - the 4th worst global downturn in 150 years

Growth in global real GDP, 1871-2001



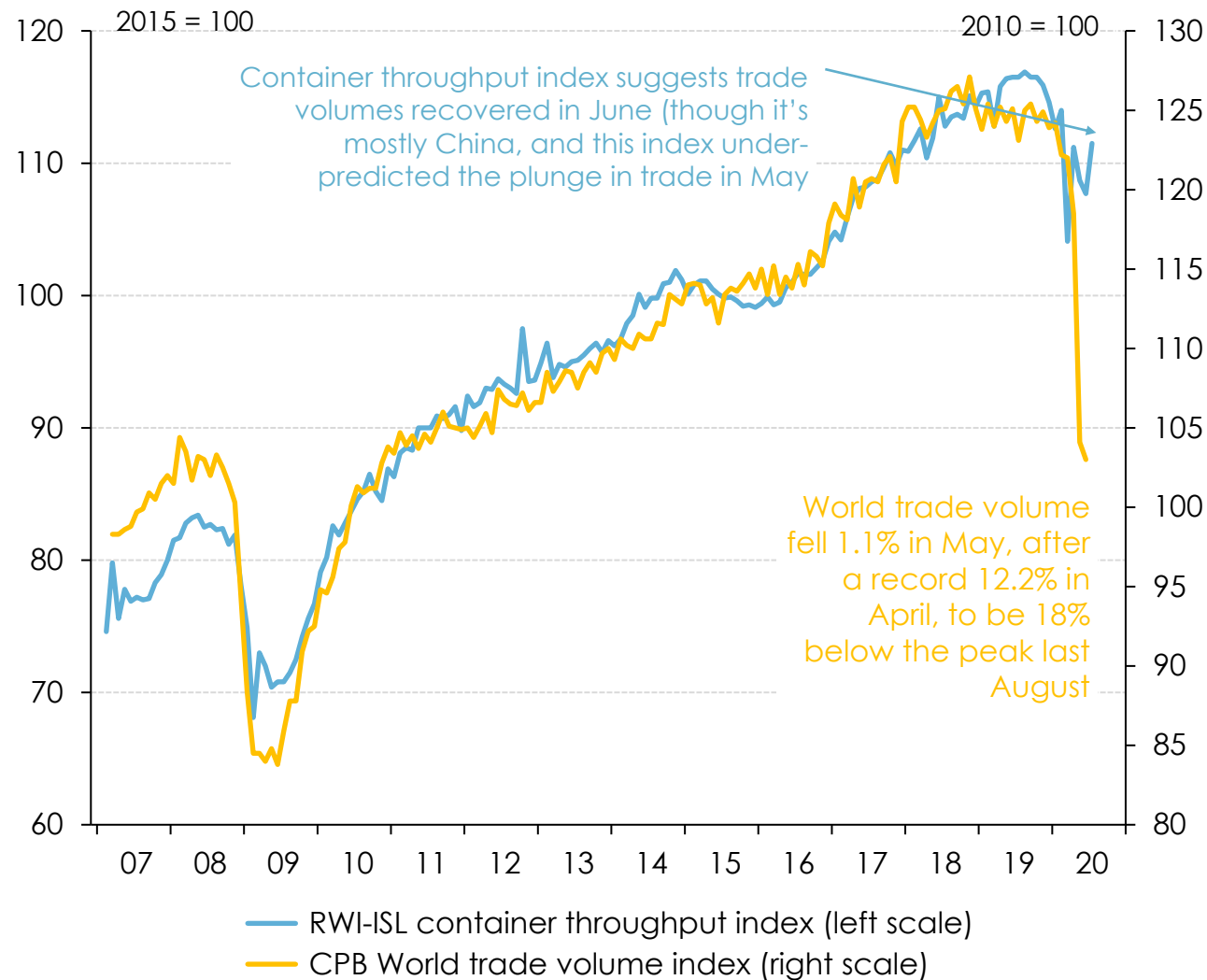
Cumulative decline in real per capita GDP during global recessions



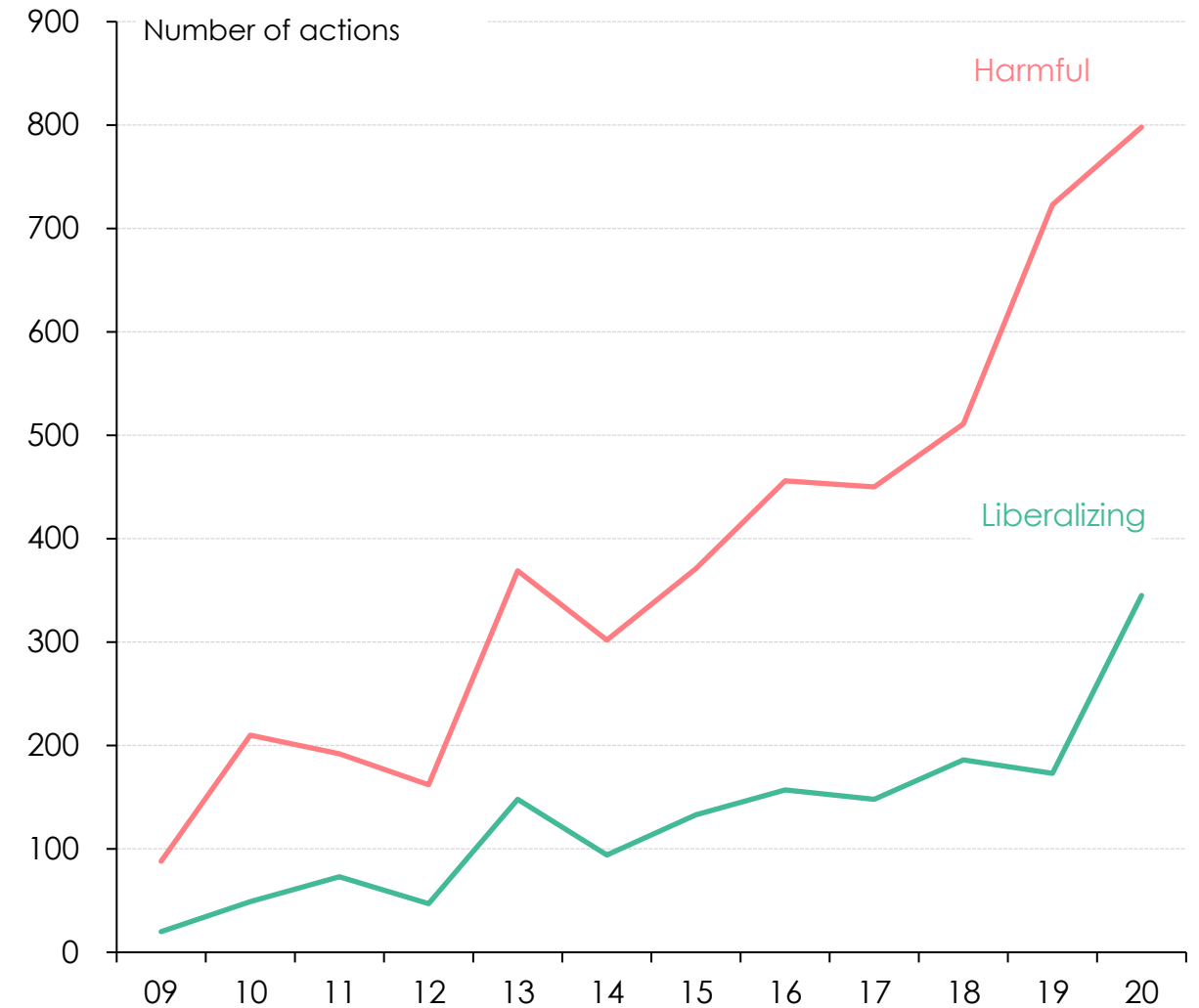
Source: The World Bank, *Global Economic Prospects*, 8th June 2020.

World merchandise trade volumes fell sharply in April

World trade volumes and container throughput



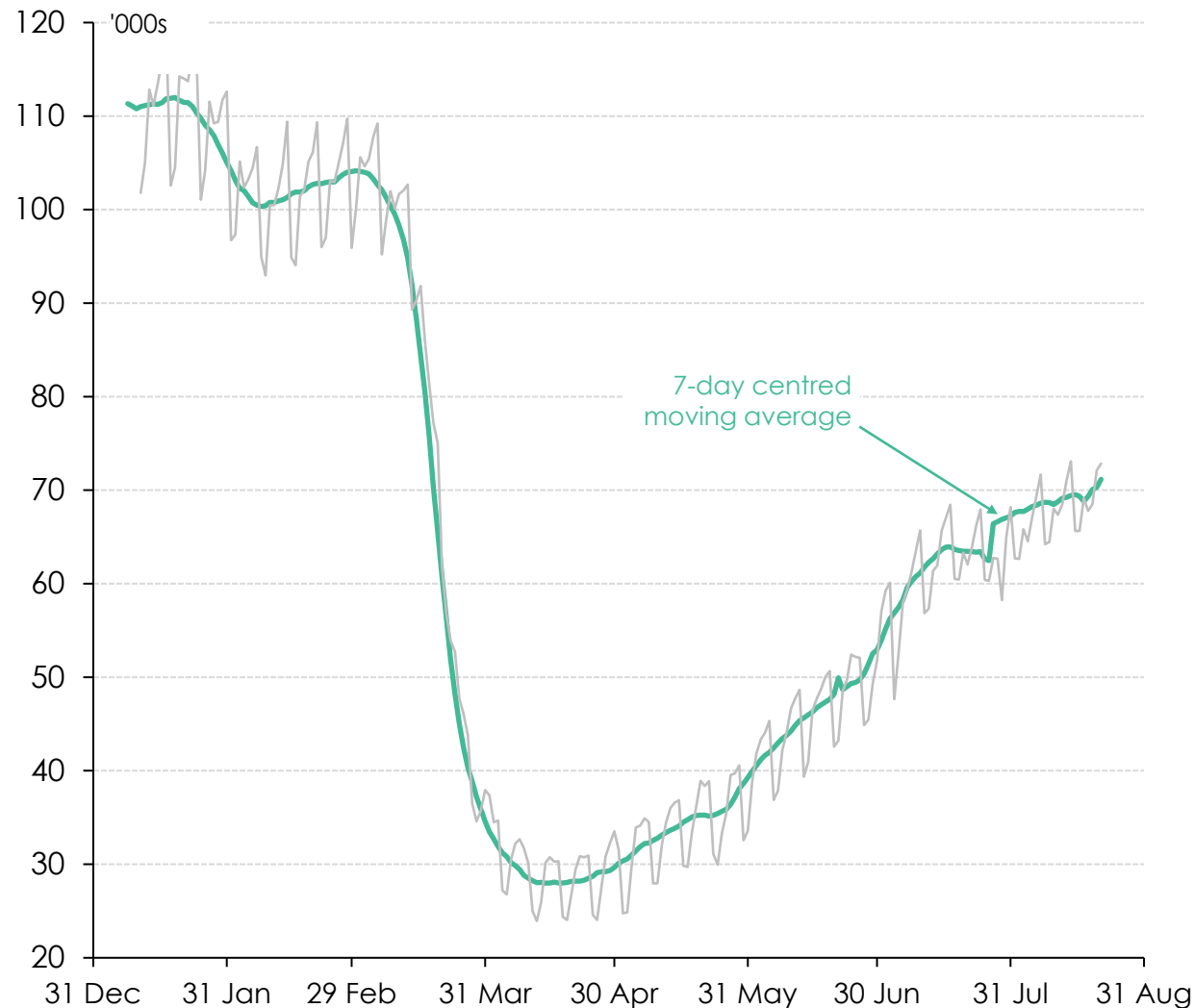
Pro- and anti-trade policy interventions



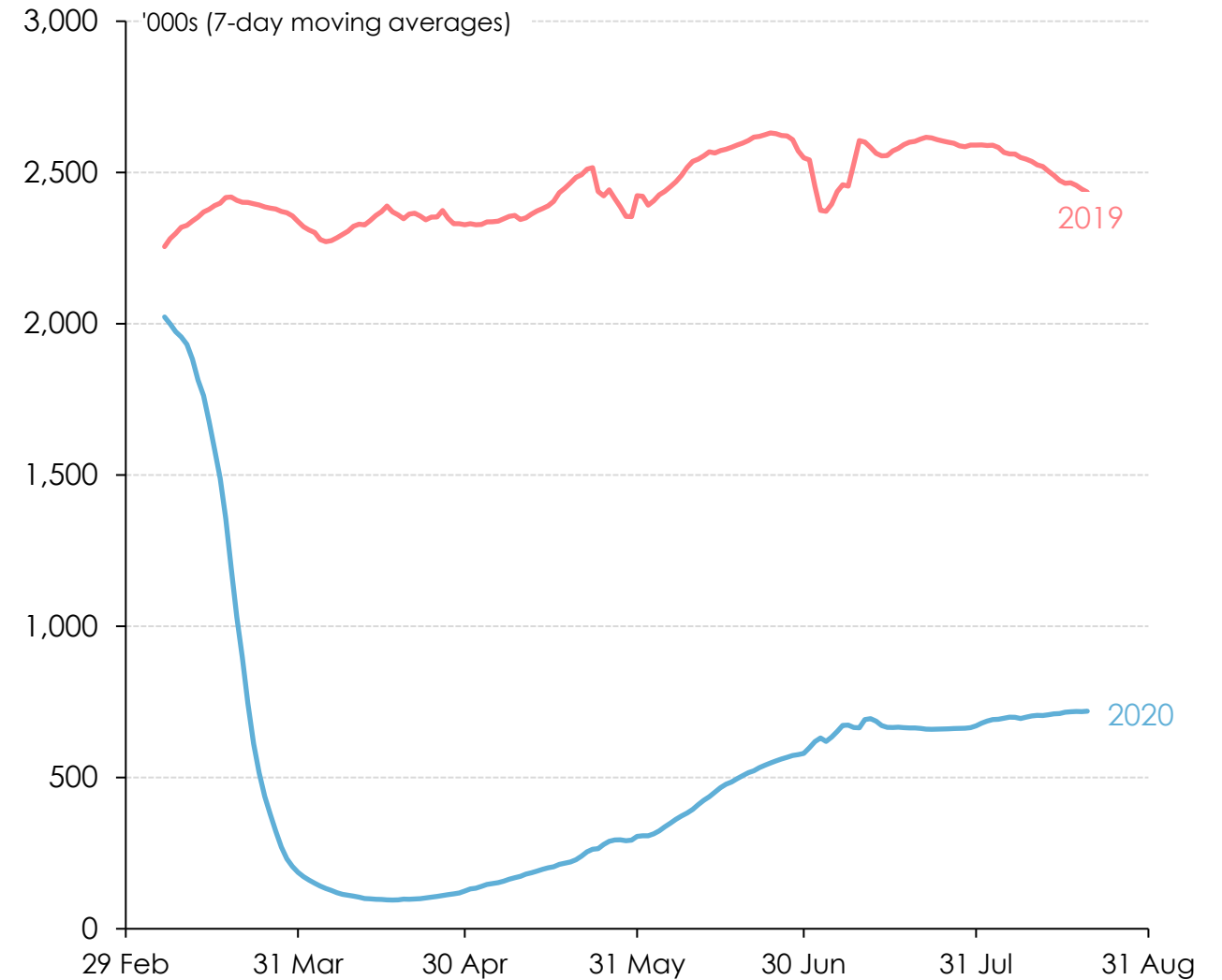
Note: The shipping container throughput index is based on reports from 91 ports around the world handling over 60% of global container shipping.
Sources: CPB Netherlands Economic Planning Bureau, *World Trade Monitor*; Institute of Shipping Economics & Logistics (ISL) and RWI Leibniz-Institut für Wirtschaftsforschung (RWI) *Container Throughput Index*; Centre for Economic Policy Research, *Global Trade Alert Global Dynamics* (latest report 7th August).

Global aviation traffic has picked up a bit further during the peak northern hemisphere holiday season, but seems to have remained flat in the US

Daily commercial flights worldwide



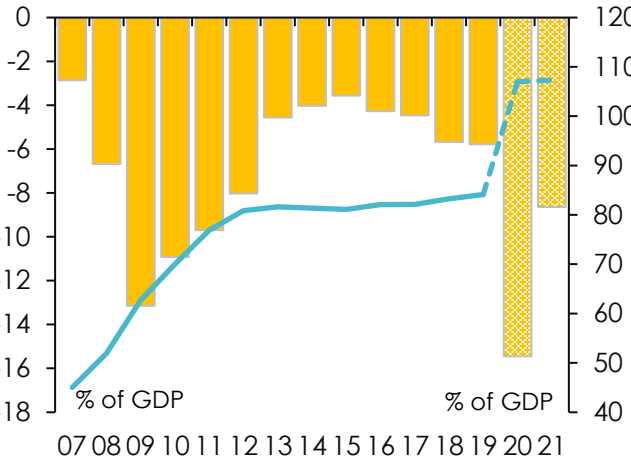
Daily US TSA security checks



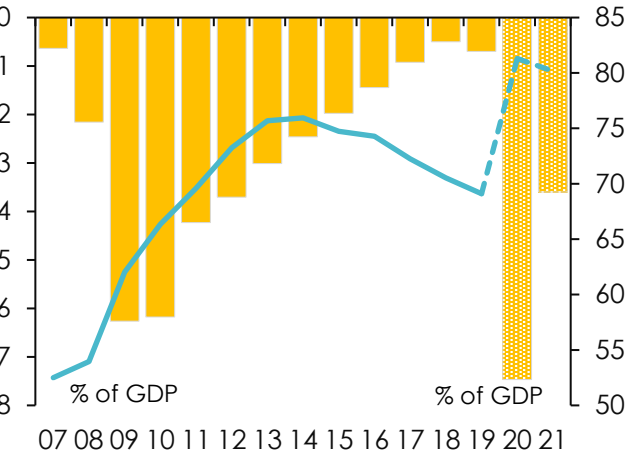
Note: Commercial flights include commercial passenger flights, cargo flights, charter flights, and some business jet flights. Data up to 21st August.
Sources: Flightradar24.com; US Transport Safety Administration (at last, something useful produced by aviation 'security'!!!)

Governments around the world are doing more by way of fiscal stimulus than they did during the global financial crisis

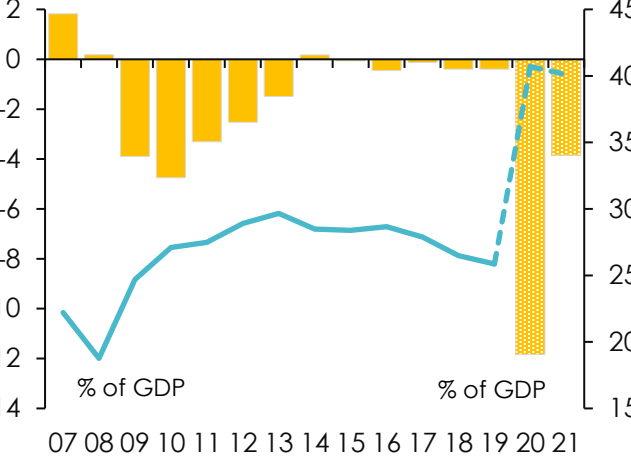
United States



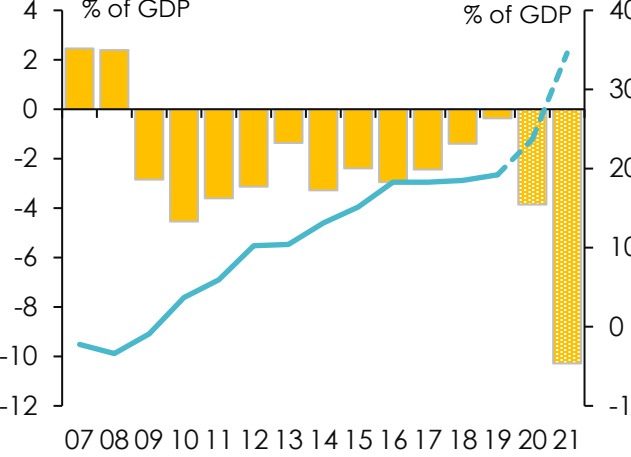
Euro area



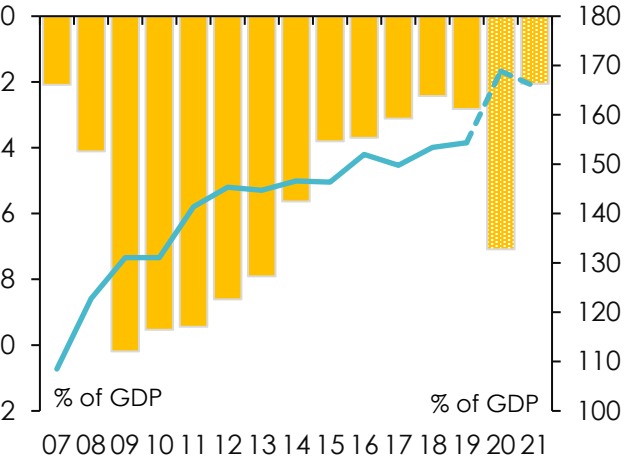
Canada



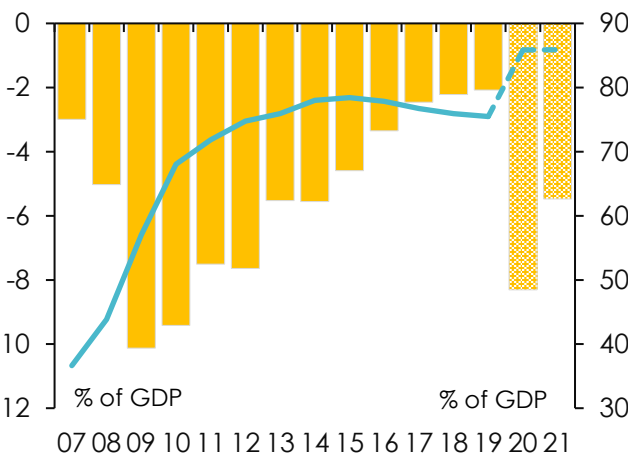
Australia



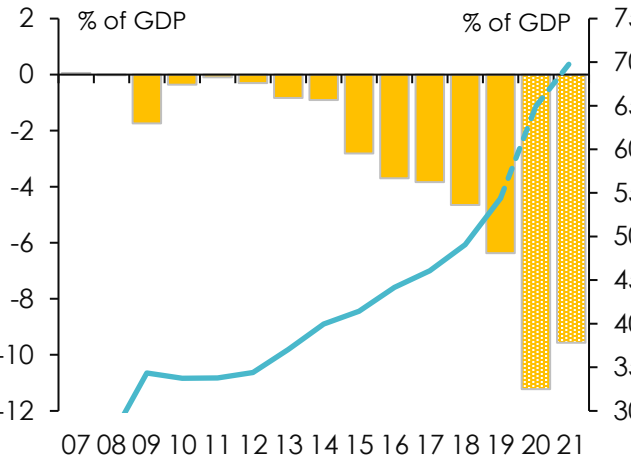
Japan



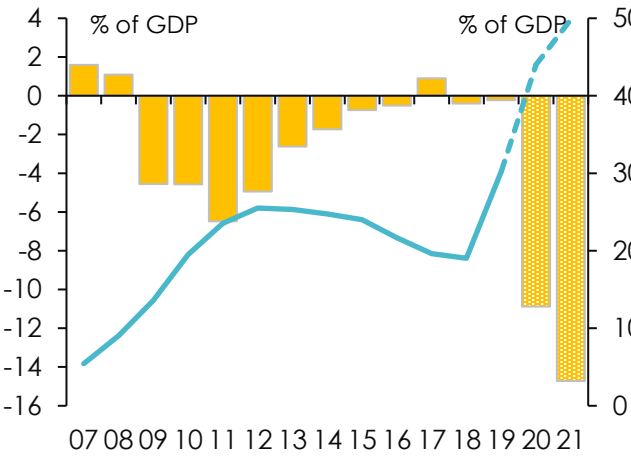
United Kingdom



China



New Zealand

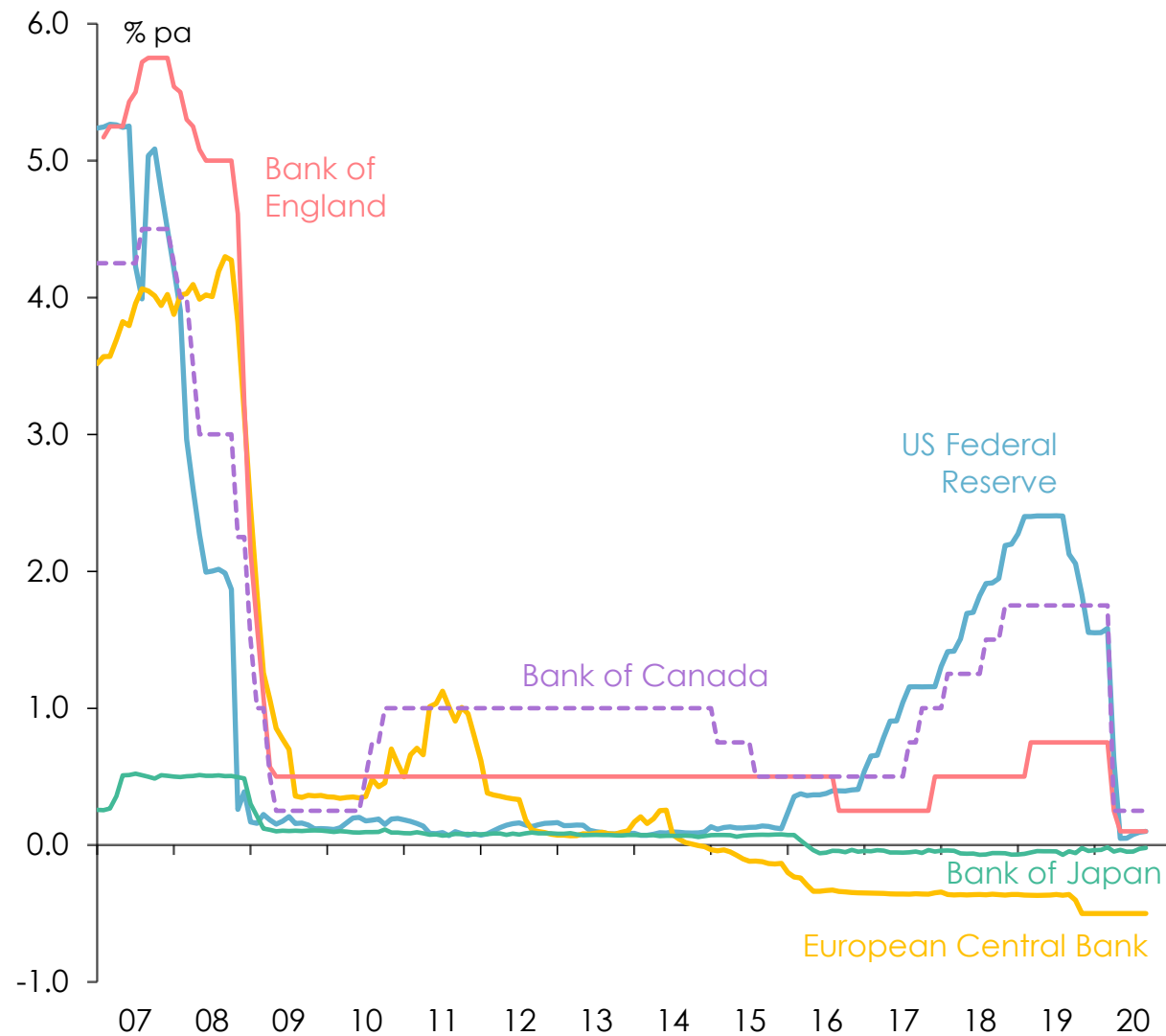


General government overall fiscal balance (left scale)
 General government net debt (right scale)

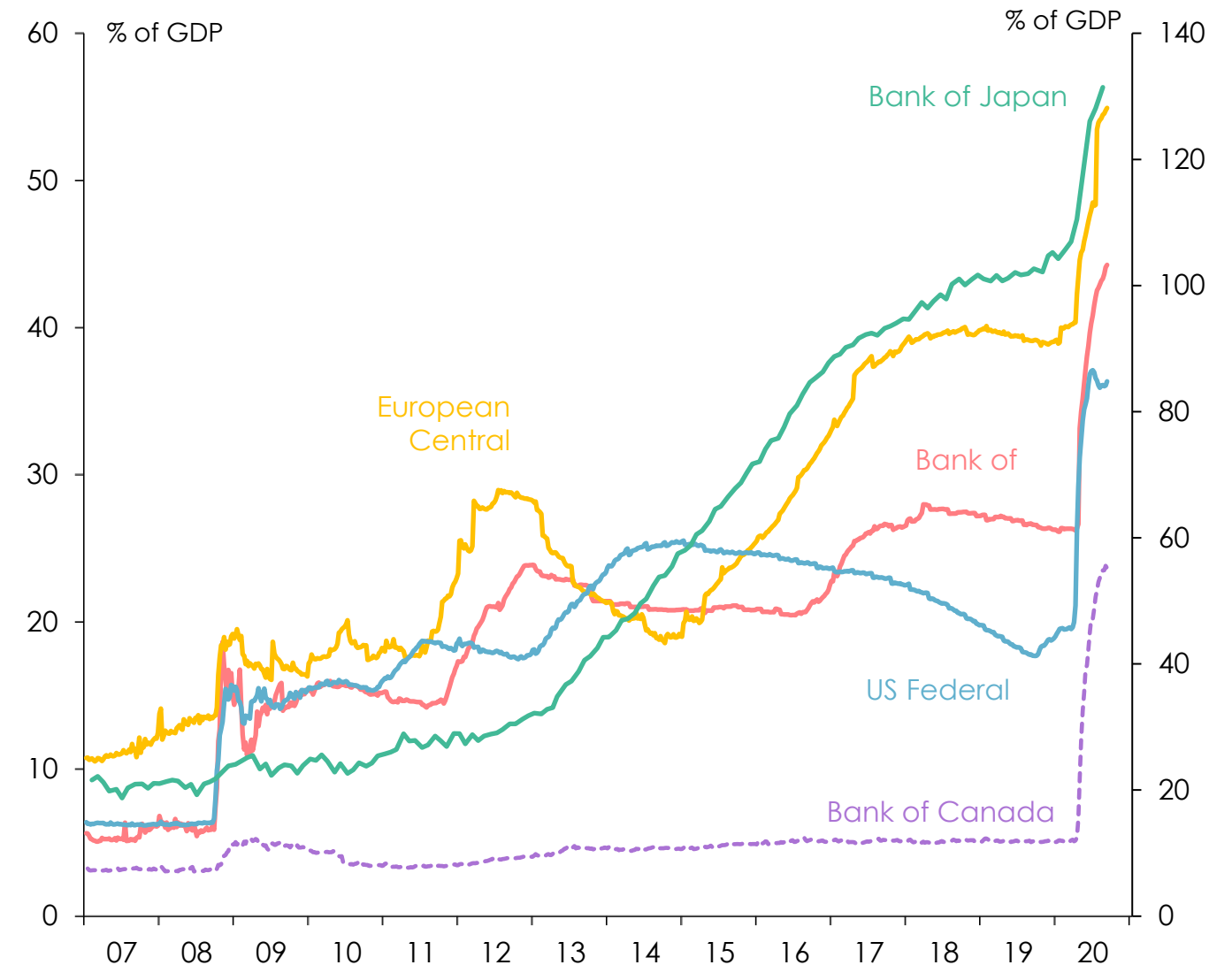
Note: UK data does not include the measures announced by the Chancellor on 8th July; China debt is gross debt, not net; Australian data are for the federal government only and are for fiscal years ended 30th June; NZ data are for fiscal years ended 31st March. Sources: International Monetary Fund, *Fiscal Monitor*, April 2020, and *World Economic Outlook*, June 2020; Australian Government, *Economic and Fiscal Update*, July 2020; New Zealand Treasury, *Budget Economic & Fiscal Update*, May 2020.

Major central banks have cut interest rates to record lows, and done more 'quantitative easing' than during the global financial crisis

Major central bank policy interest rates



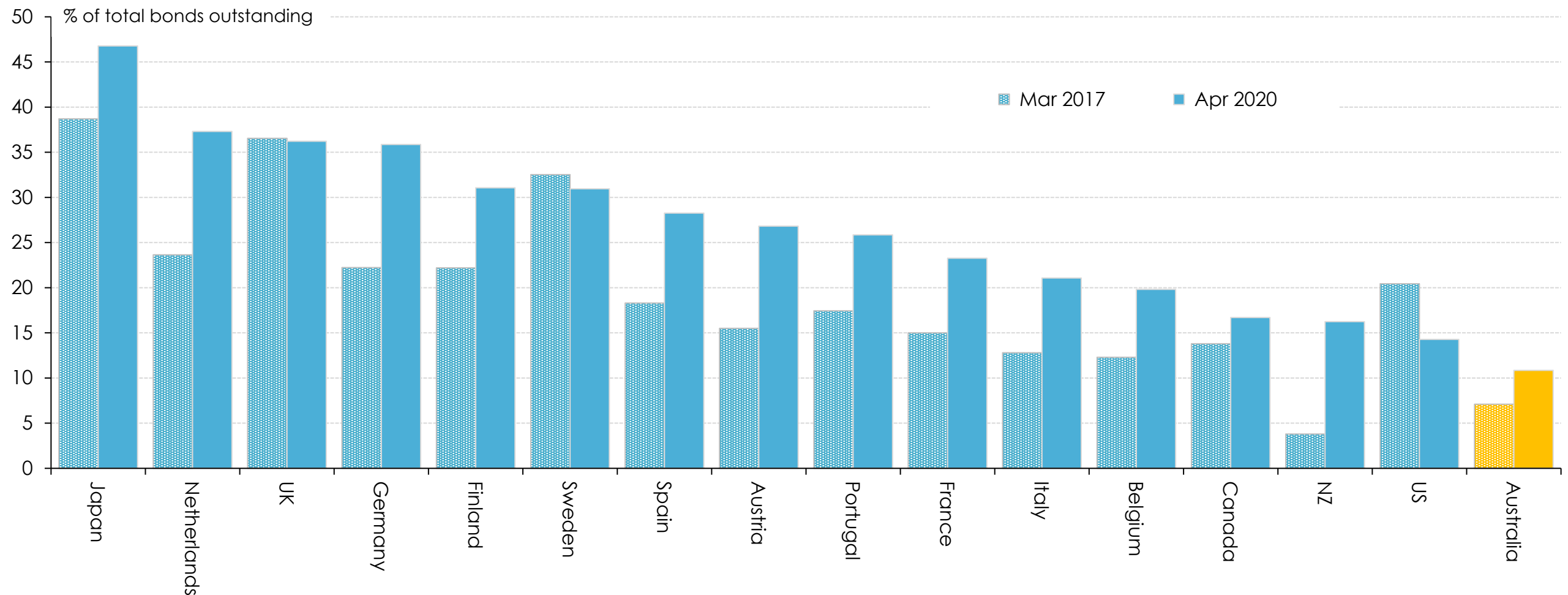
Major central bank balance sheets



Note: estimates of Bank of England assets as a pc of GDP for weeks since the beginning of April have been revised upwards sharply following the incorporation of Q2 nominal GDP data as the denominator (but on that score see also slide 48). Estimates of US Fed, and BoJ assets as a pc of GDP have also been revised up with the use of Q2 nominal GDP as the denominator, but less sharply. ECB and BoC assets since April are still expressed as a pc of Q1 GDP. .. Sources: US Federal Reserve; European Central Bank; Bank of Japan; Bank of England; Bank of Canada; national statistical agencies; Corinna.

Central banks now hold significant proportions of total government debt in a growing number of countries

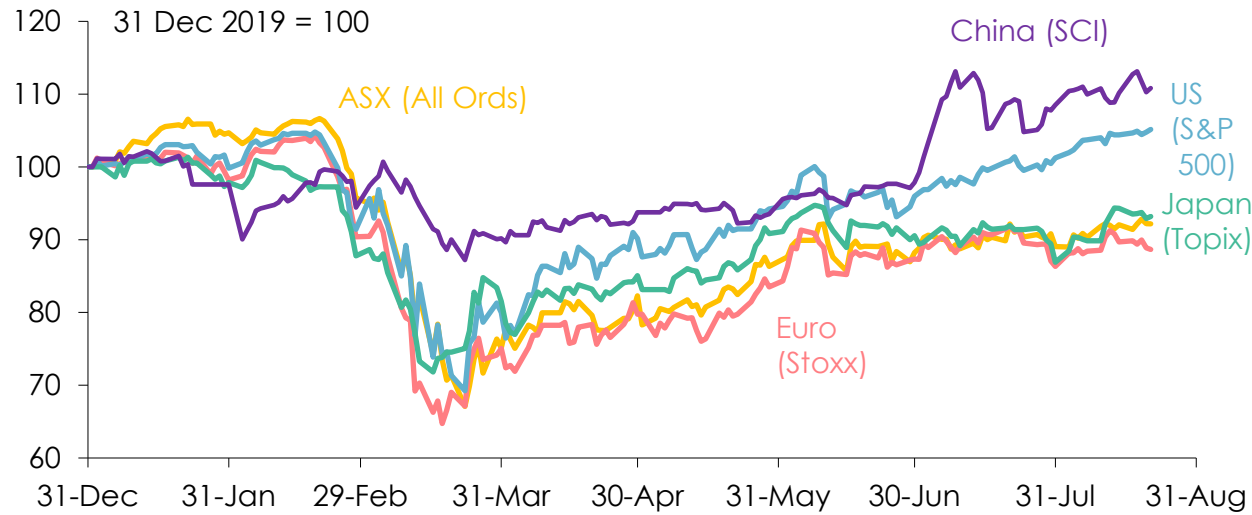
Central bank holdings of central government bonds



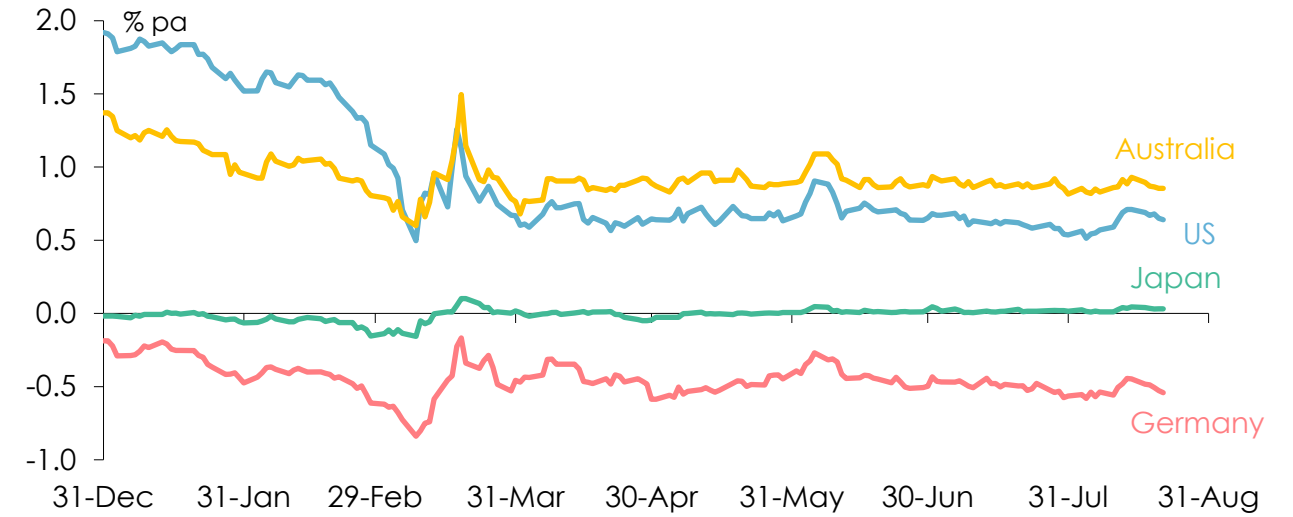
Sources: Surprisingly, the RBA does not disclose its holdings of Australian Government bonds in its weekly balance sheet statement (see RBA Statistical Table A1. Hence the figure shown here for Australia at March 2017 was derived from ABS *Finance and Wealth*, and that for April 2020 by adding to RBA holdings as per the December 2019 issue of *Finance and Wealth*, disclosed RBA purchases of Australian Government bonds up to end-April, divided by the amount of Australian Government securities outstanding disclosed in the Government's *Monthly Financial Statement*. The figures for RBNZ holdings of NZ government securities are published in Table r1 on the RBNZ's website while figures for total NZ government securities outstanding are in Table D30. All others are from OECD, *Economic Outlook* No. 107 (June 2020) and No. 104 (June 2017).

The US stockmarket struck new record highs this week (mainly driven by tech stocks), bond yields fell (except in Japan) and the US\$ rose

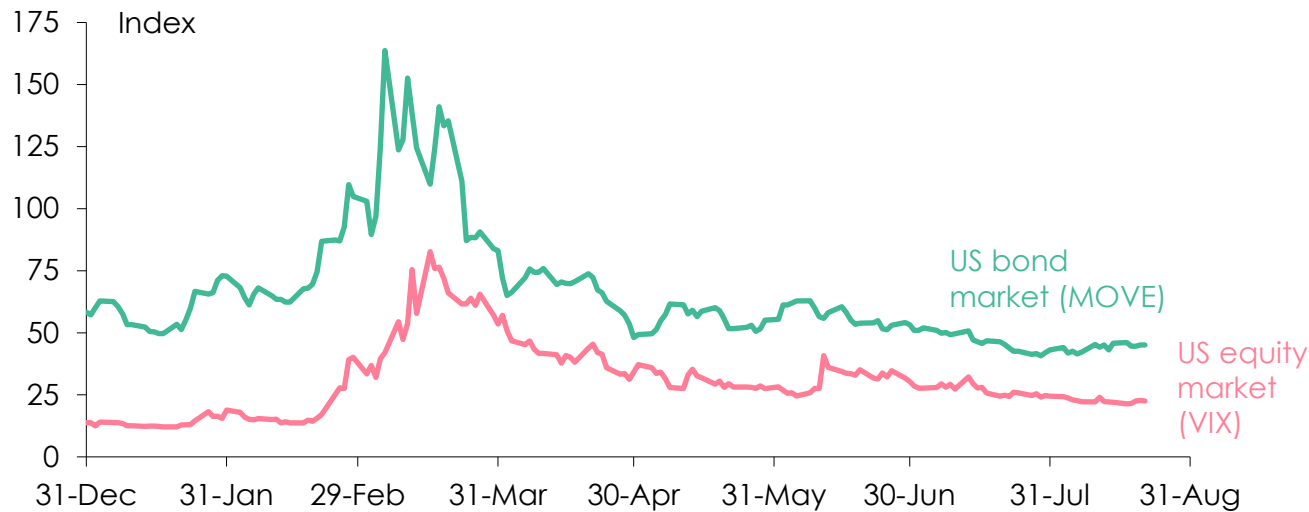
Stock markets



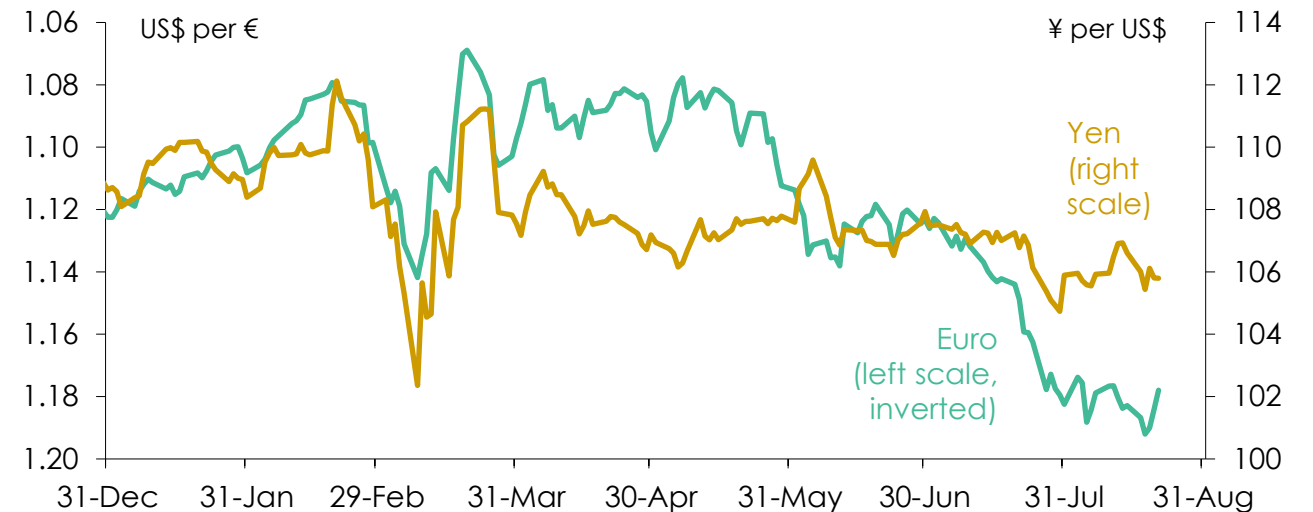
10-year bond yields



Measures of market volatility



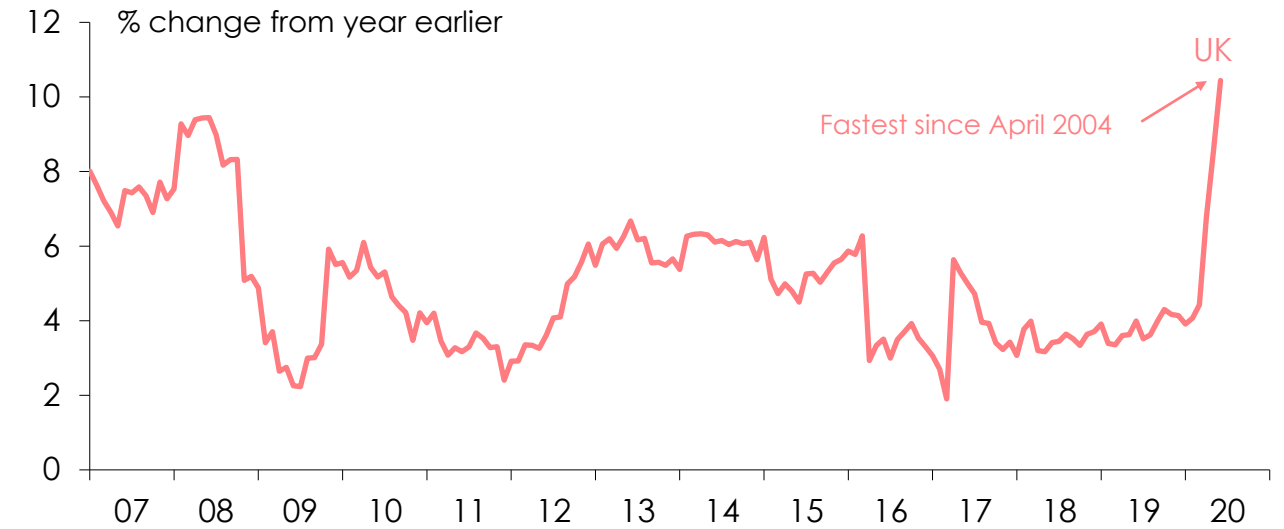
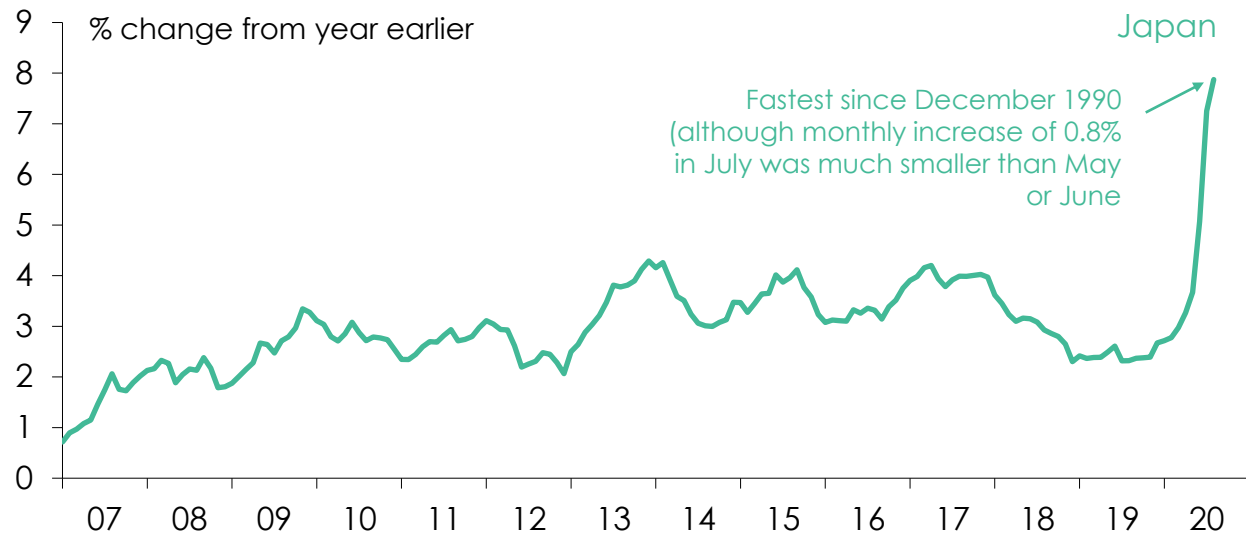
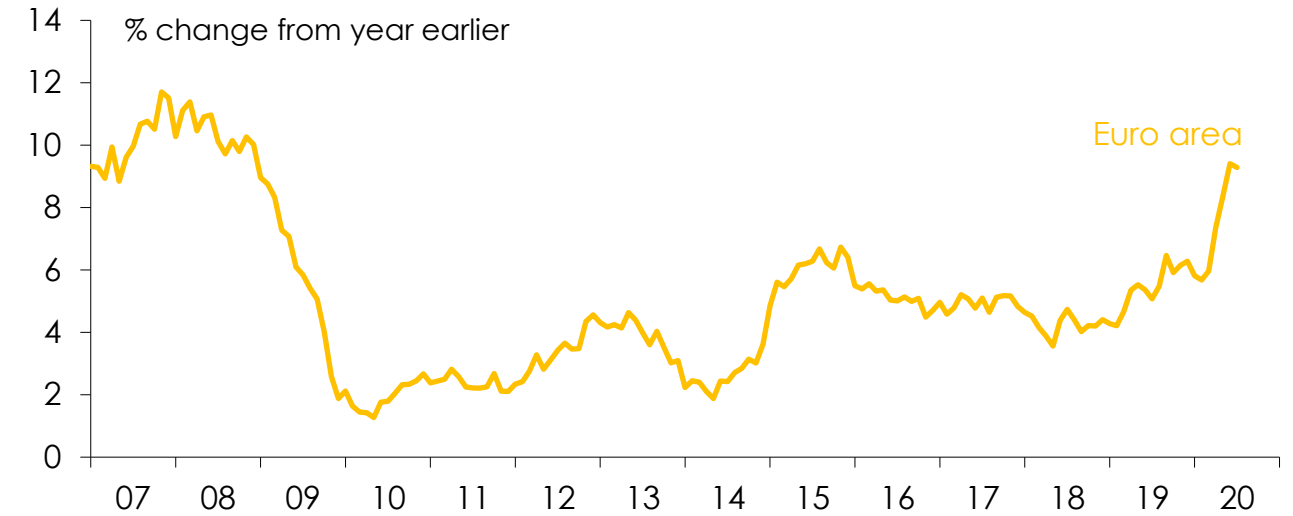
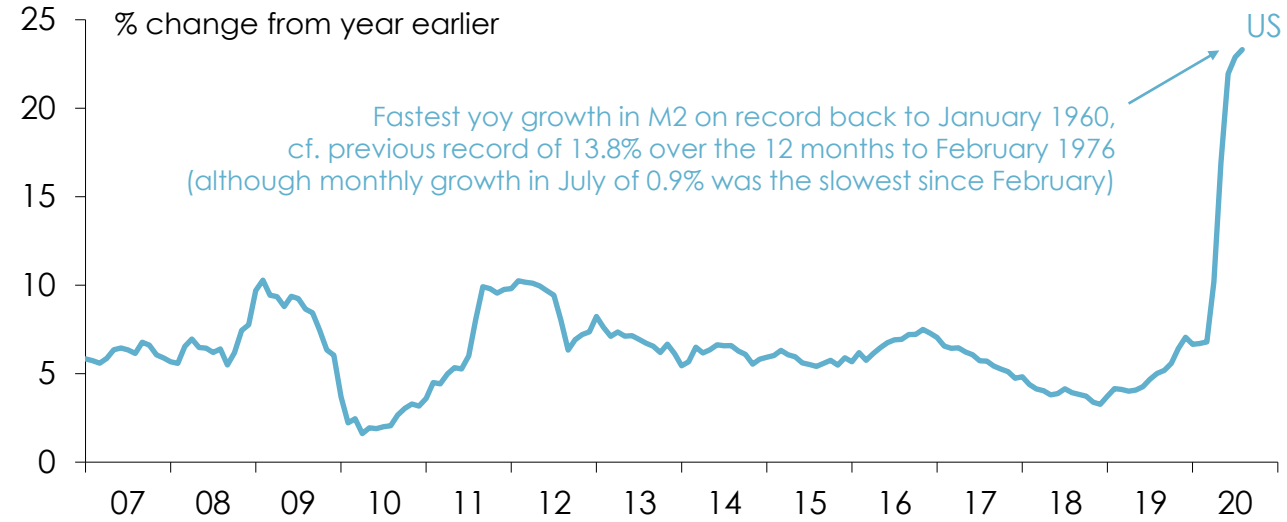
US dollar vs euro and yen



Source: Refinitiv Datastream. Data up to 21st August.

'Quantitative easing' has prompted a more rapid acceleration in money supply growth than it did during the global financial crisis ...

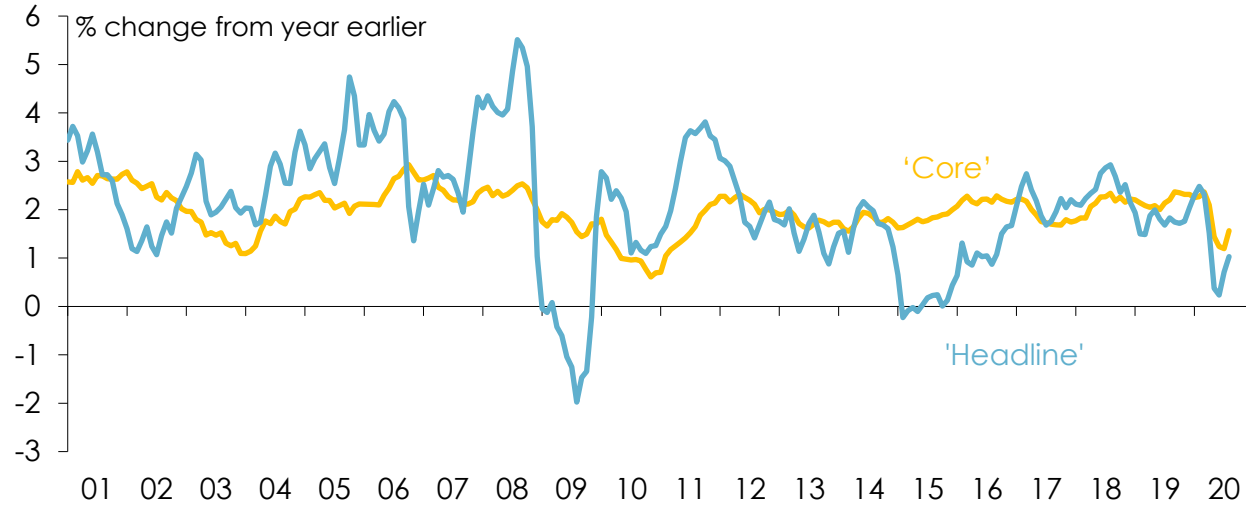
M2 money supply growth



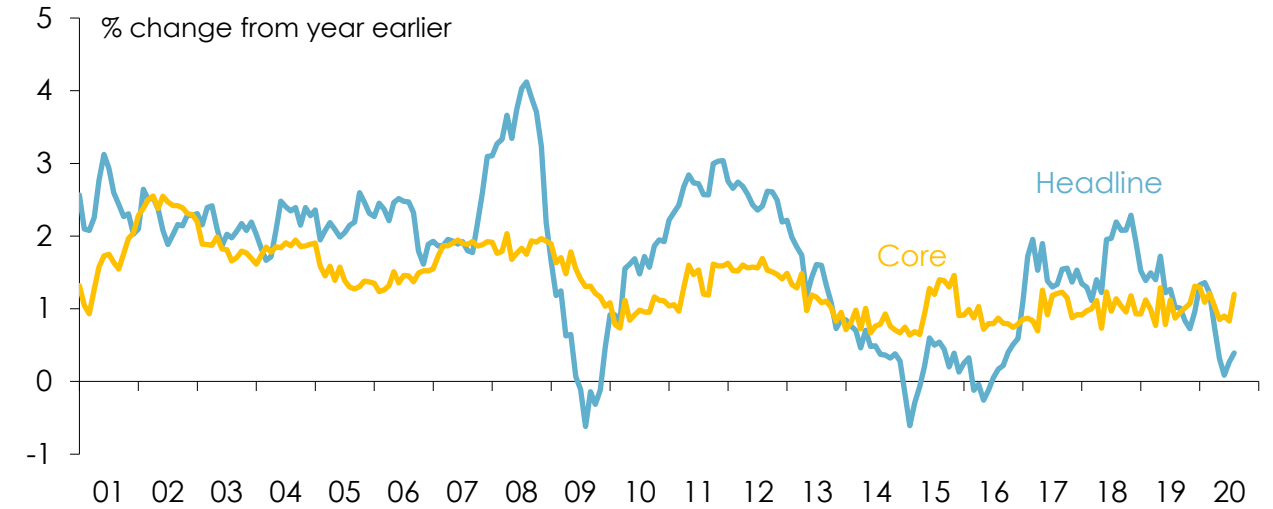
Note: Japan is M2+CDs; UK is M4. Sources: US Federal Reserve; European Central Bank; Bank of Japan; Bank of England.

...but so far at least, inflation has remained below central bank targets – although both ‘headline’ and ‘core’ inflation ticked up in July

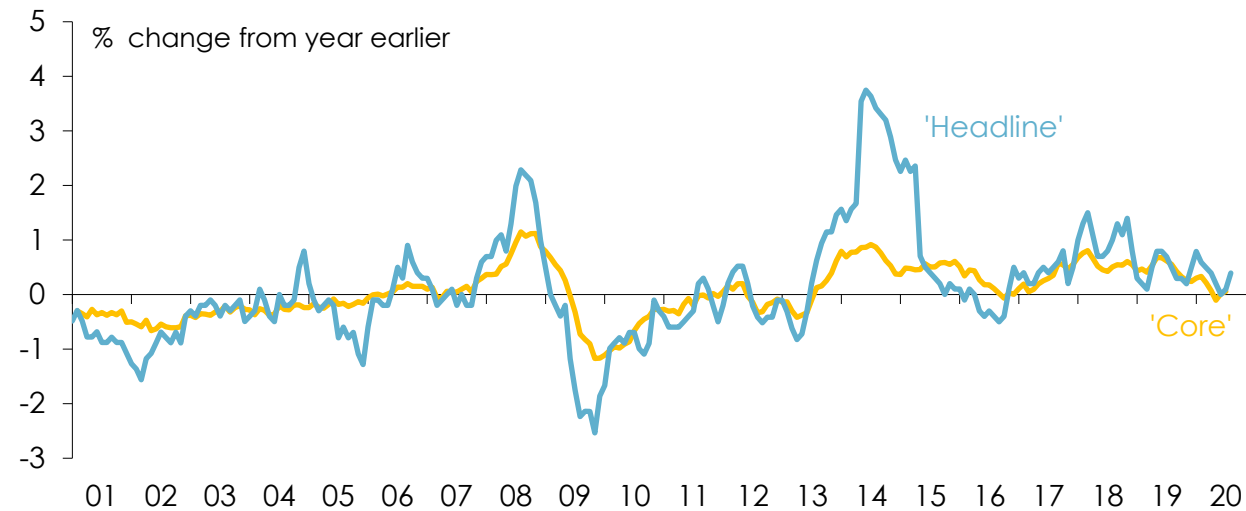
‘Headline’ and ‘core’ inflation - US



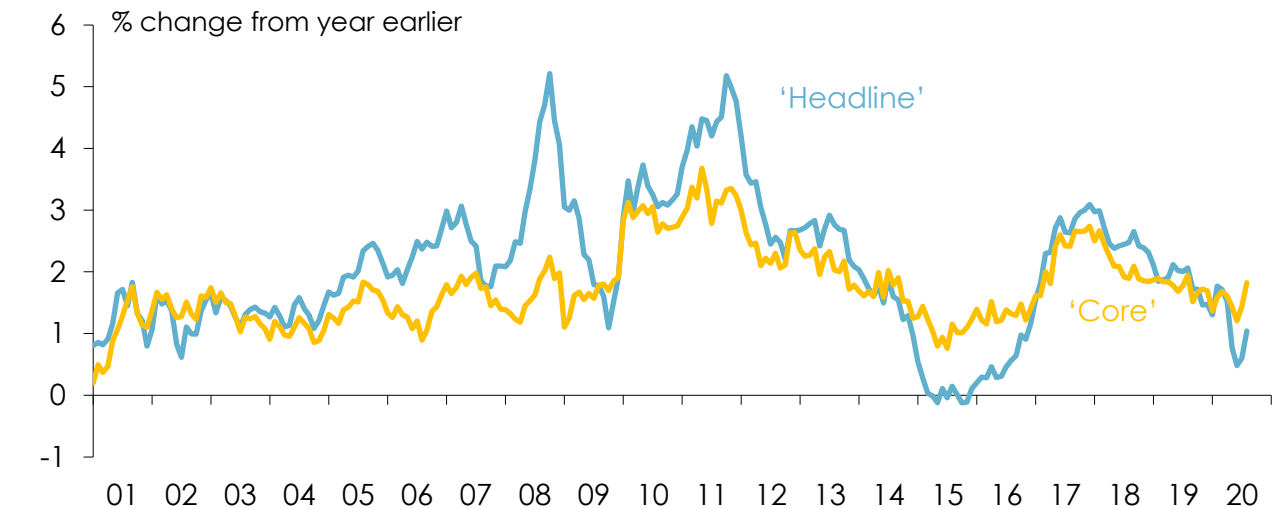
‘Headline’ and ‘core’ inflation – Euro area



‘Headline’ and ‘core’ inflation - Japan

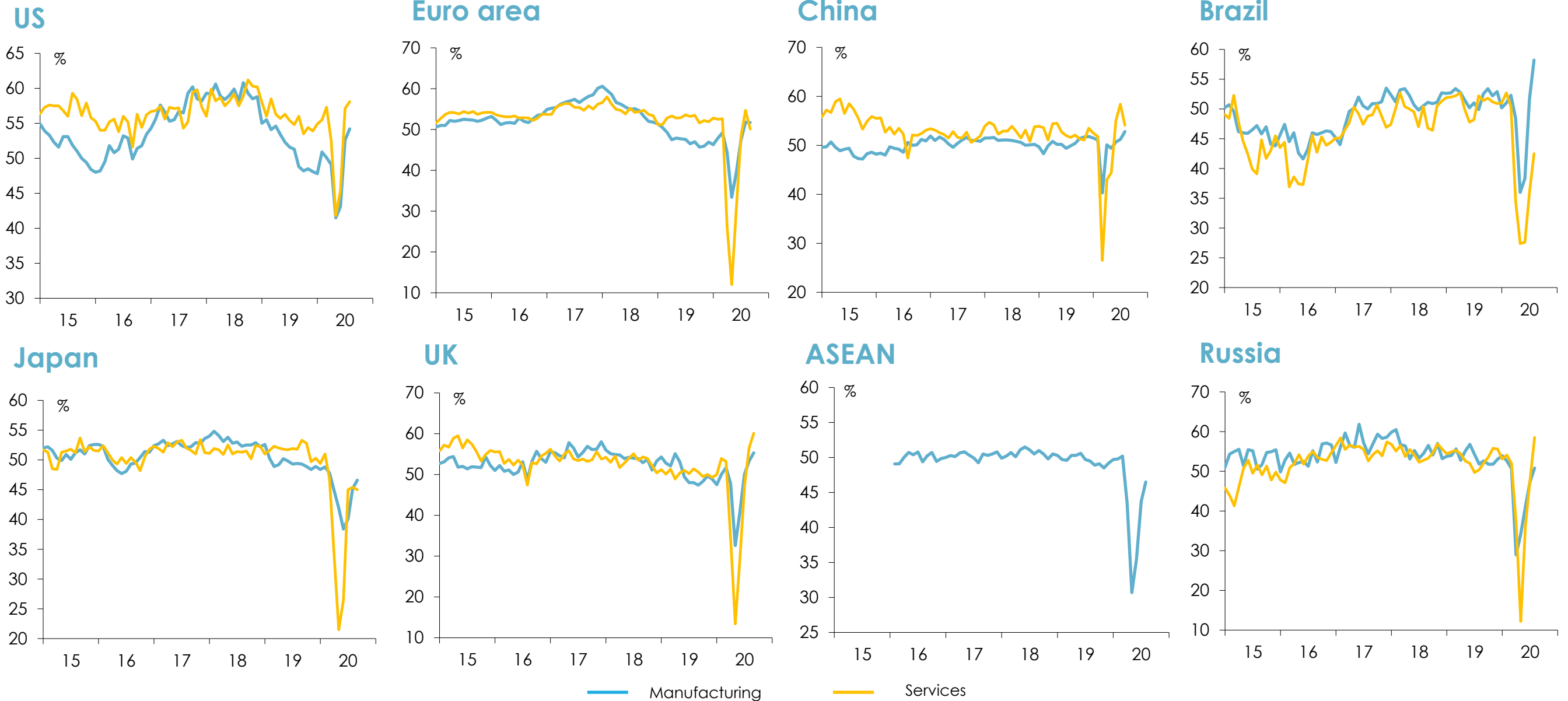


‘Headline’ and ‘core’ inflation – UK



Note: ‘Core’ inflation is the CPI excluding food & energy in the US; excluding food, energy, alcohol & tobacco in the euro area; and excluding energy & seasonal foods in the UK. The ‘core’ inflation measure for Japan is the weighted median CPI calculated by the Bank of Japan. Sources: US Bureau of Labor Statistics; Eurostat; Statistics Bureau of Japan; Bank of Japan; UK Office for National Statistics.

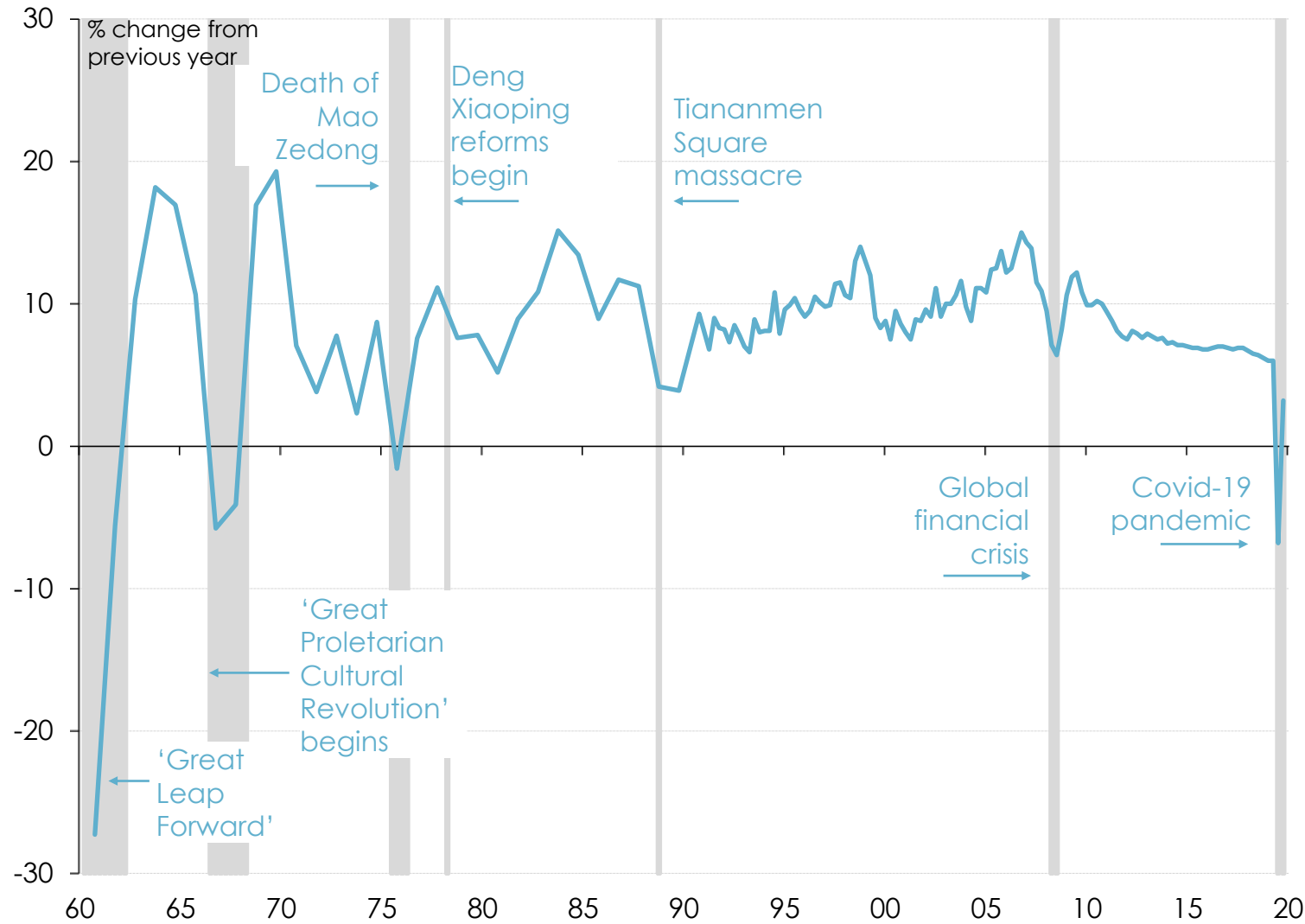
Purchasing managers' indices (PMIs) point to an ongoing rebound in both manufacturing and services in major economies since May



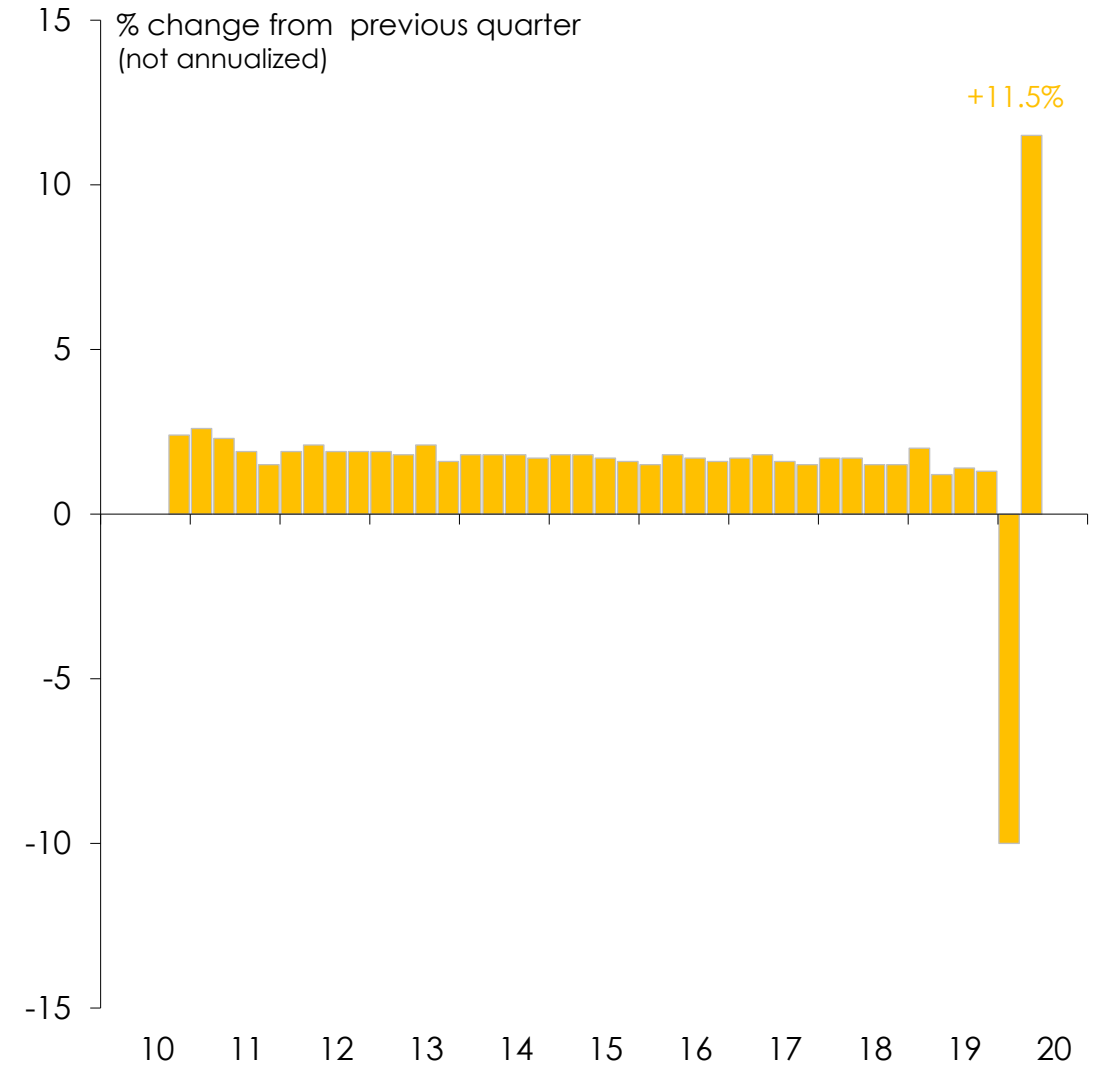
Note: Purchasing Managers' Indexes (PMIs) are derived from surveys of senior executives, who are asked to report whether various dimensions of business activity recorded an increase, decrease or no change compared with the previous month. A reading of 50 indicates an overall increase cf. the previous month, and a reading of less than 50 indicates a decrease. Latest data for Japan, the euro area and the UK are preliminary August; all others are for July. See also PMIs for other Asia-Pacific economies on slide 39. Sources: US Institute of Supply Management; INH Markit; Caixin; Refinitiv Datastream.

China's economy rebounded strongly in Q2 from what had been the worst downturn in almost 60 years in Q1

Real GDP growth, from year earlier, 1961-2020



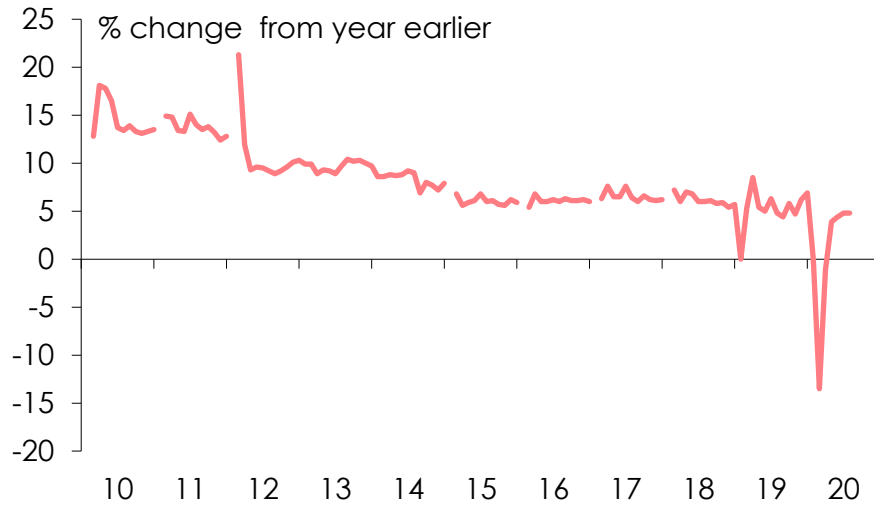
Quarterly real GDP growth, 2010-2020



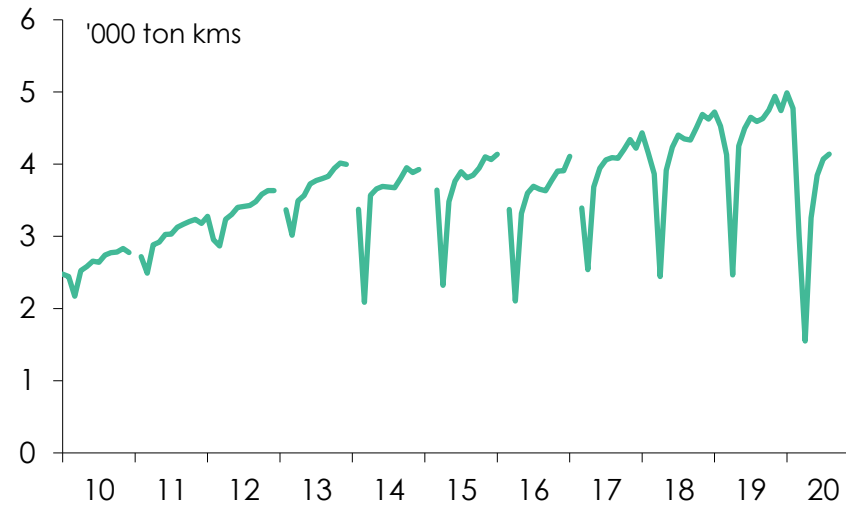
Note: In the left-hand chart, GDP growth rates are annual averages up to the December quarter of 1991, and then quarter-on-corresponding-quarter-of-previous-year thereafter. Sources: China National Bureau of Statistics.

The production side of the Chinese economy rebounded strongly in the June quarter

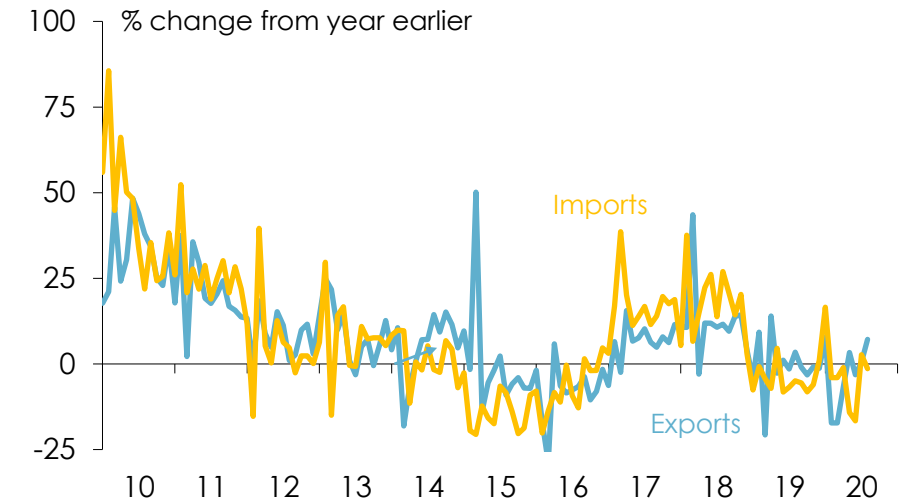
Industrial production



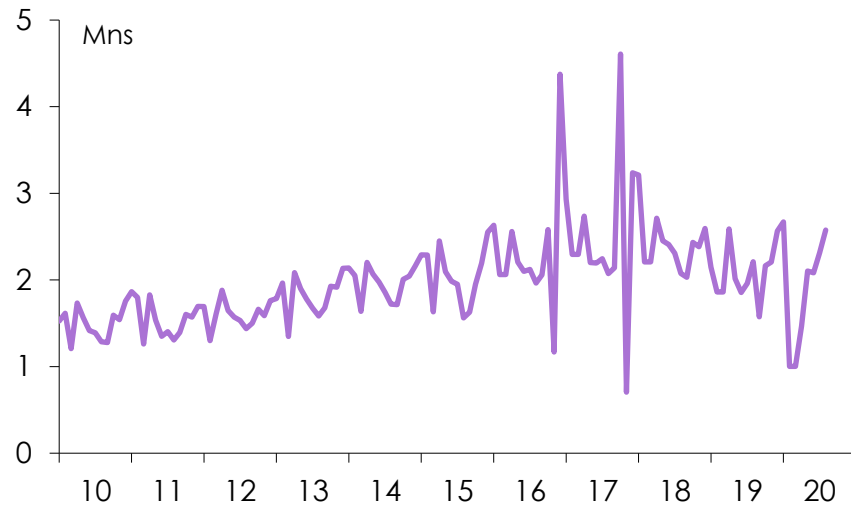
Freight traffic volumes



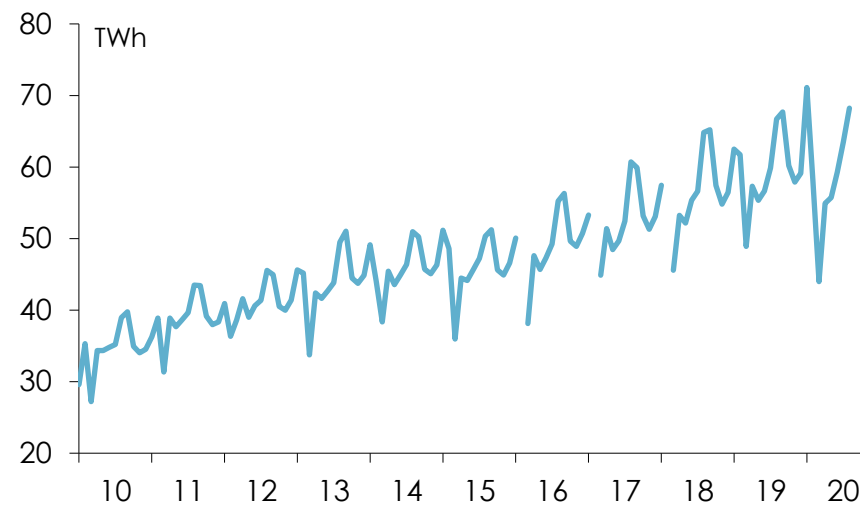
Merchandise trade



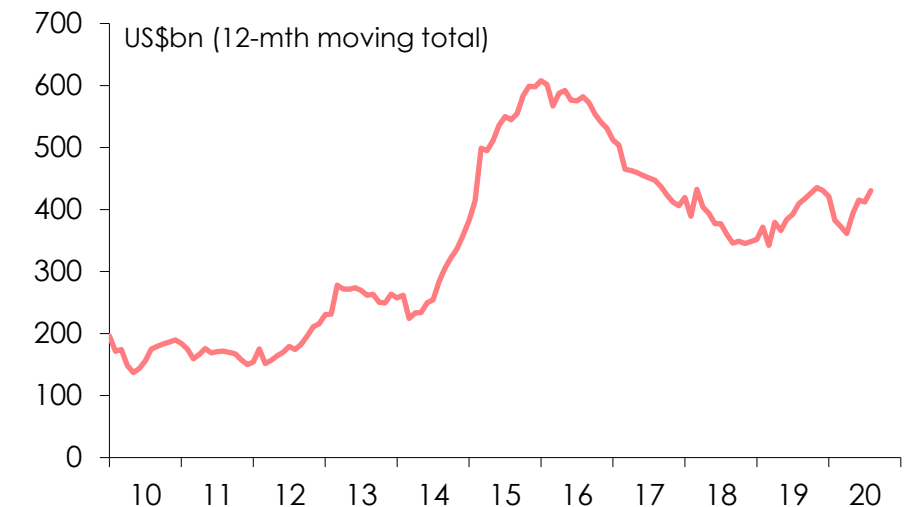
Motor vehicle production



Primary electricity production



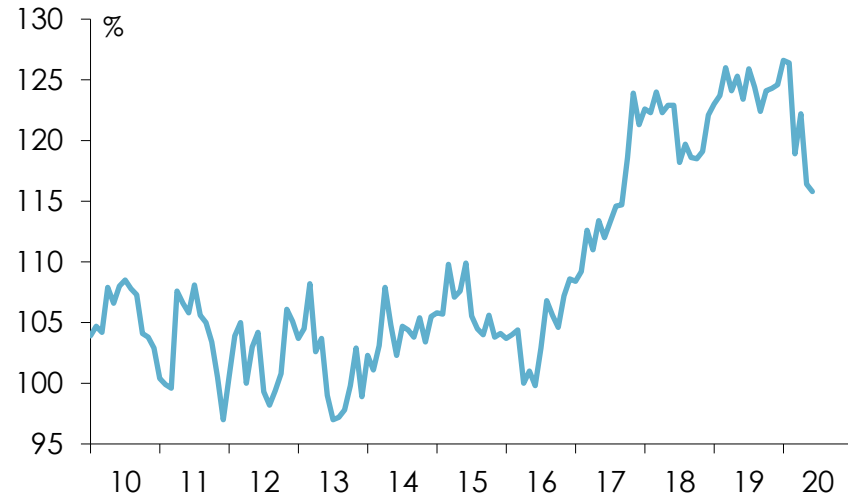
Merchandise trade balance



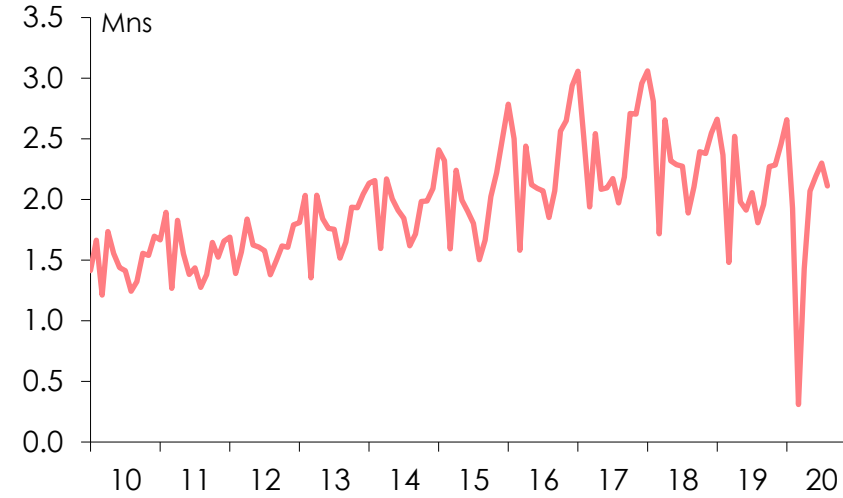
Sources: China National Bureau of Statistics; China Association of Automobile Manufacturers; China General Administration of Customs. Latest data are for July.

However the 'demand' side of the Chinese economy – both household and business – is recovering rather more gradually

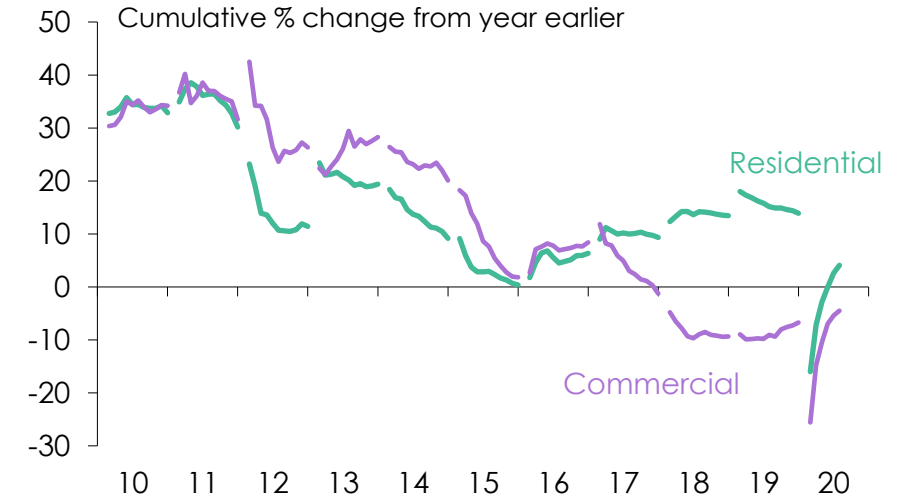
Consumer sentiment



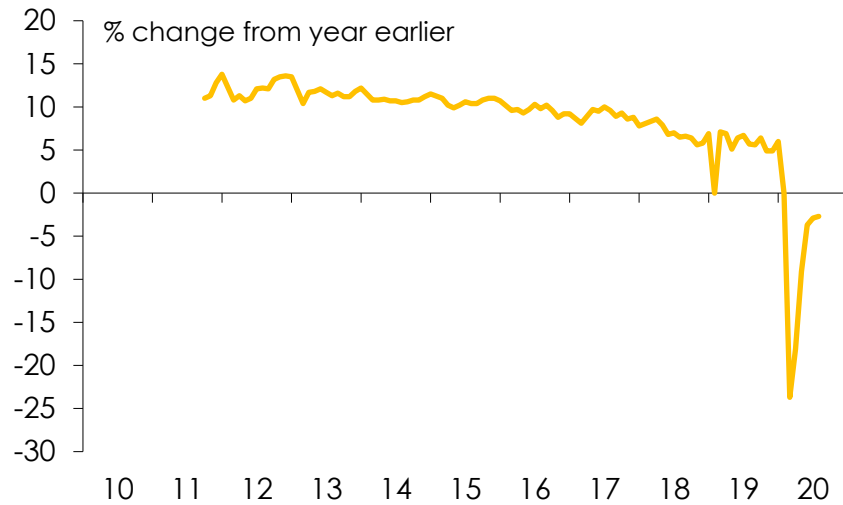
Motor vehicle sales



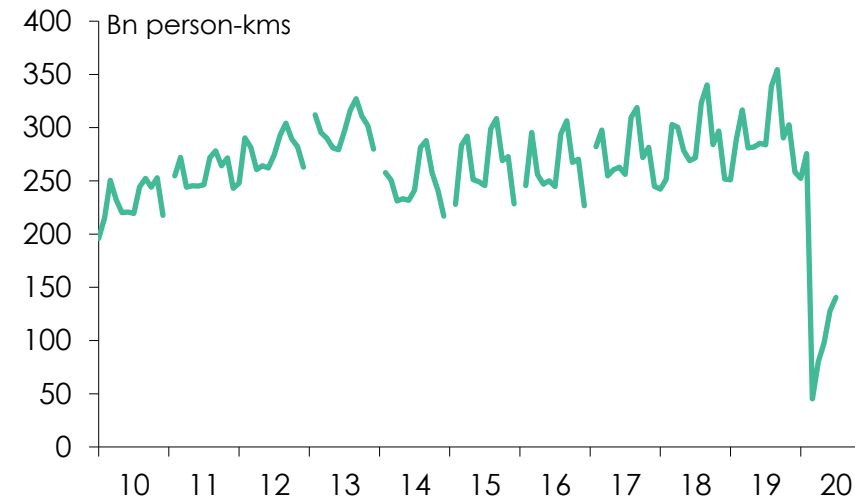
Real estate investment



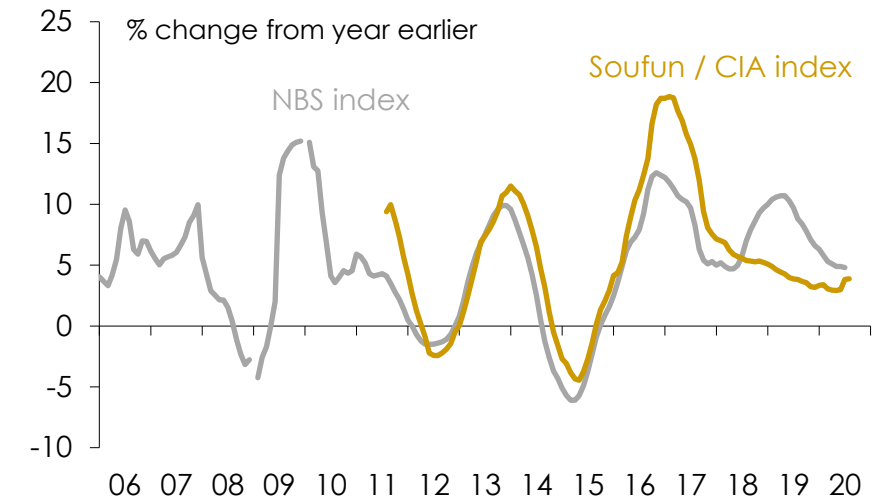
Retail sales volume



Passenger traffic volumes



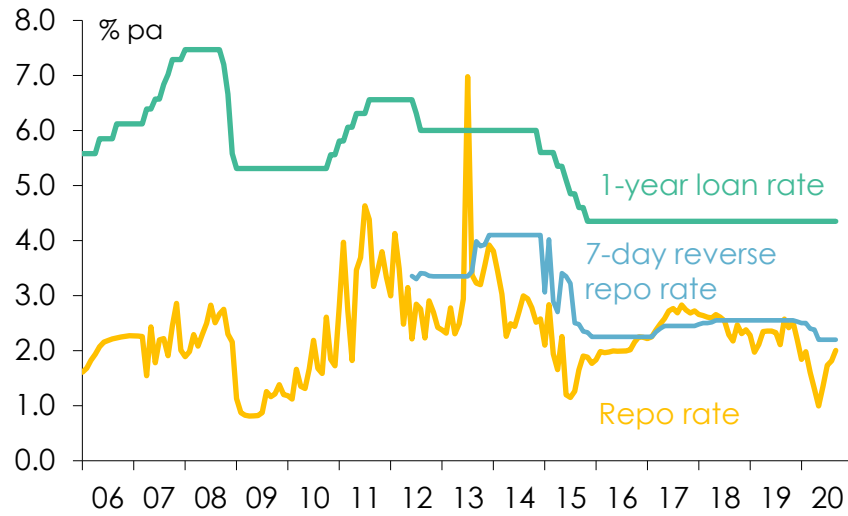
Residential real estate prices



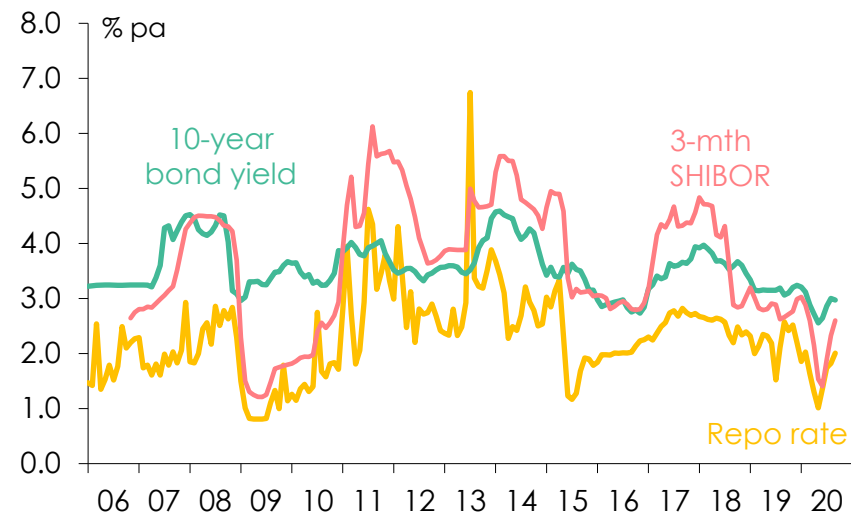
Sources: China National Bureau of Statistics; China Association of Automobile Manufacturers; China Index Academy. Latest data are for July, except for consumer sentiment index and passenger traffic volumes, which are for June.

The PBoC has been more cautious about stimulus than it was in 2008-09 or 2015-16, perhaps because it's still concerned about financial stability

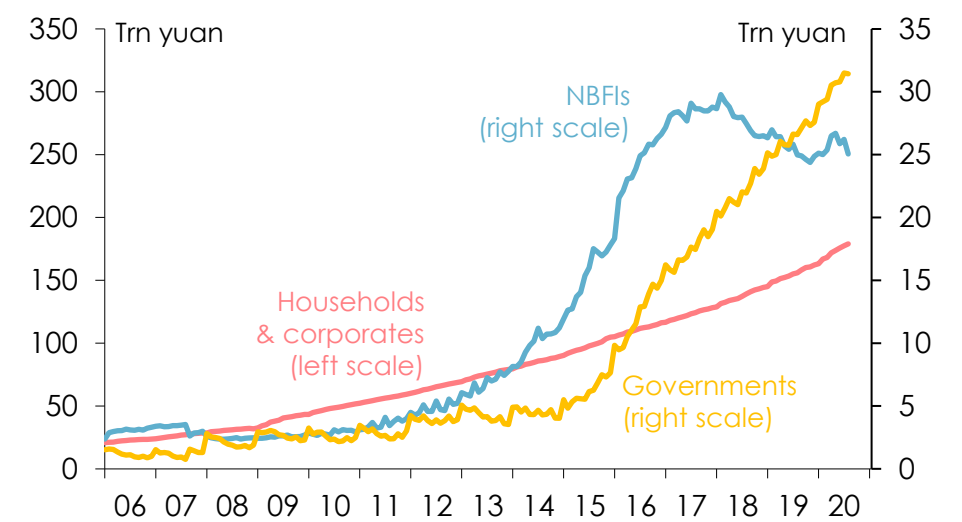
PBoC policy interest rates



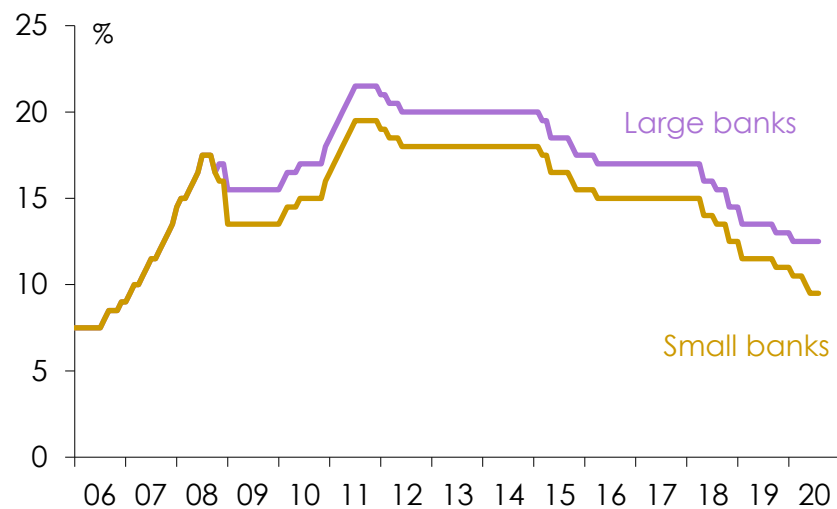
Market interest rates



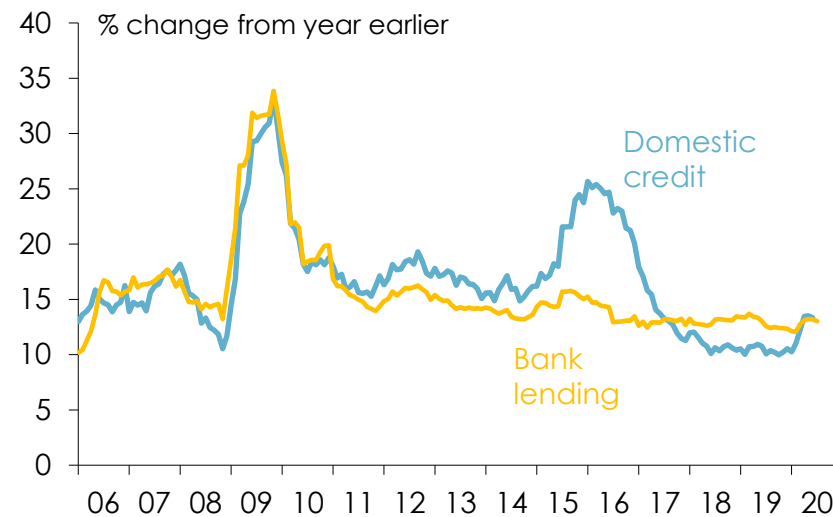
Depository corporation assets



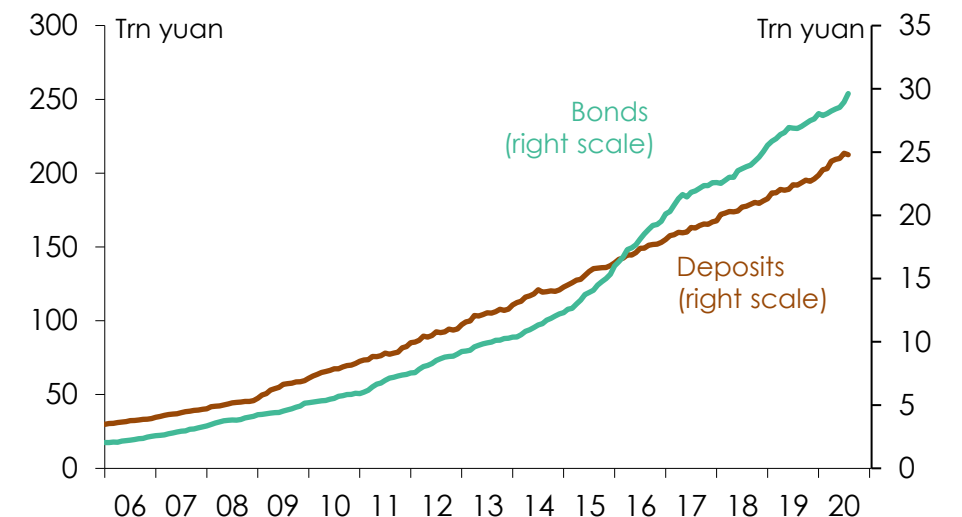
Bank reserve requirement ratios



Credit growth



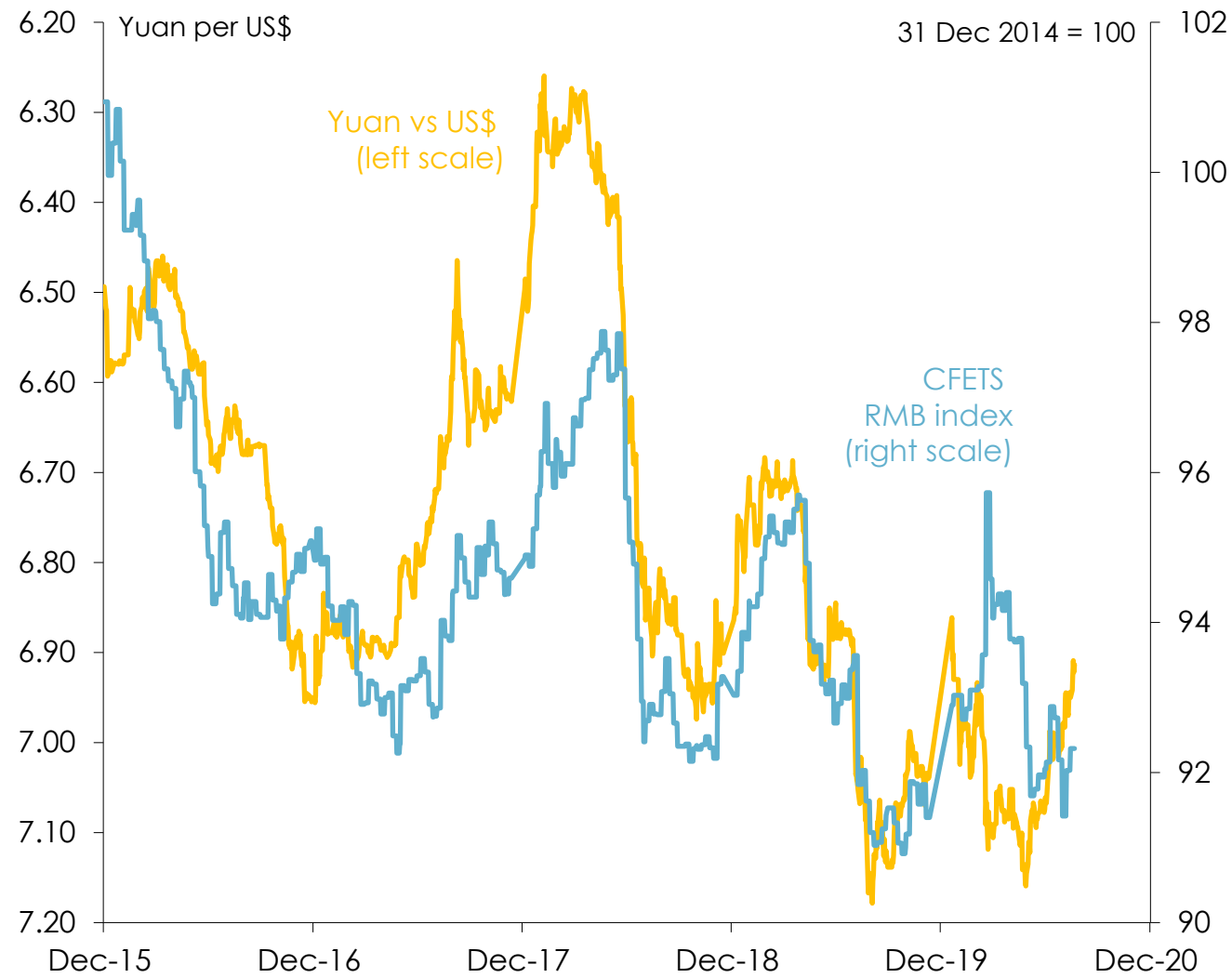
Depository corporation liabilities



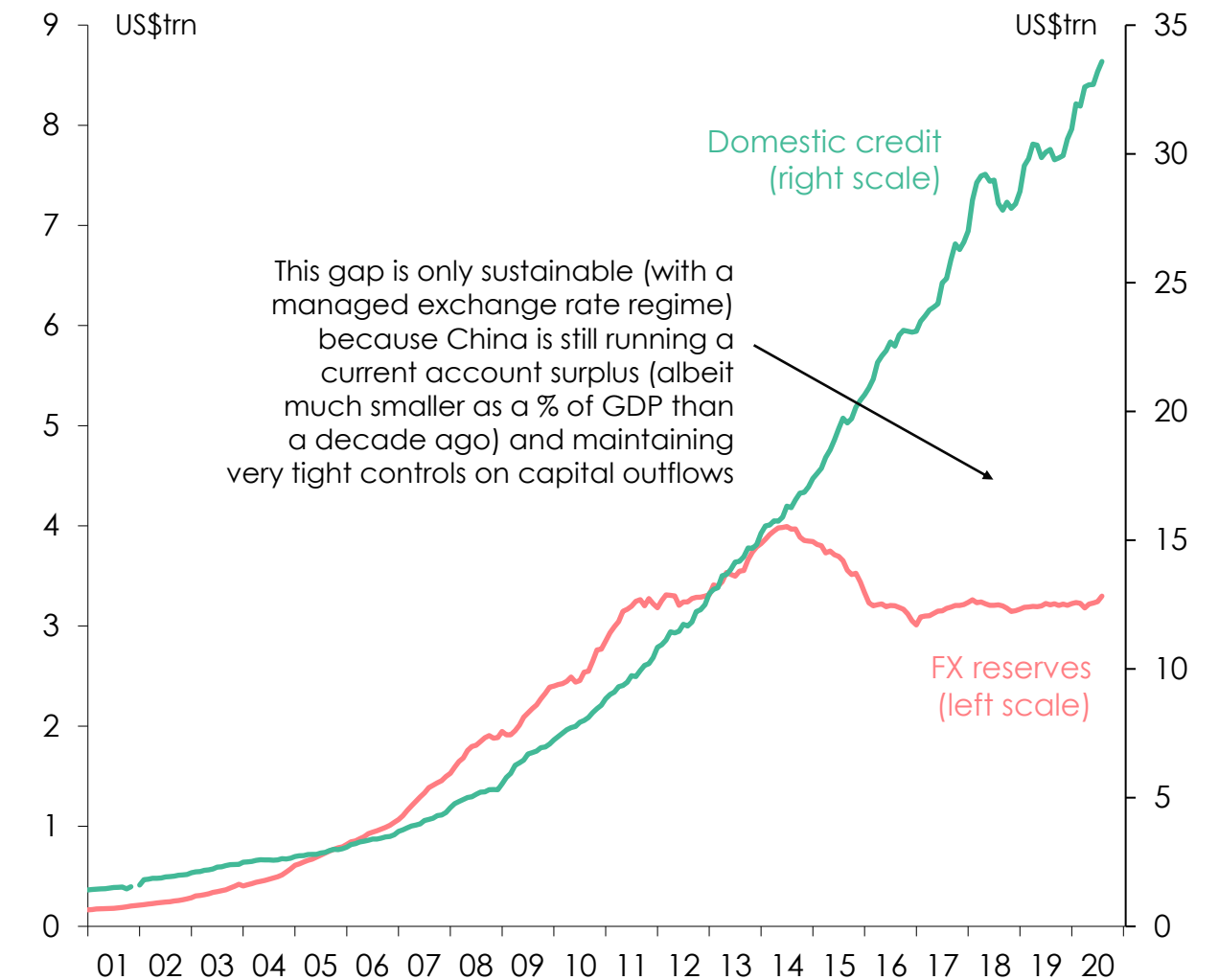
Note: 'SHIBOR' is the Shanghai Inter-Bank Offered Rate. Sources: Refintiv Datastream; People's Bank of China. Latest interest data are for the week ended 14th August; latest credit and financial system data are for July.

Since late May the Rmb has risen 3.2% against the US\$ but has been virtually unchanged in trade-weighted terms

Chinese yuan vs US\$ and trade-weighted index



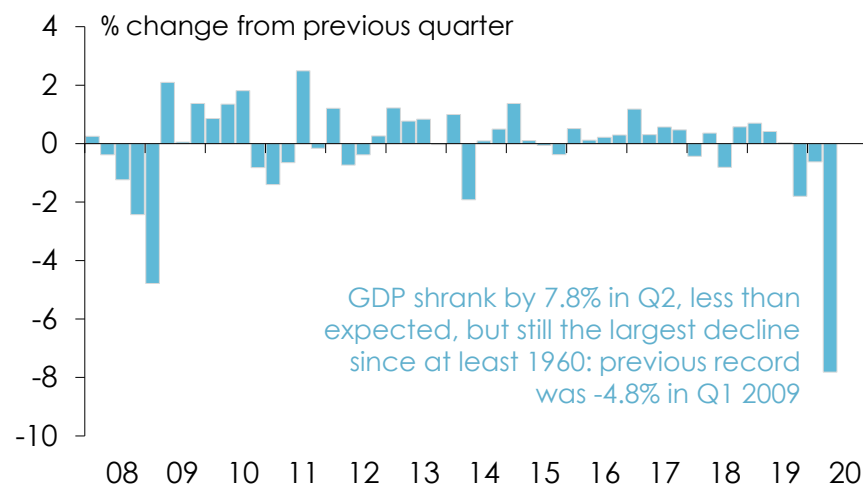
FX reserves and domestic credit



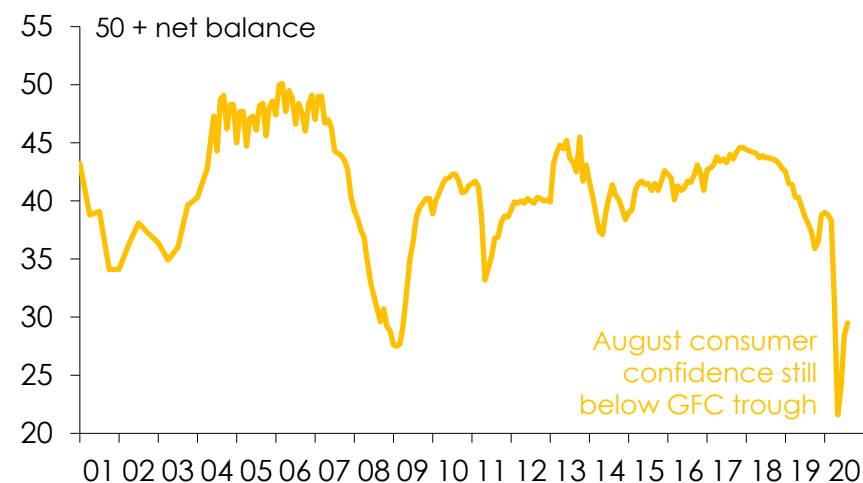
Sources: Refinitiv Datastream; China Foreign Exchange Trading System; People's Bank of China. Exchange rates up to 21st August; credit and FX reserves data up to July.

Japan entered its fourth recession since 2000 after hiking its GST rate last October, and the pandemic has worsened it

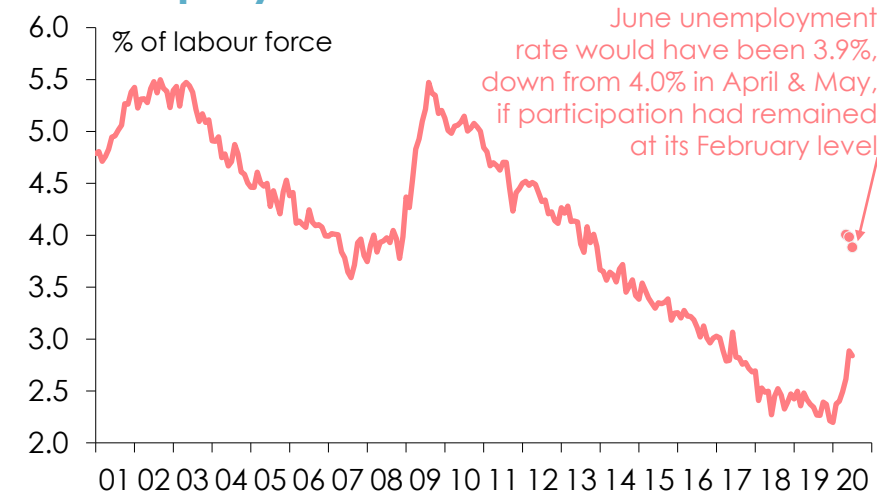
Real GDP



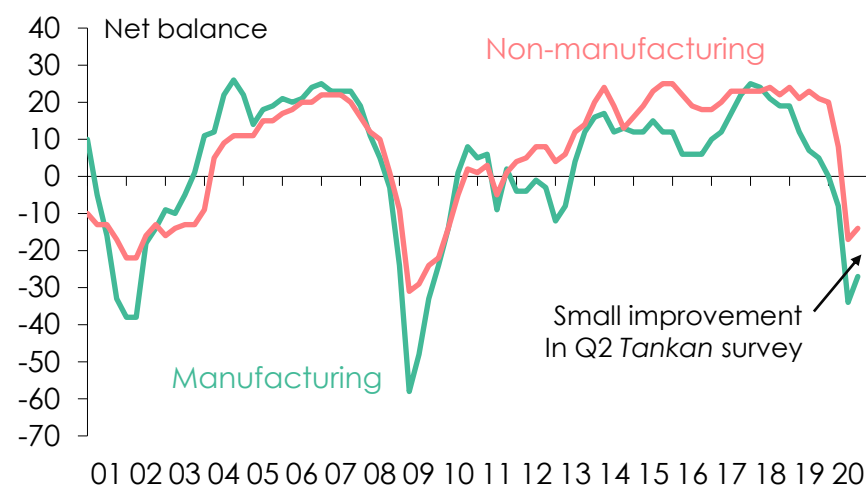
Consumer confidence



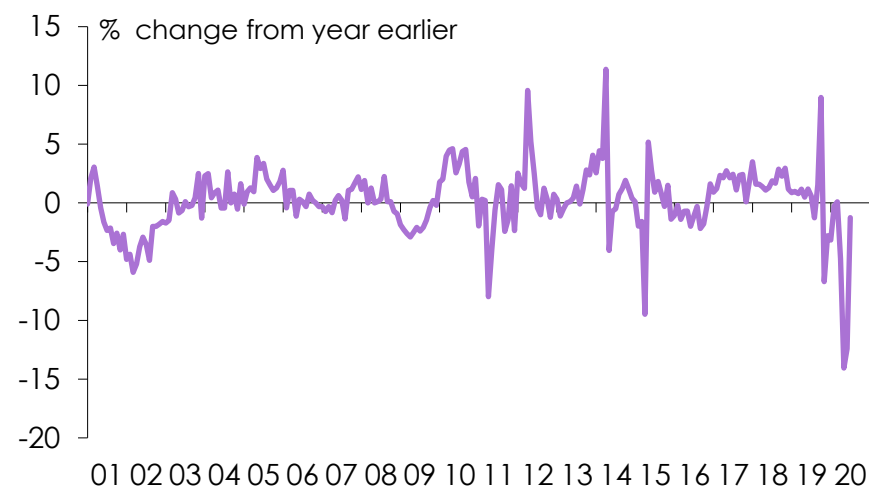
Unemployment



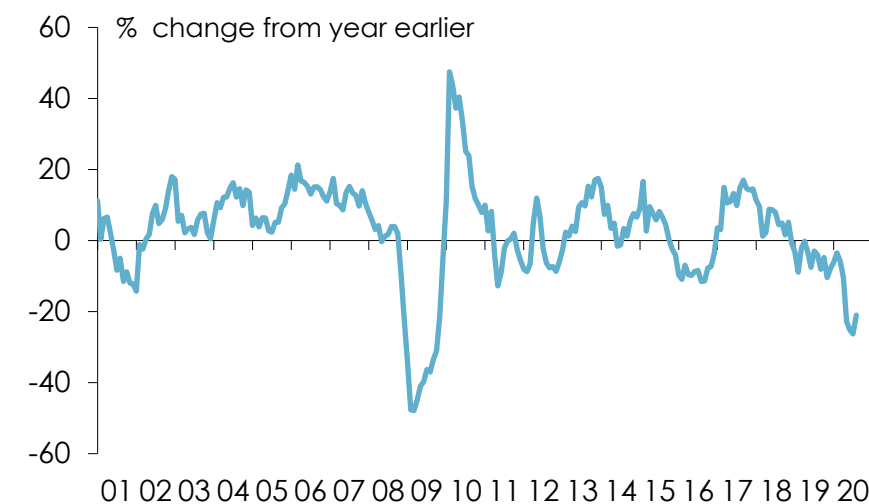
Business conditions – large firms



Retail sales



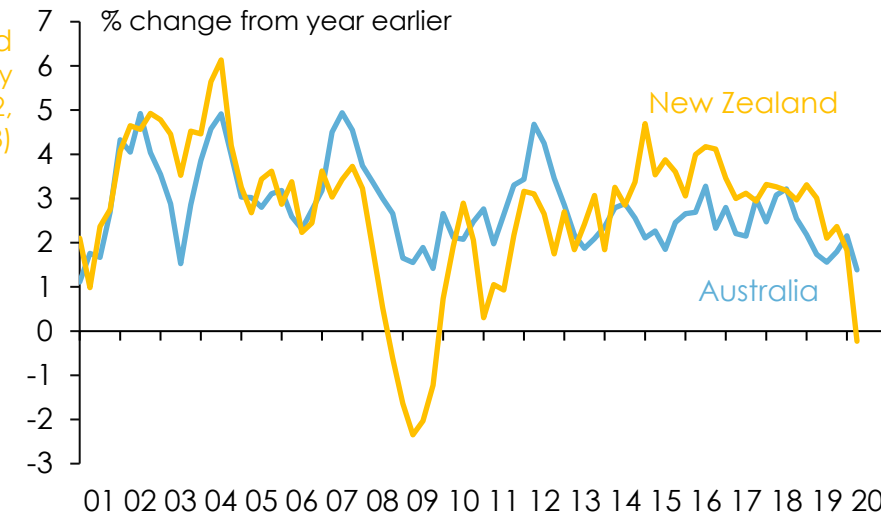
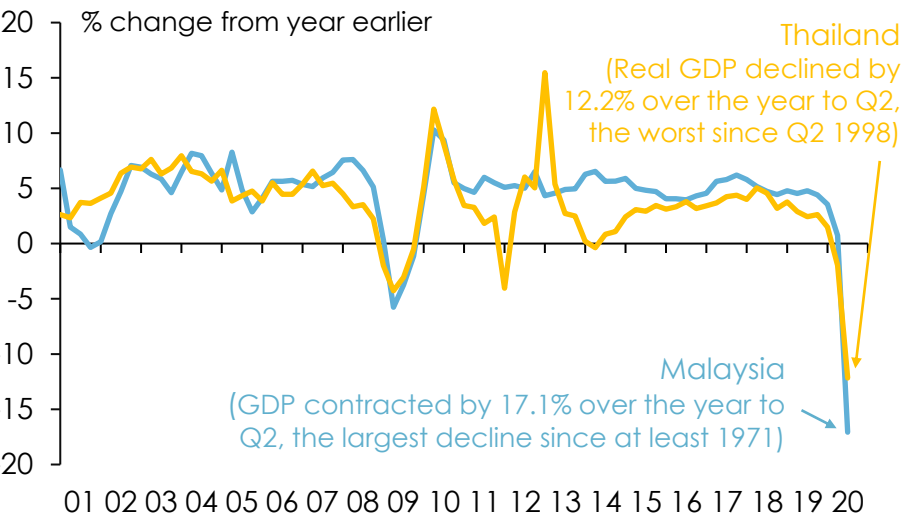
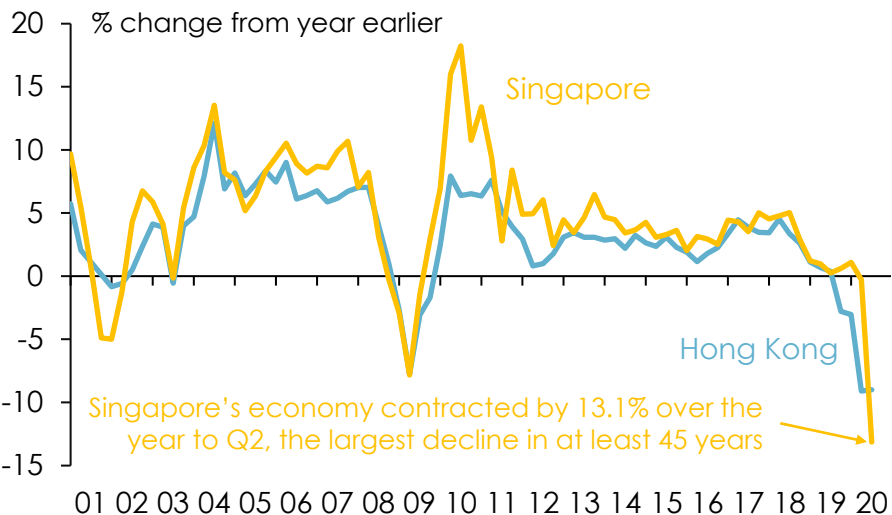
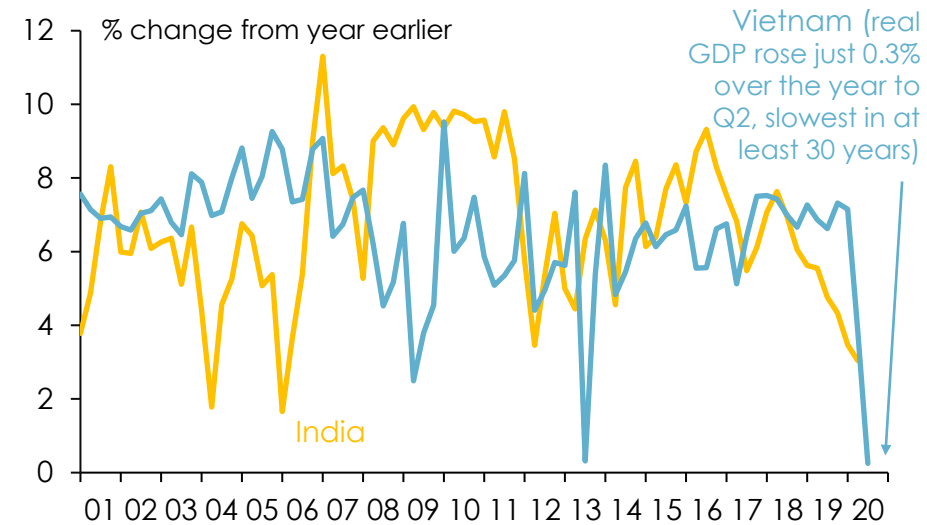
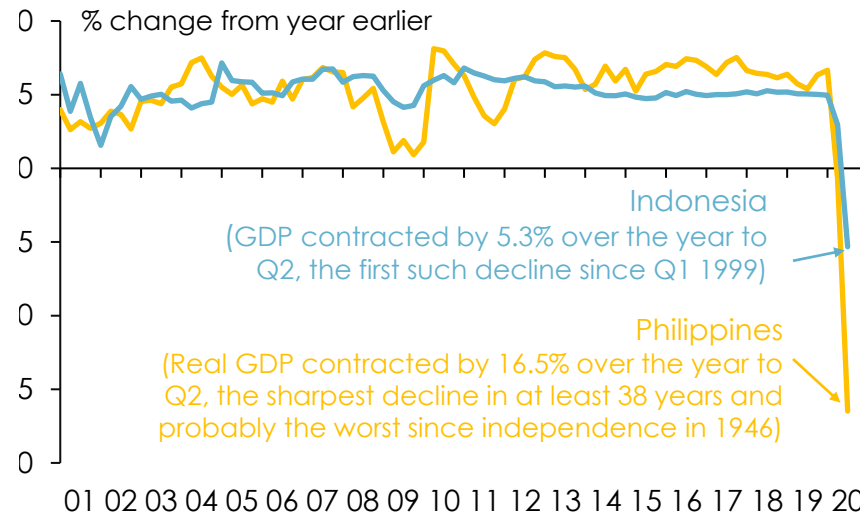
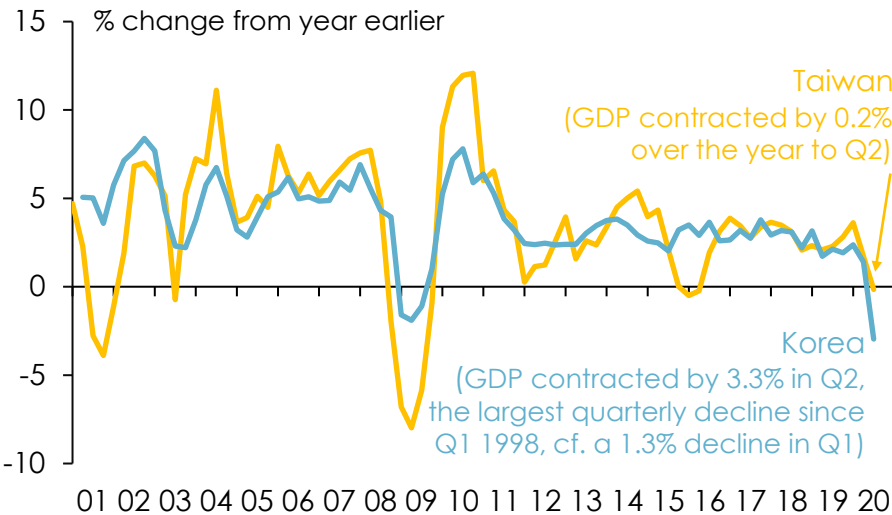
Merchandise export volumes



Sources: Japan Cabinet Office; Bank of Japan; Japan Automobile Dealers' Association; Ministry of Health, Labour & Welfare.

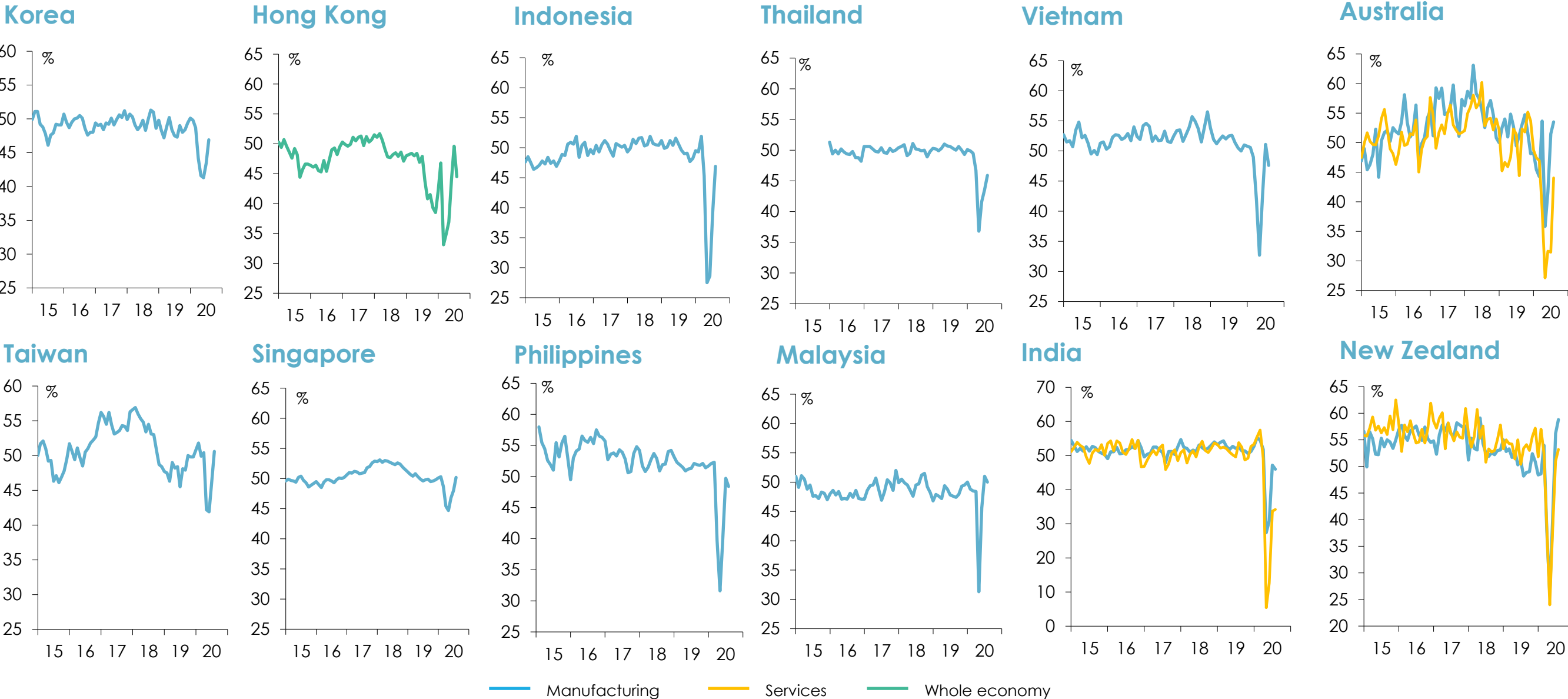
All other Asian economies which have so far reported Q2 GDP numbers, except Vietnam, have experienced outright contractions from Q2 2019

Real GDP growth – Asia-Pacific economies



Sources: Bank of Korea; Taiwan Directorate-General of Budget, Accounting & Statistics; Hong Kong Census & Statistics Department; Singapore Ministry of Trade and Industry; Department of Statistics Malaysia; Office of the National Economic & Social Development Council of Thailand; Statistics Indonesia; Philippine Statistics Authority; General Statistics Office of Viet Nam; India Ministry of Statistics & Programme Implementation; Australian Bureau of Statistics; Statistics New Zealand. India's Q2 real GDP will be released on 31st August; Australia's on 2nd September; and New Zealand's on 17th September.

Manufacturing PMIs rose further in July in Korea, Taiwan, Indonesia and Thailand but fell back slightly in the Philippines, Malaysia, Thailand & India

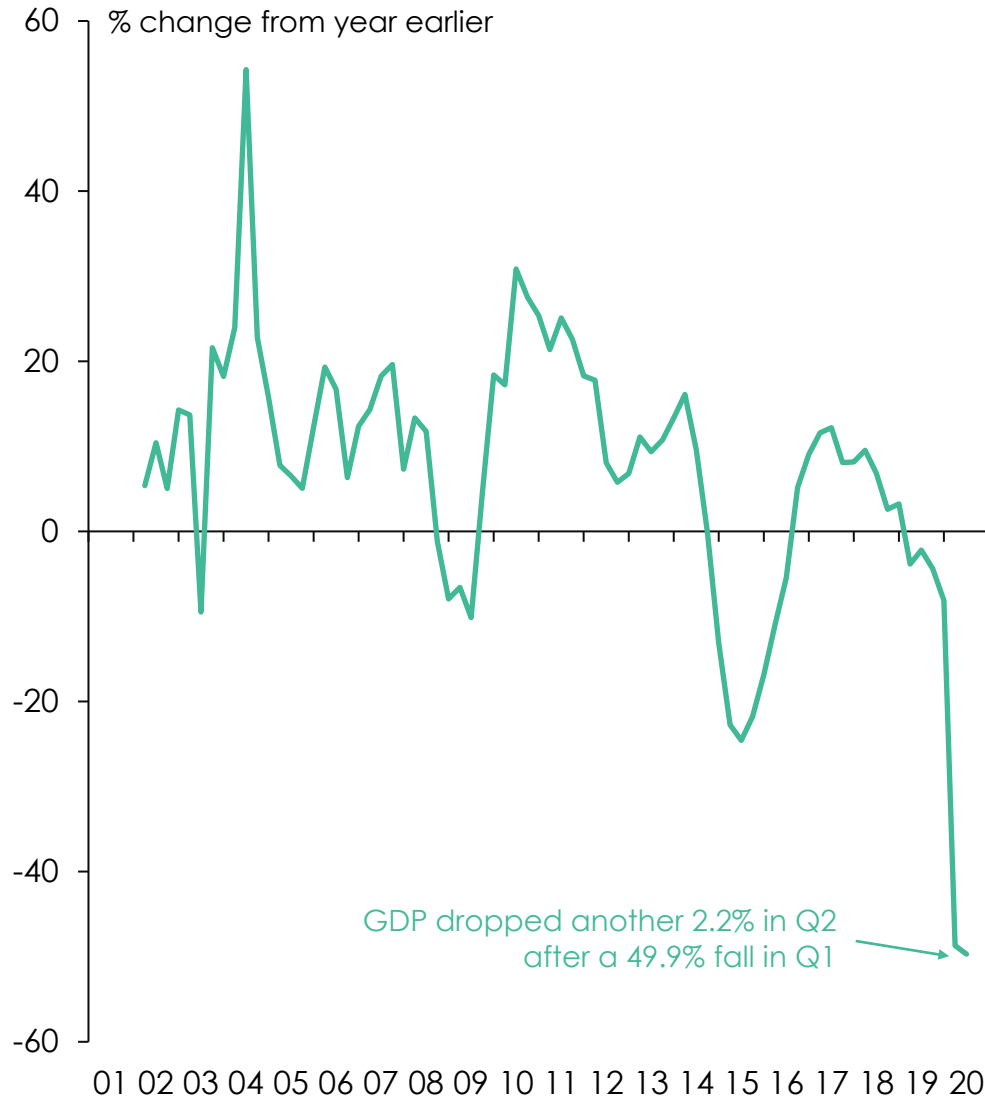


Note: Purchasing Managers' Indexes (PMIs) are derived from surveys of senior executives, who are asked to report whether various dimensions of business activity recorded an increase, decrease or no change compared with the previous month. A reading of 50 indicates an overall increase cf. the previous month, and a reading of less than 50 indicates a decrease. Latest data are for July.

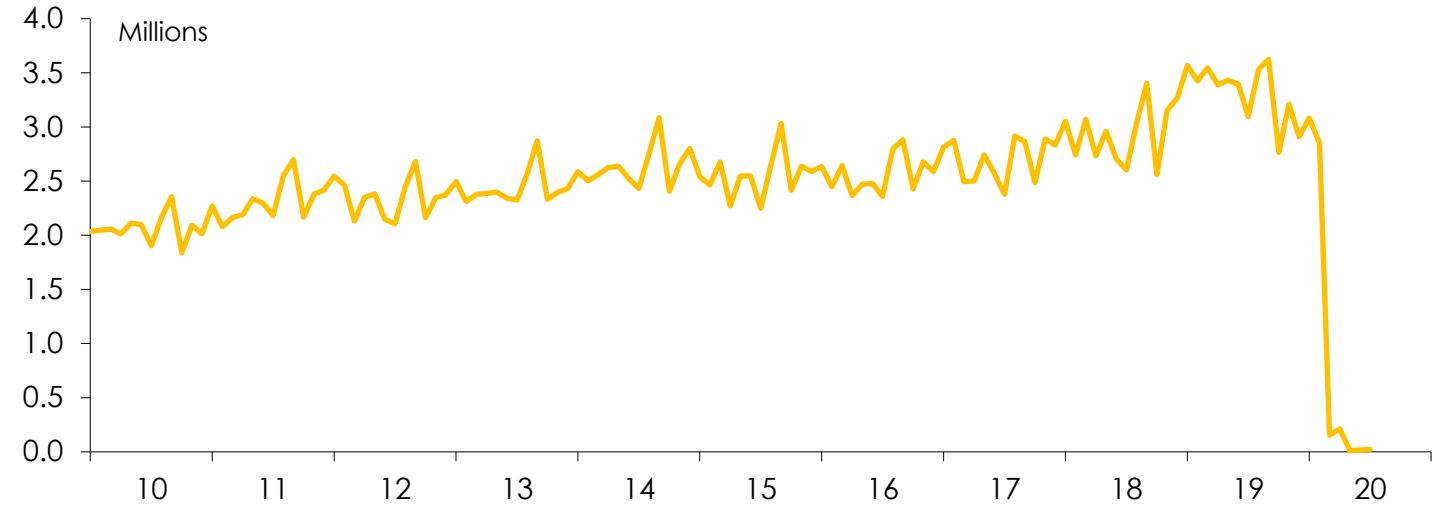
Sources: IHS Markit; Singapore Institute of Purchasing & Materials Management; Australian Industry Group; Business NZ; Refinitiv Datastream.

The world's worst recession is probably in Macau

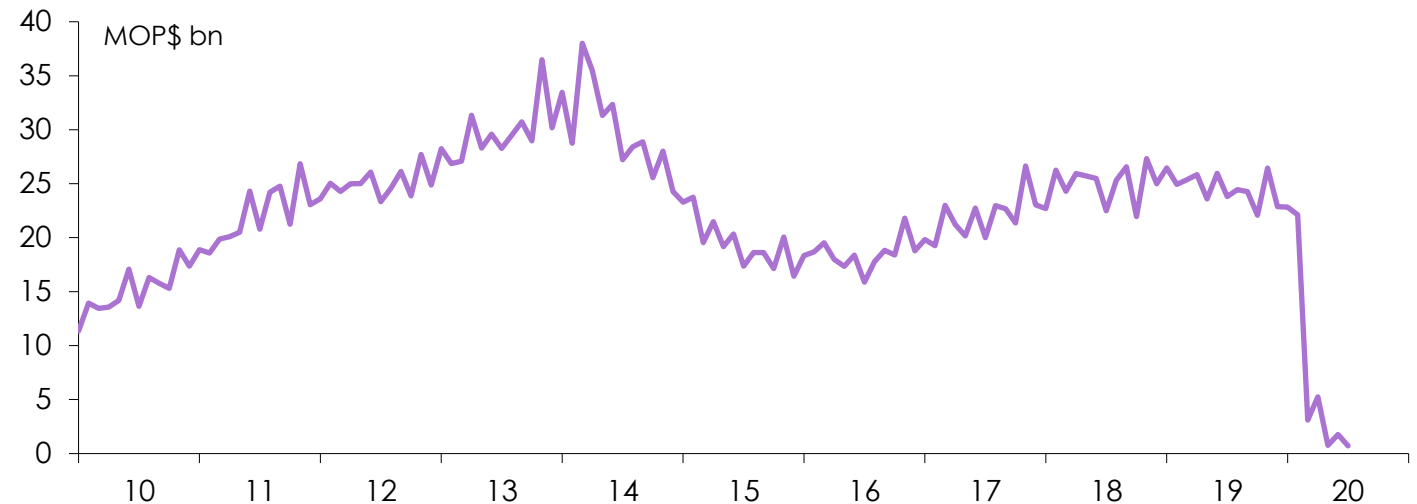
Macau – real GDP



Visitor arrivals



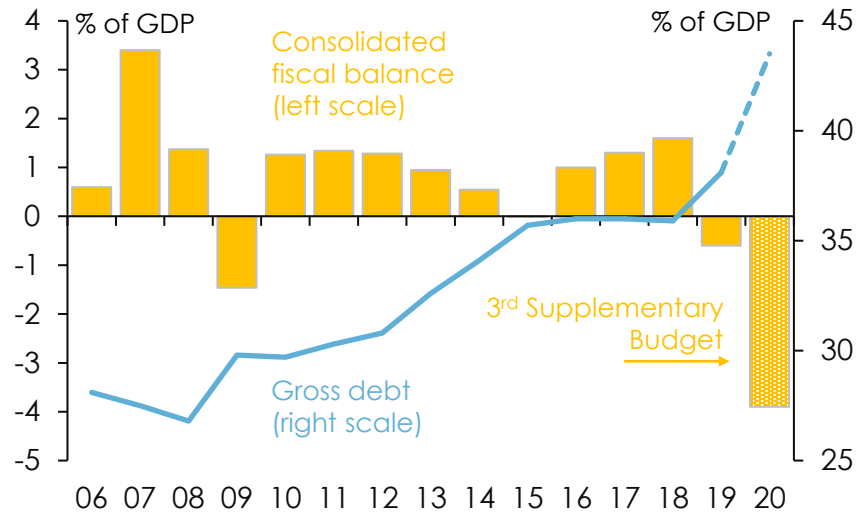
Gambling revenue



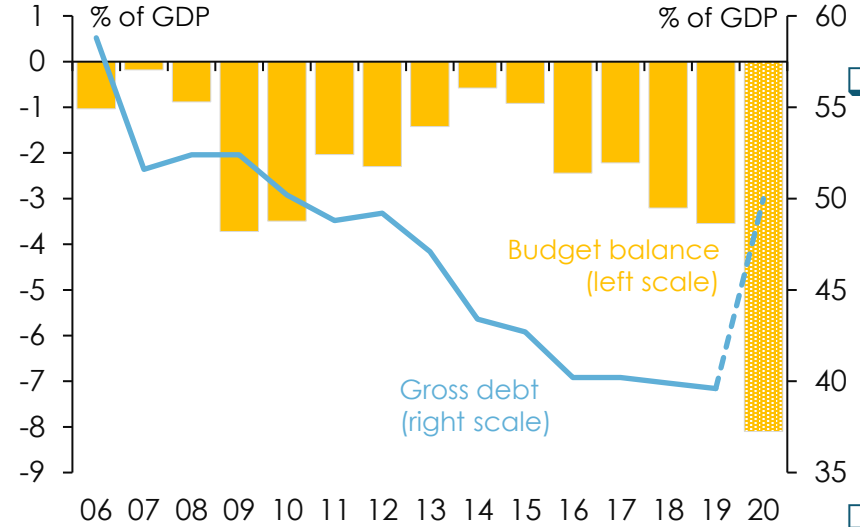
Note: MOP\$ is the standard abbreviation for Macanese patacas (1 MOP = US13¢). Source: Macau Statistics and Census Service.

Some Asian central banks have engaged in various forms of 'quantitative easing'

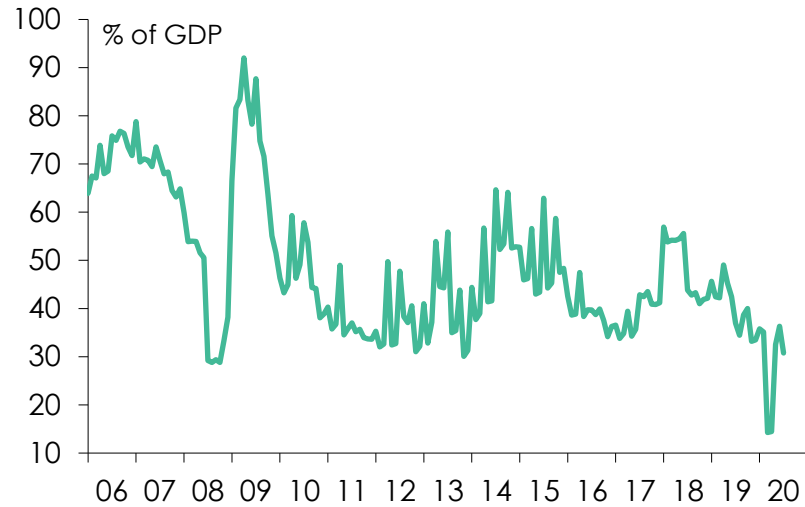
Korea central government budget



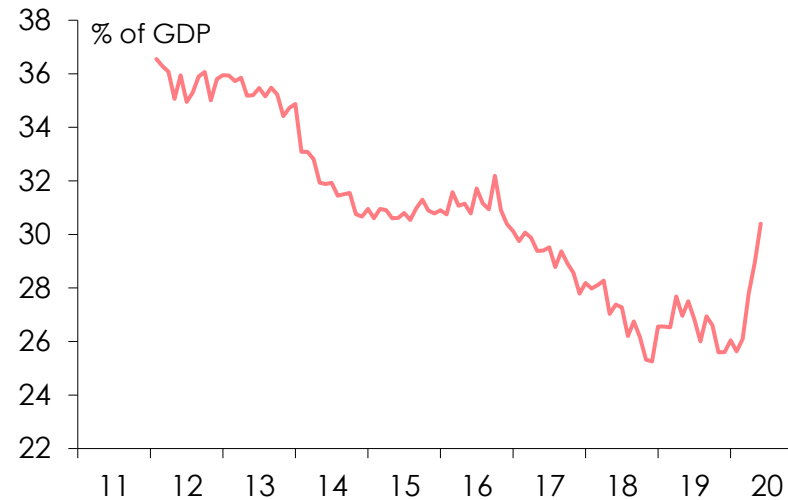
Philippines NG budget



BoK domestic assets



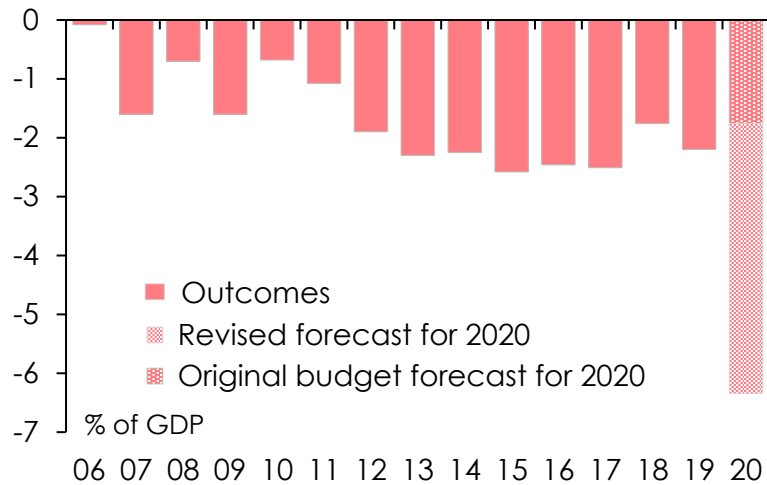
BSP assets



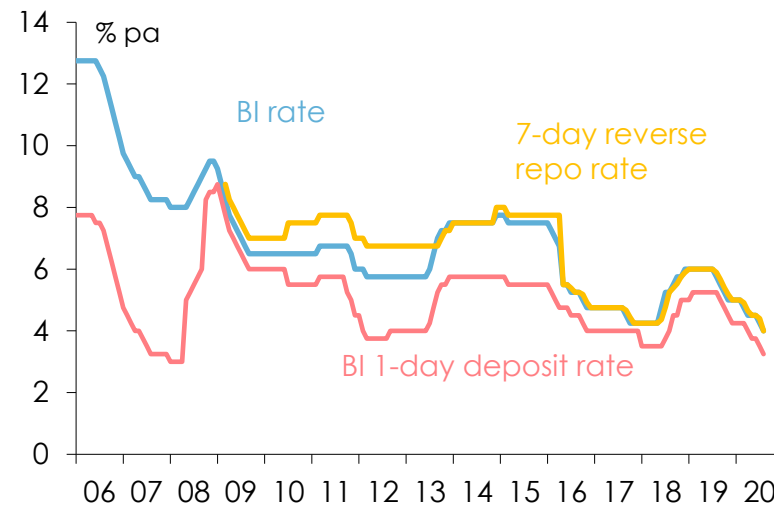
- ❑ The Bank of Korea has cut its policy rate by 100bp so far this year to a record low of 0.50%
- ❑ After its last rate cut in May, Governor Lee Ju-Yeol indicated the BoK was considering using 'unconventional monetary tools' to support growth
 - since March, the BoK has been willing to supply 'unlimited liquidity' to financial institutions, accepting a wider range of collateral in repos
 - this month the BoK lent ₩8 trn to a ₩10 trn SPV established to buy corporate bonds and CP
- ❑ The BoK's total domestic assets more than doubled between end-February and end-May, from 40% of GDP to 84% - reflecting increased holdings of bonds, reverse repos and lending to both government and the private sector
- ❑ The Philippines National Government (NG) expects its budget deficit to reach 8.1% of GDP this year, and public debt to rise to 50% of GDP
- ❑ In March, the BSP purchased ₱300bn (US\$6bn) of bonds directly from the Treasury Bureau under a 6-mth repo arrangement, and reportedly bought another ₱500bn in the secondary market through to the end of July

Bank Indonesia has entered into a formal agreement with the Indonesian Government to purchase debt directly, and subsidize other debt issuance

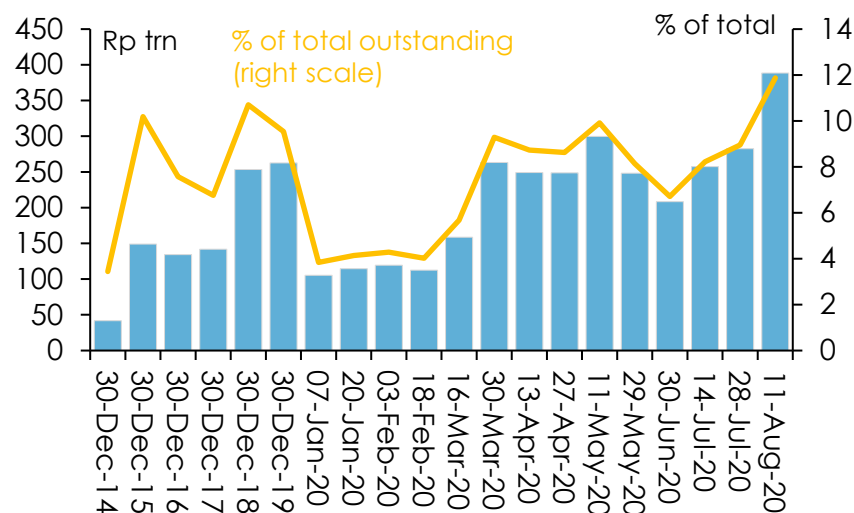
Indonesia budget deficit



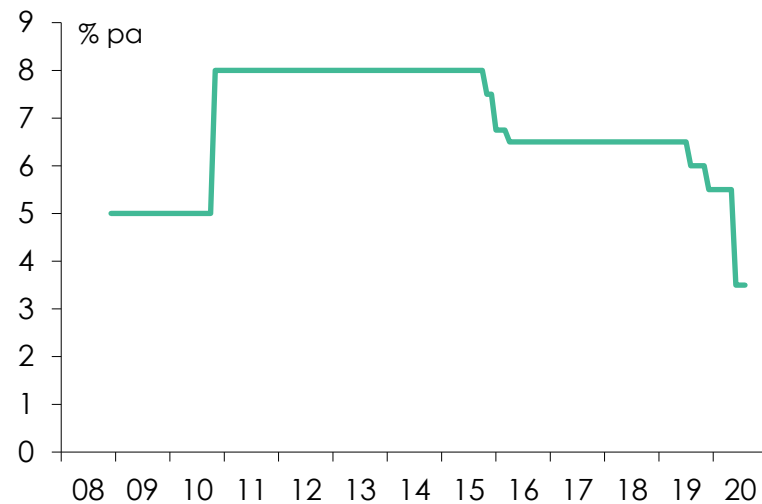
BI monetary policy rates



BI holdings of tradeable SBNs



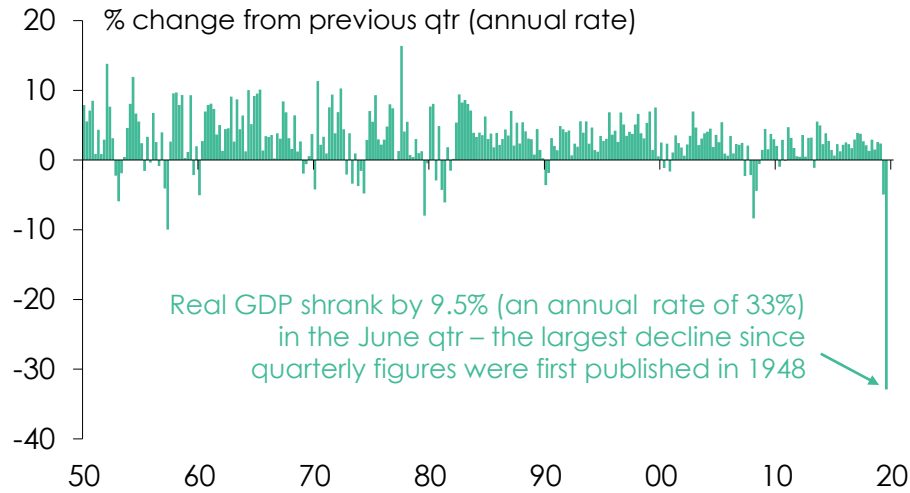
Bank reserve requirement ratio



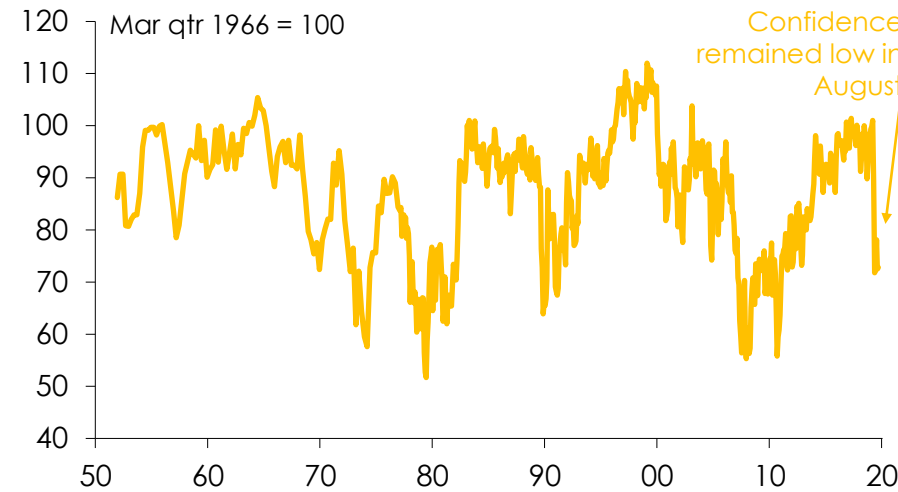
- ❑ In July the Indonesian Government and Bank Indonesia agreed on a 'burden sharing' scheme under which BI will directly purchase from the Government almost Rp400 trn of bonds (SBNs) – equivalent to about 1/4 of this year's financing requirement – at its benchmark reverse repo rate, and return the interest received to the Government
 - last week BI purchased Rp82 trn of bonds directly from the Finance Ministry
- ❑ BI will also subsidise the interest on another Rp177trn of bonds issued to fund loans to micro, small and medium-sized businesses
- ❑ This follows BI's decision in mid-April to cut banks' reserve requirement ratio by 200bp, coupled with a requirement that banks use the funds thus 'freed up' to purchase SBNs
 - banks' holdings of SBNs have since increased by Rp 196 trn (25%)
- ❑ BI calls all this 'synergic monetary expansion'
- ❑ BI is also doing conventional monetary policy: it cut its policy indicator rates by 25bp at last month's policy meeting

The US economy experienced its sharpest contraction since the 1930s in the first half of 2020, although growth has turned moderately positive in Q3

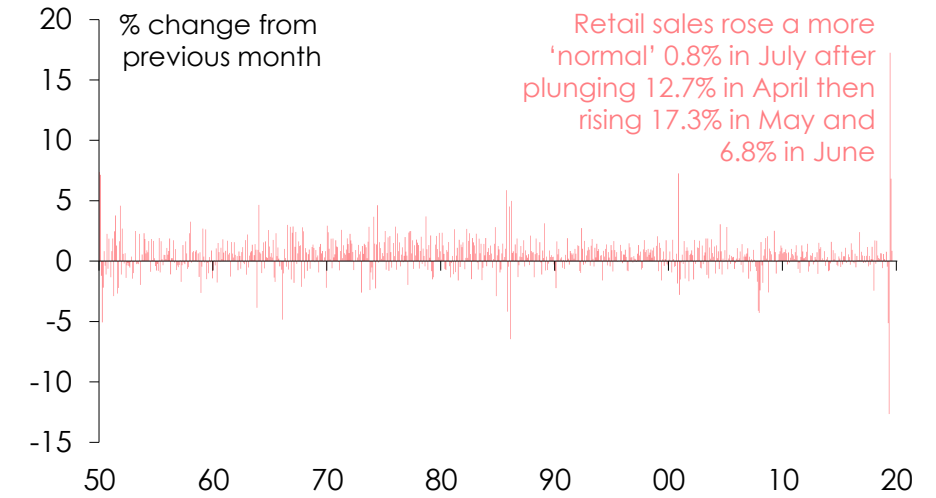
Real GDP



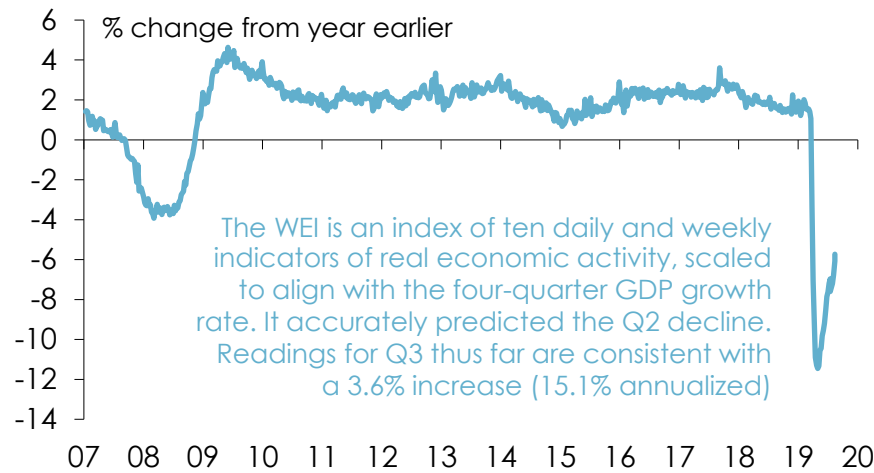
Consumer confidence



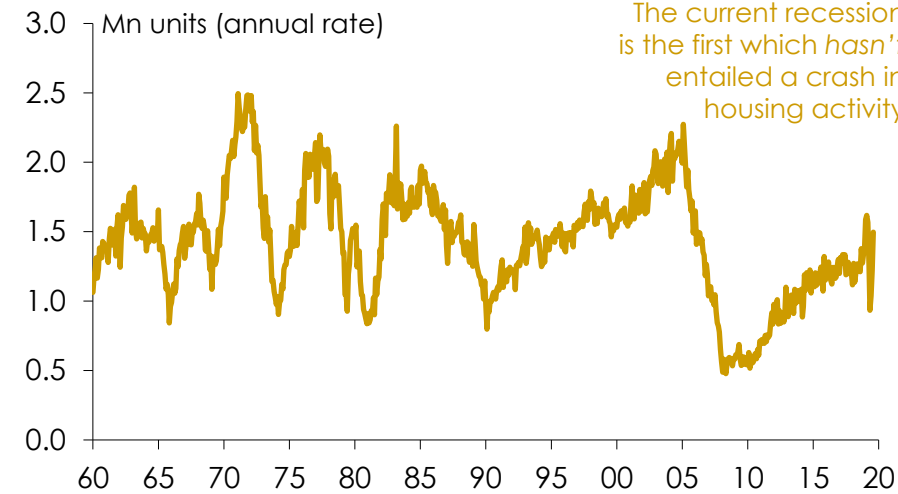
Retail sales



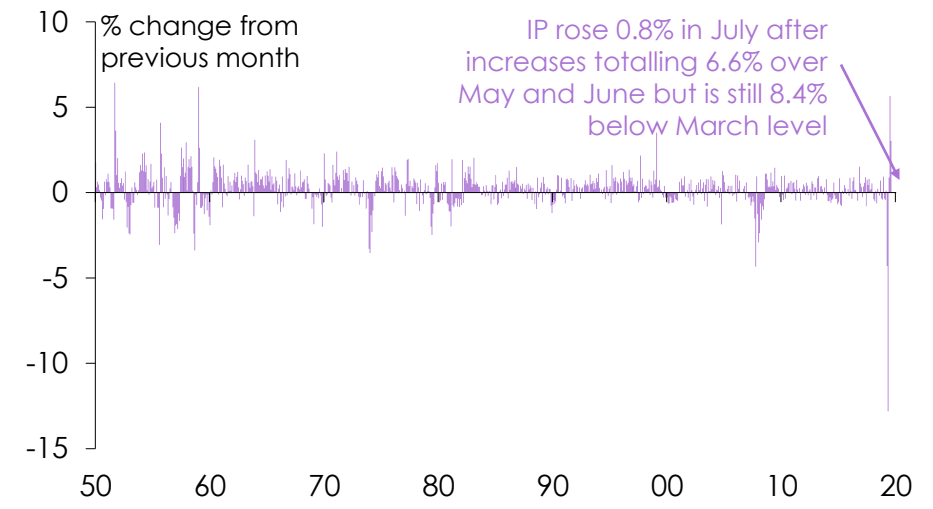
NY Fed weekly economic index



Housing starts

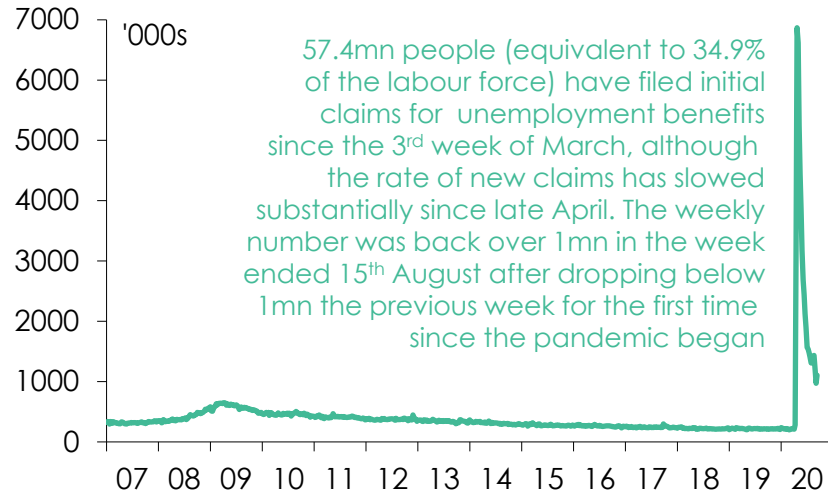


Industrial production

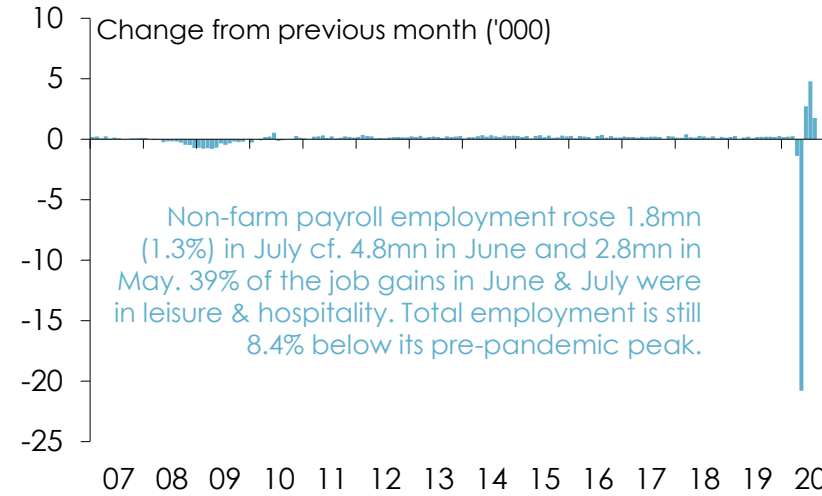


42% of the 22mn jobs lost in the US in March and April have been regained over May, June and July

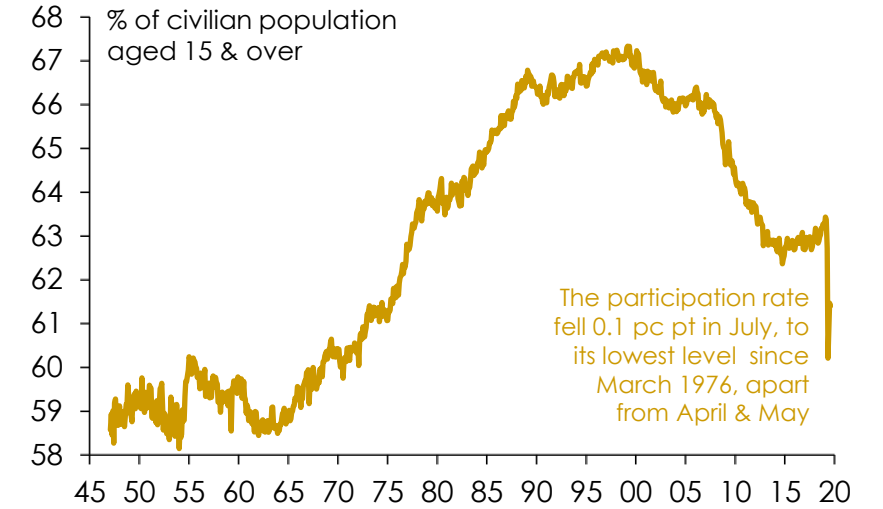
Unemployment benefit claims



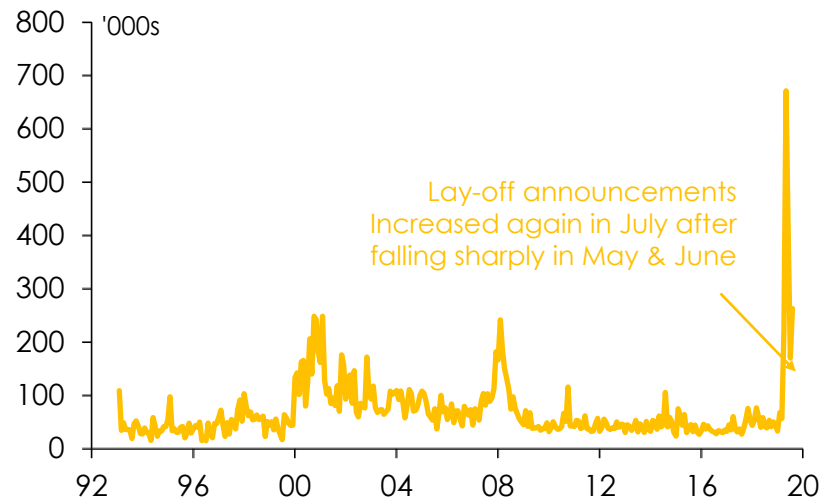
Non-farm payroll employment



Labour force participation rate



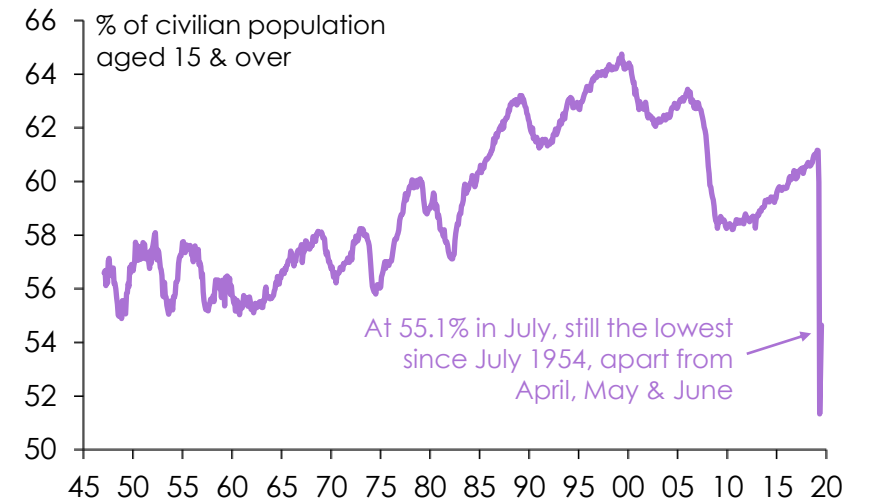
Layoff announcements



Unemployment rate

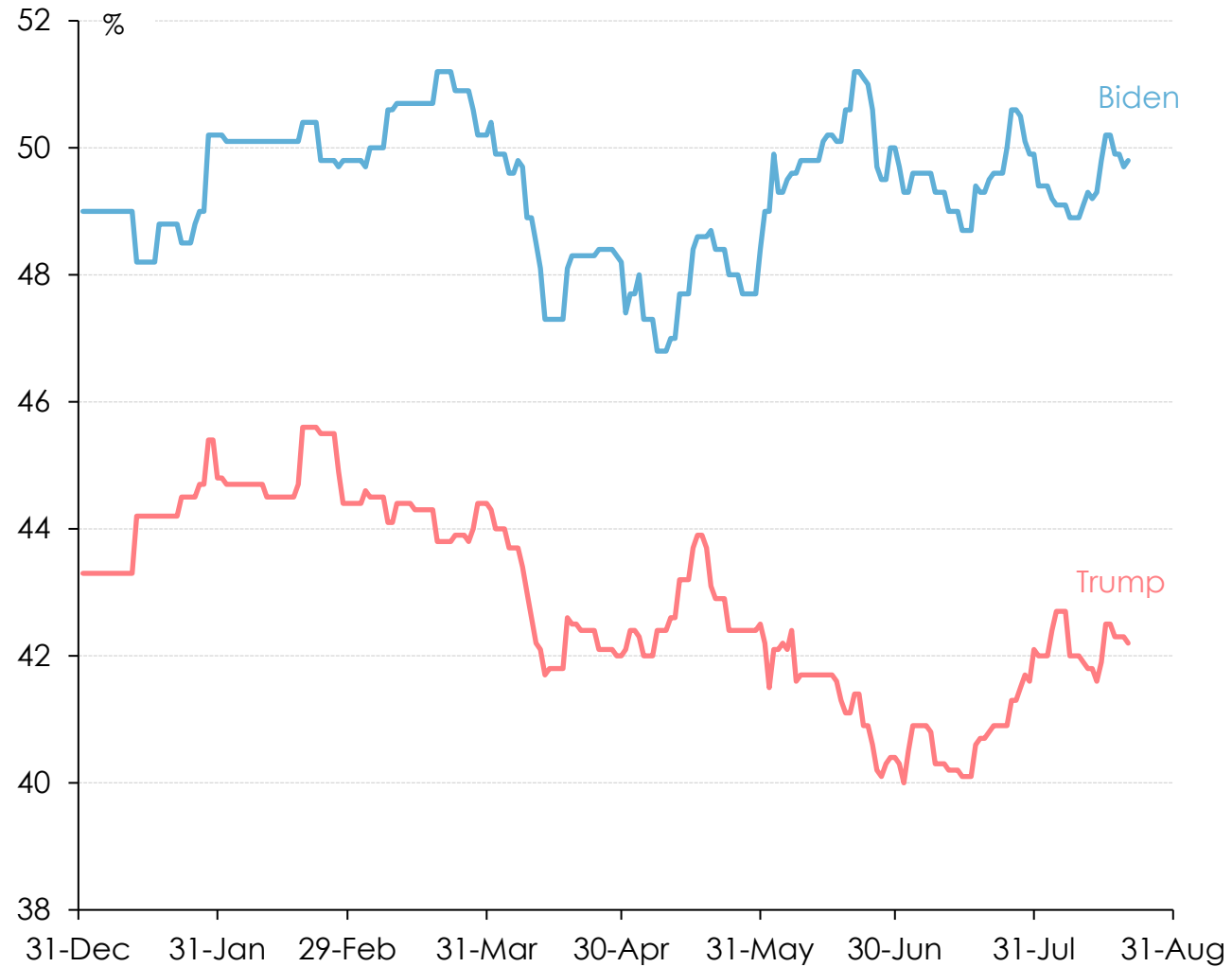


Employment to population ratio

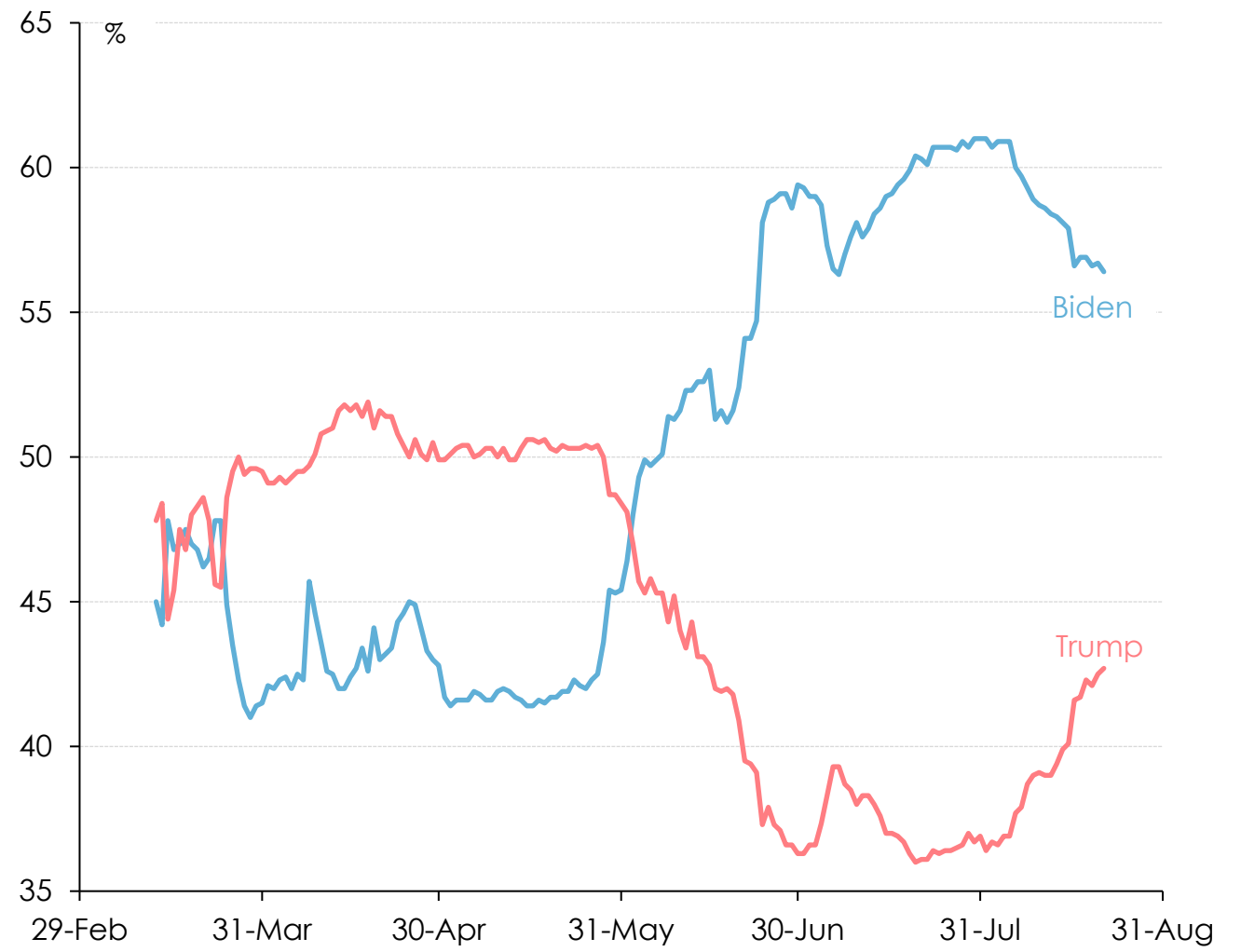


Biden seems to have gained a lift in opinion polls from this week's Democratic Convention, but not in the betting markets

Winner of November US Presidential election
– average of all opinion polls



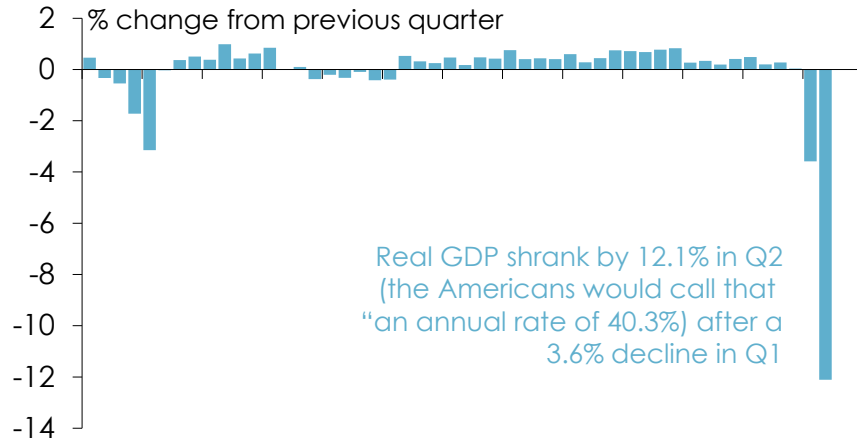
Winner of November US Presidential election
– betting odds



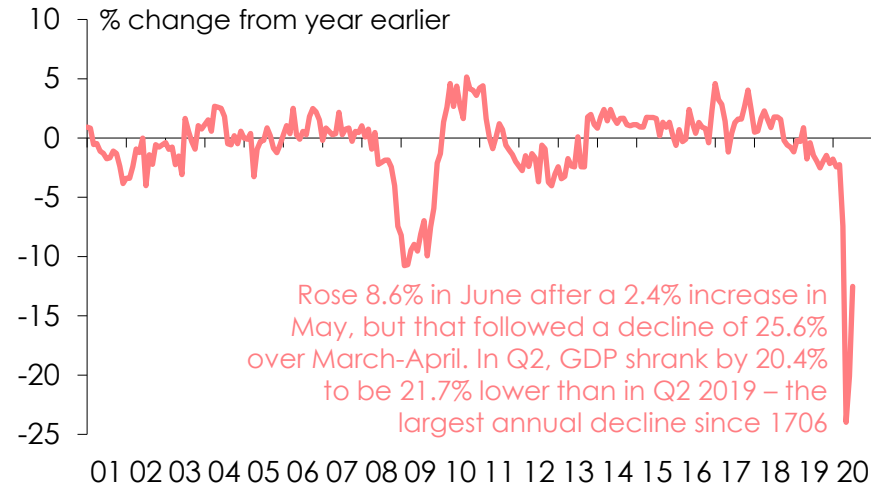
Note: The opinion poll average is based on 9 different polls; the betting odds average is based on 6 different markets. Latest opinion poll and betting odds data are for 21st August. Source: RealClearPolitics.

Europe has experienced a larger contraction in real GDP than the US – although unemployment hasn't risen nearly as much

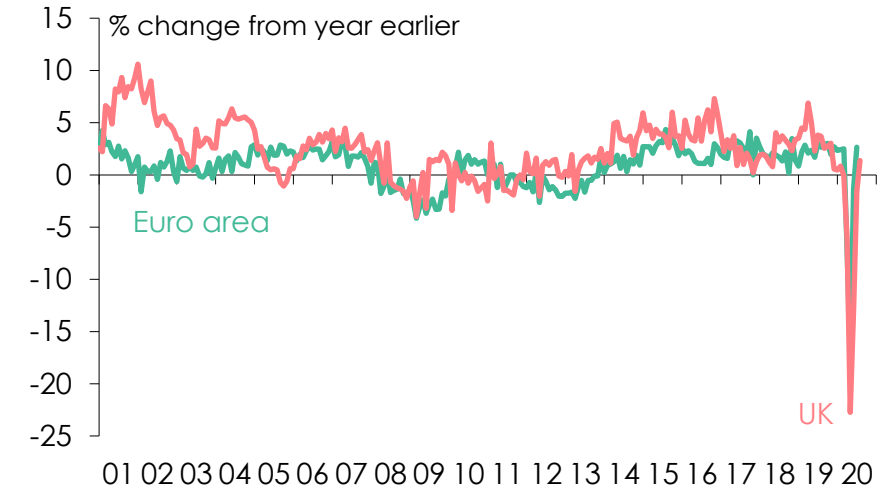
Euro area real GDP



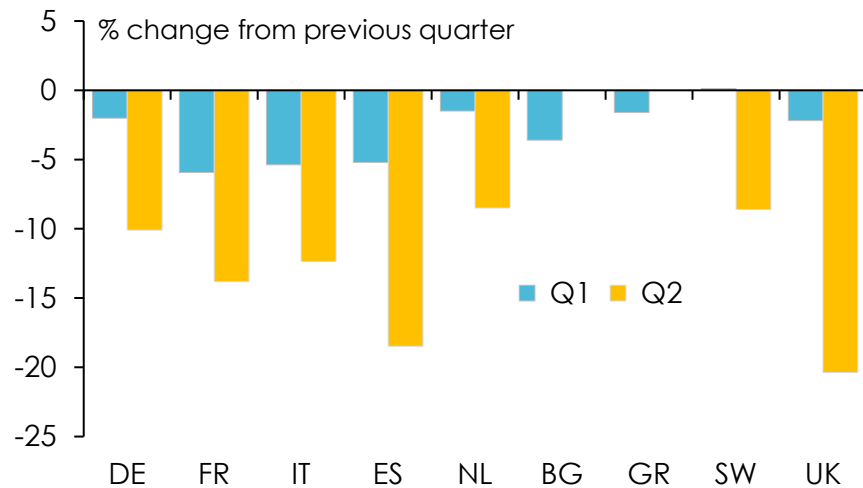
UK monthly GDP



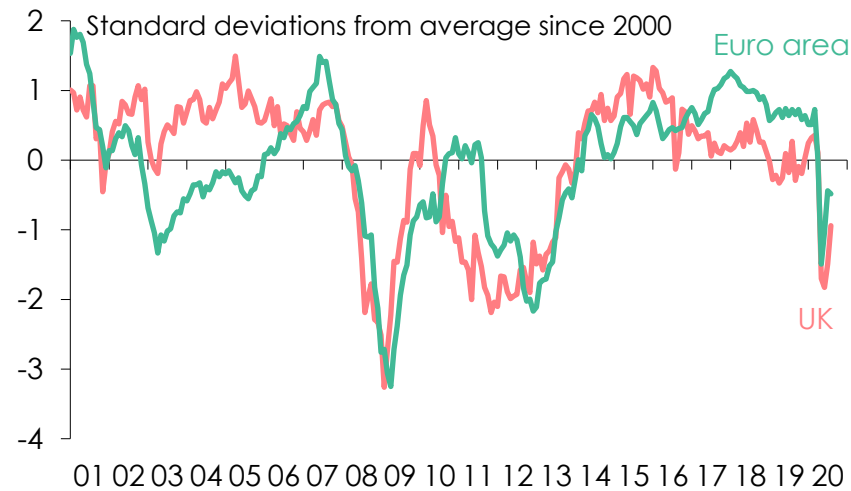
Retail sales volume



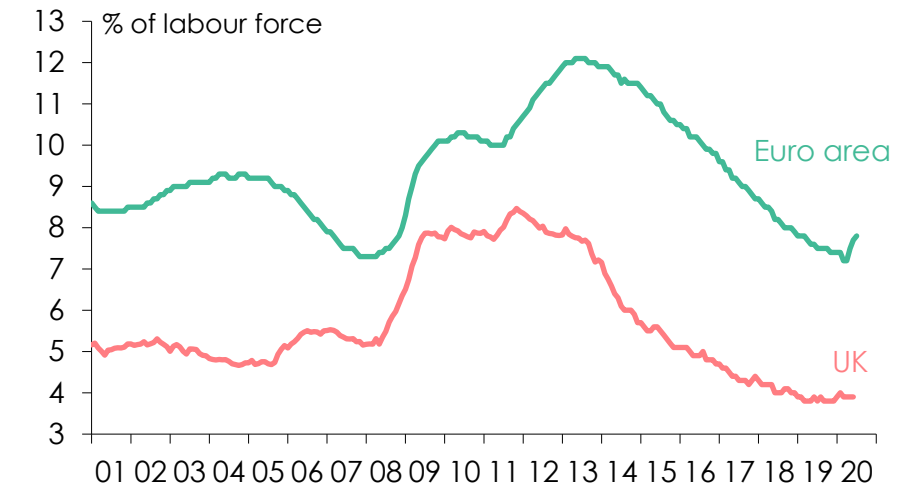
Quarterly GDP by country



Consumer confidence



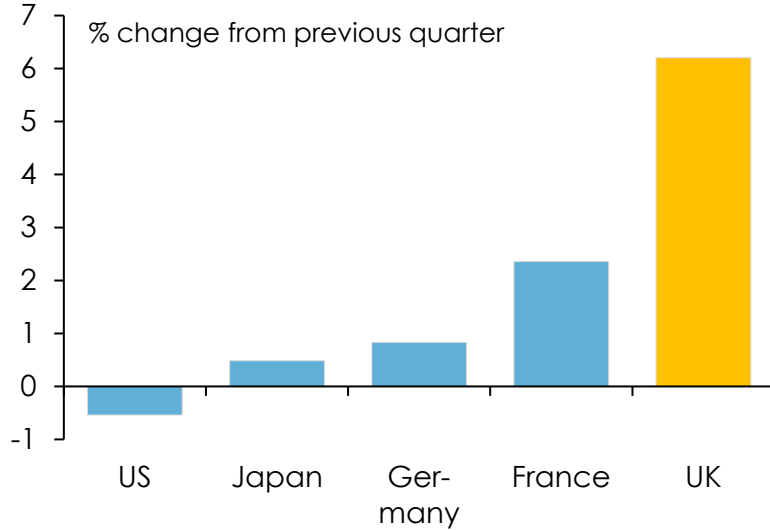
Unemployment



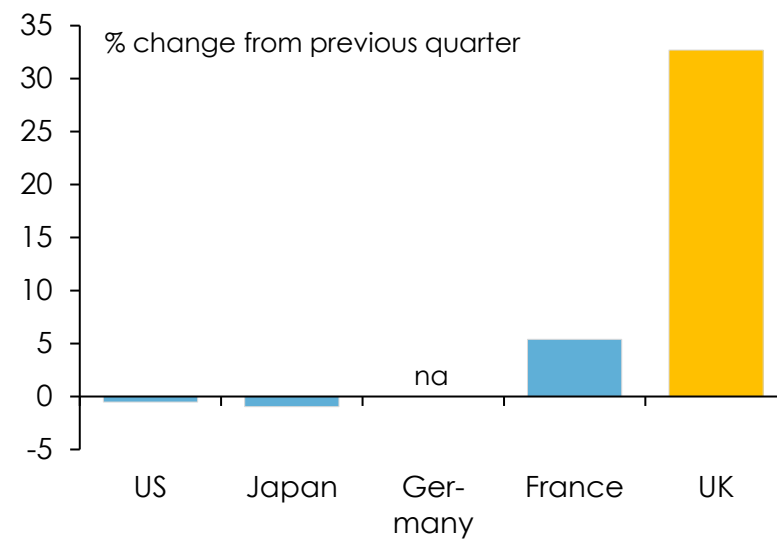
Sources: Eurostat; UK Office for National Statistics; Confederation of British Industry. The UK unemployment rate is published as a 3-month moving average

There's something fishy about the deflators used in compiling the UK's Q2 national accounts

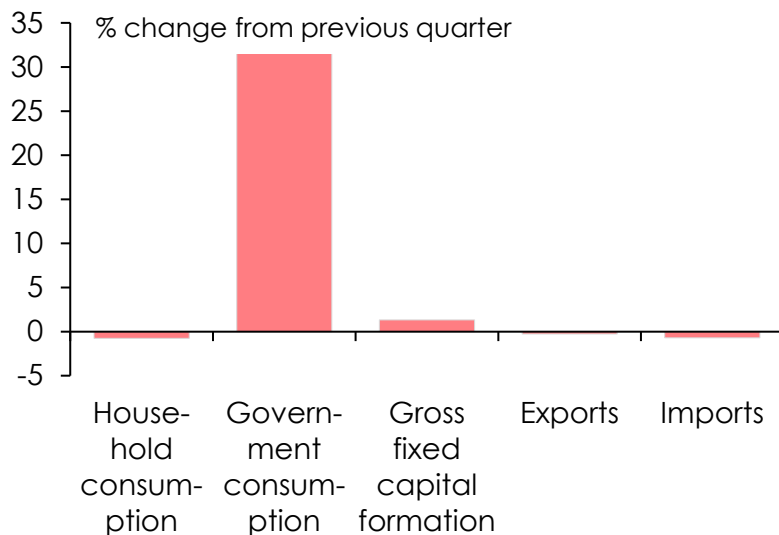
Q2 GDP deflators



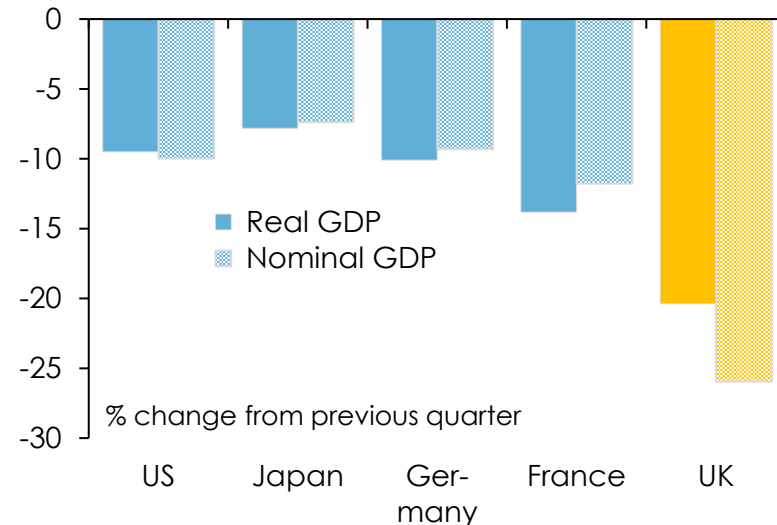
Q2 gov't consumption deflators



UK Q2 expenditure deflators



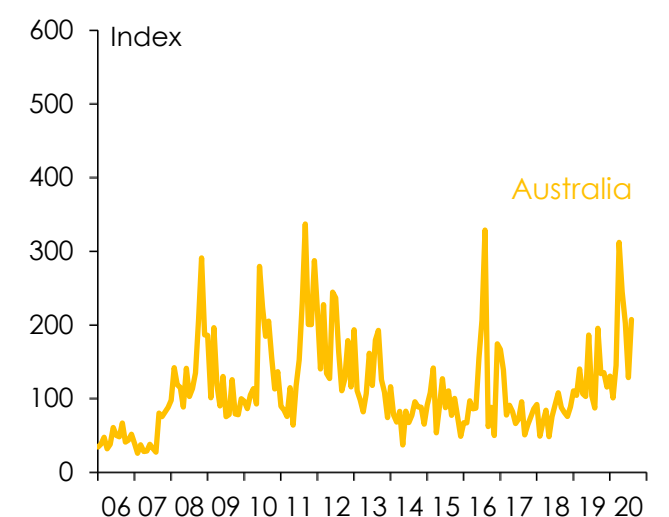
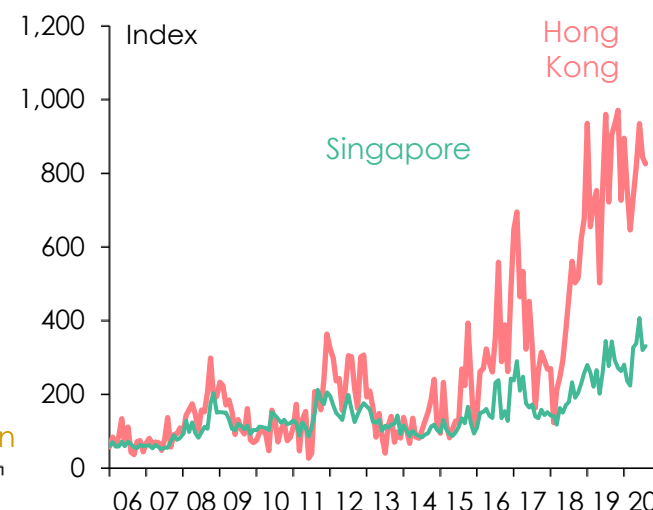
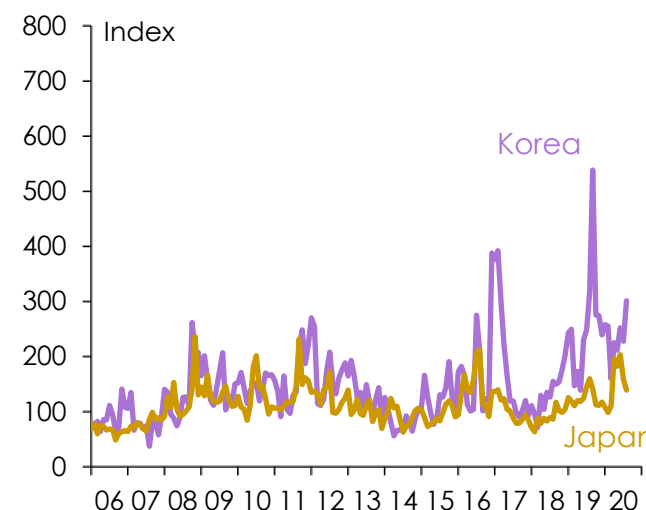
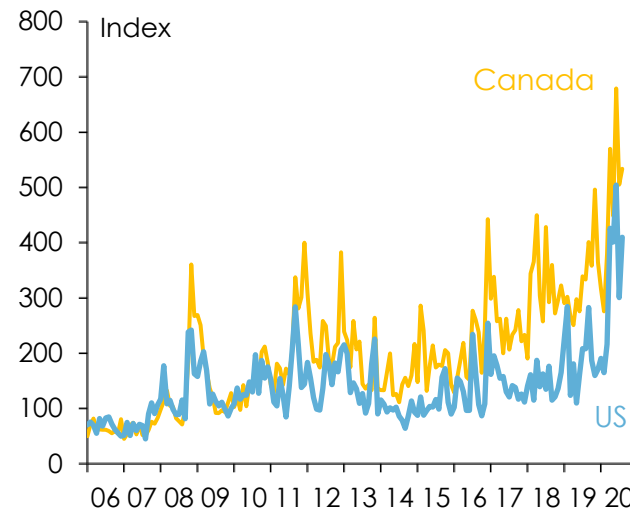
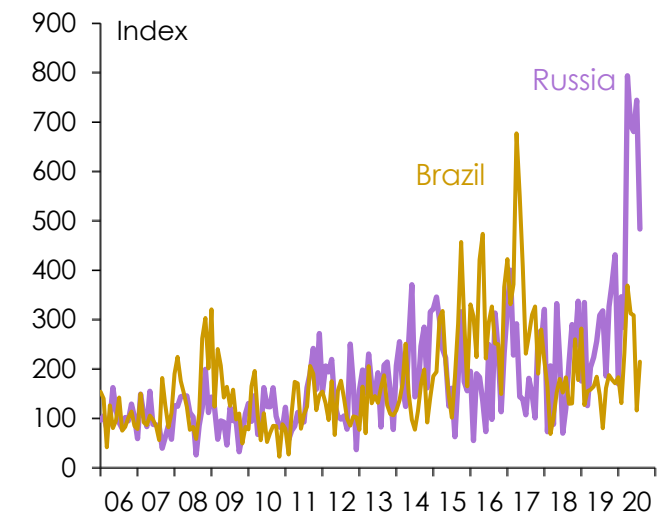
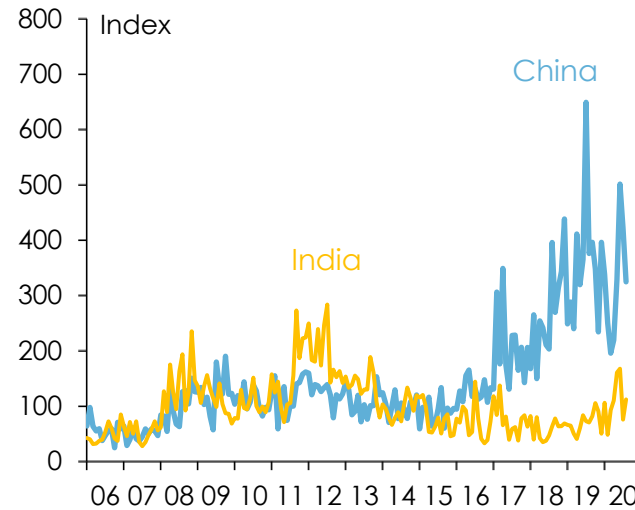
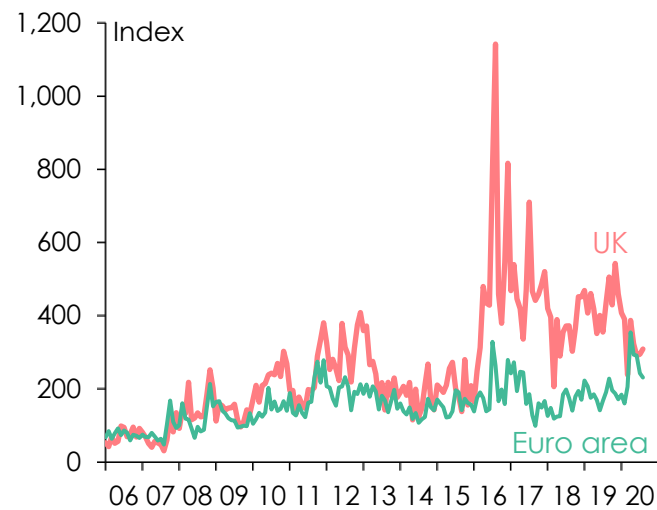
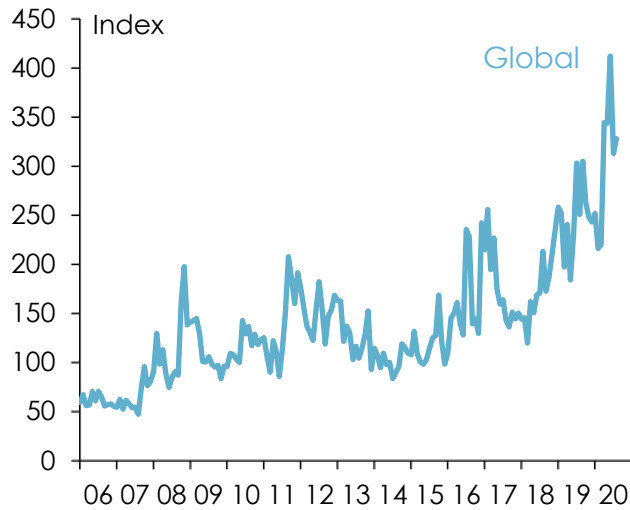
Q2 real and nominal GDP



- ❑ According to the UK's Office for National Statistics, the UK's real GDP fell by 20.4% in Q2, but nominal GDP fell by 25.9% - implying that prices (as measured by the implicit price deflator of GDP) rose by 6.2% in Q2
- ❑ This is totally inconsistent with all other measures of UK inflation in Q2 – for example the CPI was flat, producer output prices fell 0.3% and producer input prices fell 7.3%
- ❑ Closer inspection of the Q2 national accounts shows that the main contributor to the rise in the GDP deflator was a 33% increase in the deflator for government consumption
- ❑ ONS commentary on the Q2 estimates implies that this was a by-product of the way they accounted for school closures, cancellation of elective surgery, etc, due to Covid-19
- ❑ However none of the other major economies which have so far published Q2 national accounts have reported anything similar
- ❑ It could be that real GDP fell by (even) more in Q2 than estimated, or nominal GDP by less

Uncertainty about economic policy increased in the US, Canada, Korea, India & Australia in July but declined in China, Japan and Europe

Economic policy uncertainty indices

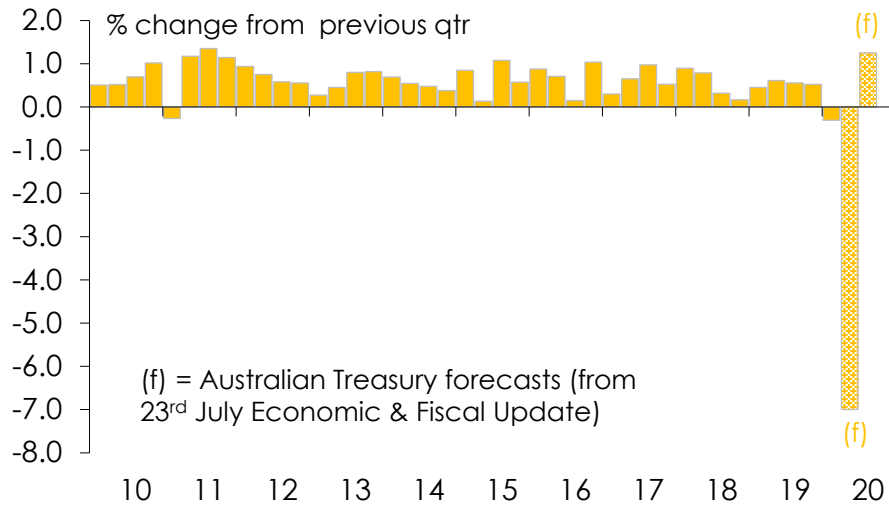


Note: The Economic Policy Uncertainty Index is derived from a count of newspaper articles containing the words “uncertain” or “uncertainty”, “economy” or “economic”, and policy-relevant terms pertaining to regulation, monetary or fiscal policy, central bank, taxation, tariffs, deficit, budget, etc. The index for the euro area is a GDP-weighted average of indices for Germany, France, Italy, Spain, the Netherlands and Ireland constructed by Corinna. Latest data are for June 2020.
Source: PolicyUncertainty.com; Scott Banker, Nick Bloom & Steven Davis, ‘Measuring Economic Policy Uncertainty’, *Quarterly Journal of Economics*, 131, no. 4 (November 2016), pp. 1593-1636.

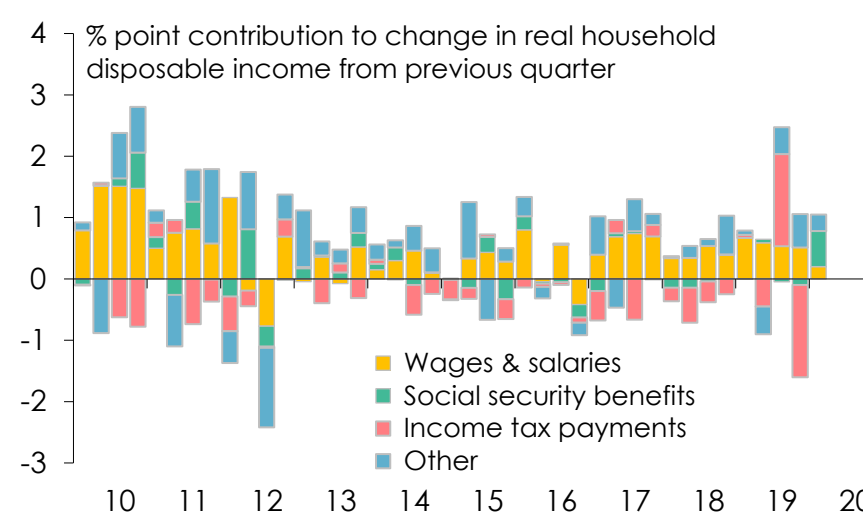
Australia

In Australia GDP declined in Q1 for the first time in 9 years, reflecting the impact of bushfires and 'social distancing' restrictions on private demand

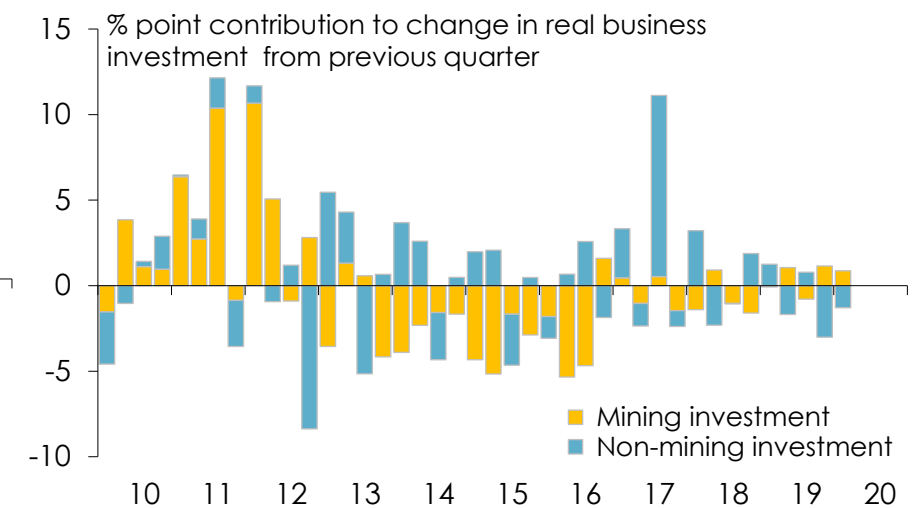
Quarterly change in real GDP



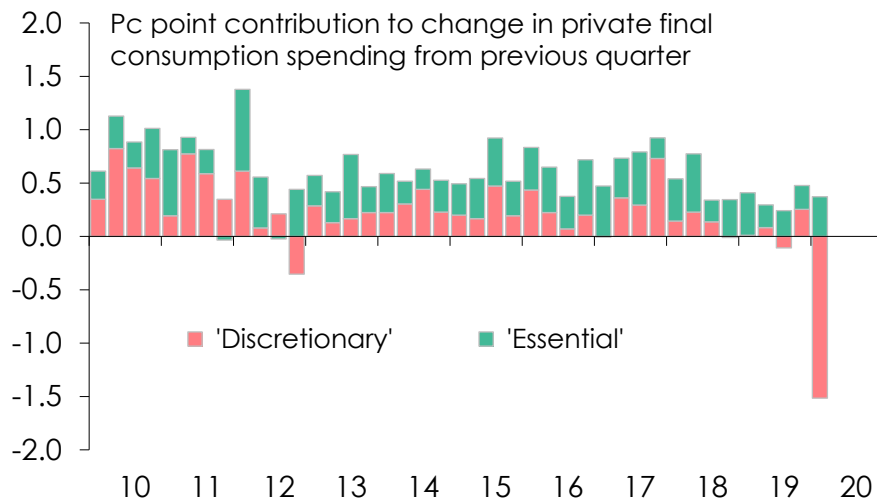
Household disposable income



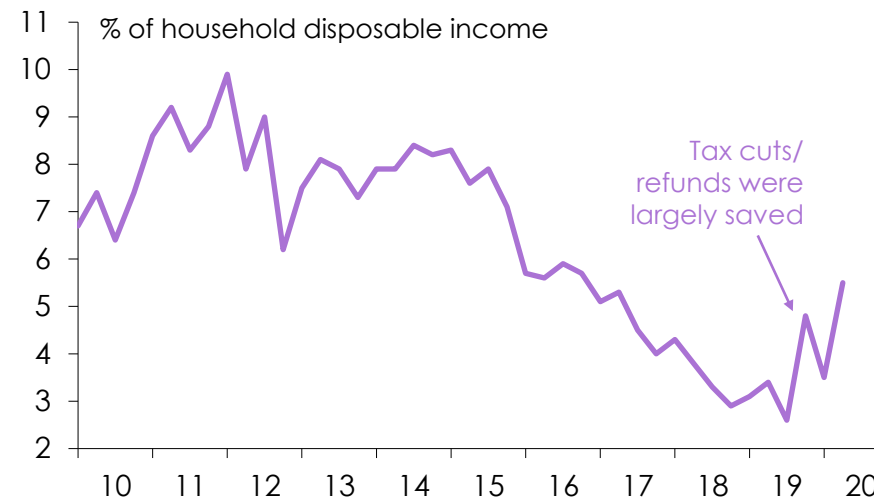
Business investment expenditure



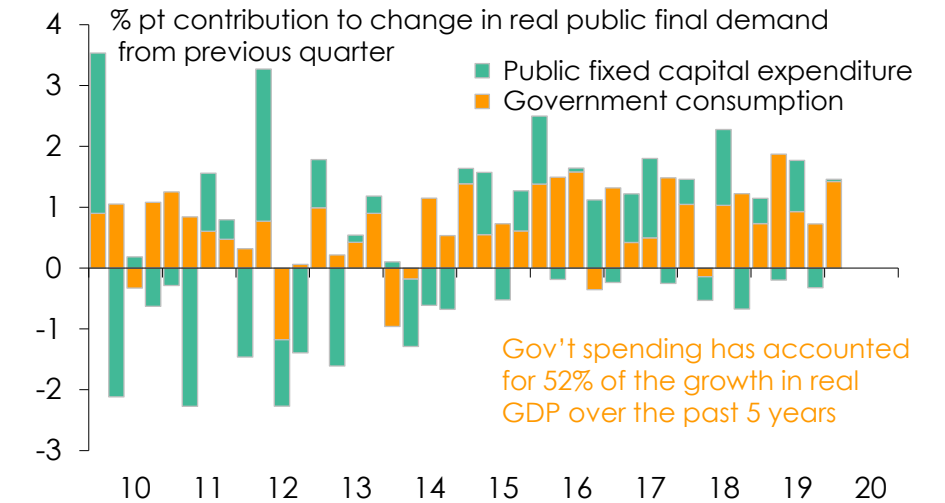
Household consumption expenditure



Household saving rate



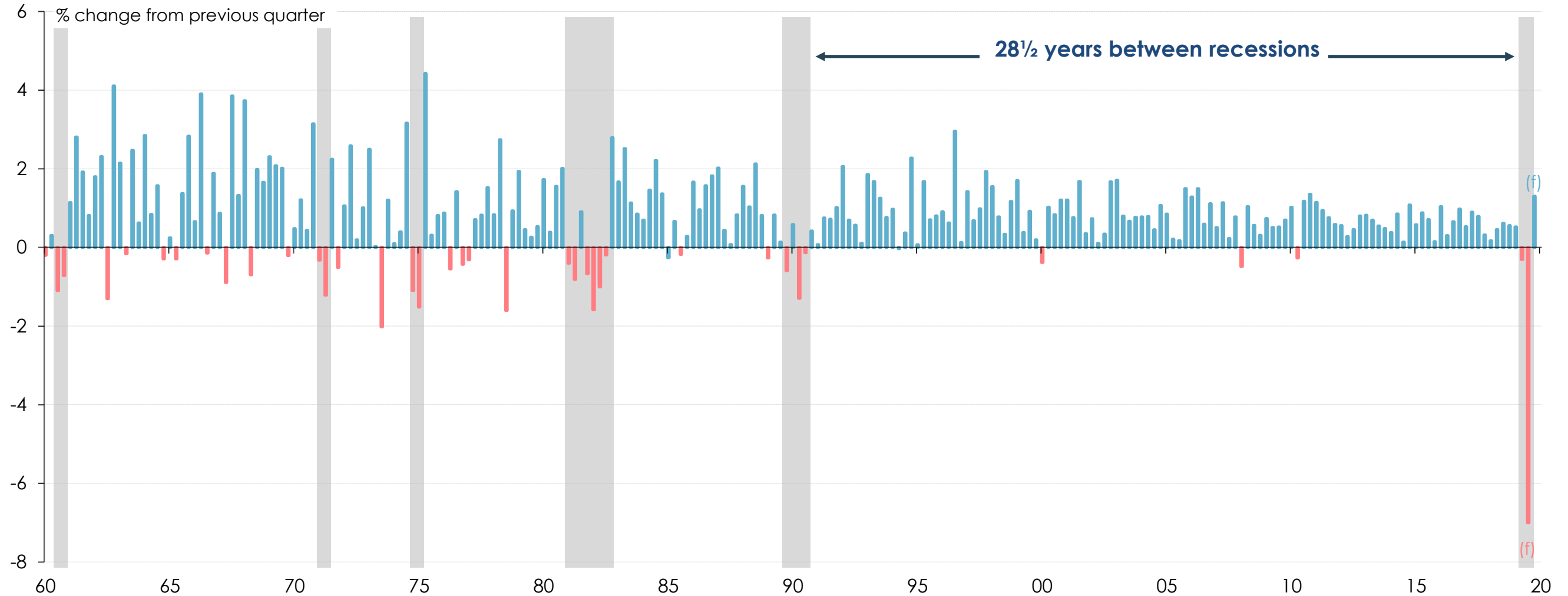
Public expenditure



Note: 'Essential' household consumption expenditure comprises food; rent & other dwelling services; electricity, gas & other fuel; operation of vehicles; rail, bus & taxi services; communications; health; education; and insurance & other financial services. Components of household disposable income are deflated by the implicit price deflator of household final consumption expenditure. Source: ABS; Australian Treasury. June quarter national accounts released on 2nd September.

Australia's record-breaking run of almost 30 years without a recession has come to an end

Quarterly growth in Australian real GDP, 1960-2020



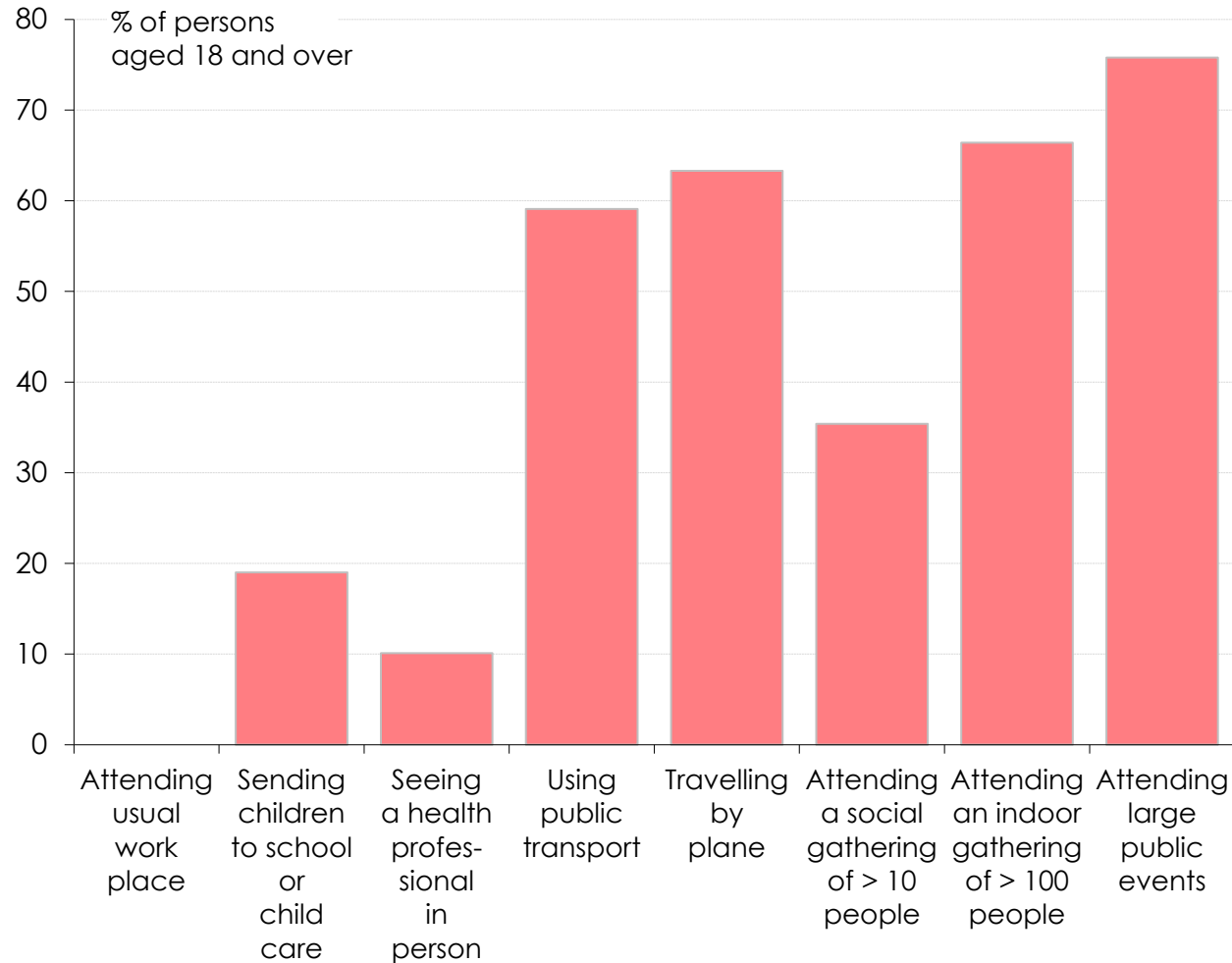
Note: Shaded areas denote recessions. (f) denotes Australian Treasury forecasts (for more detail see slides 55-56).
Sources: ABS; Australian Treasury, *Economic and Fiscal Update*, 23rd July 2020.

The path out of the current downturn will be more gradual than the path into it was

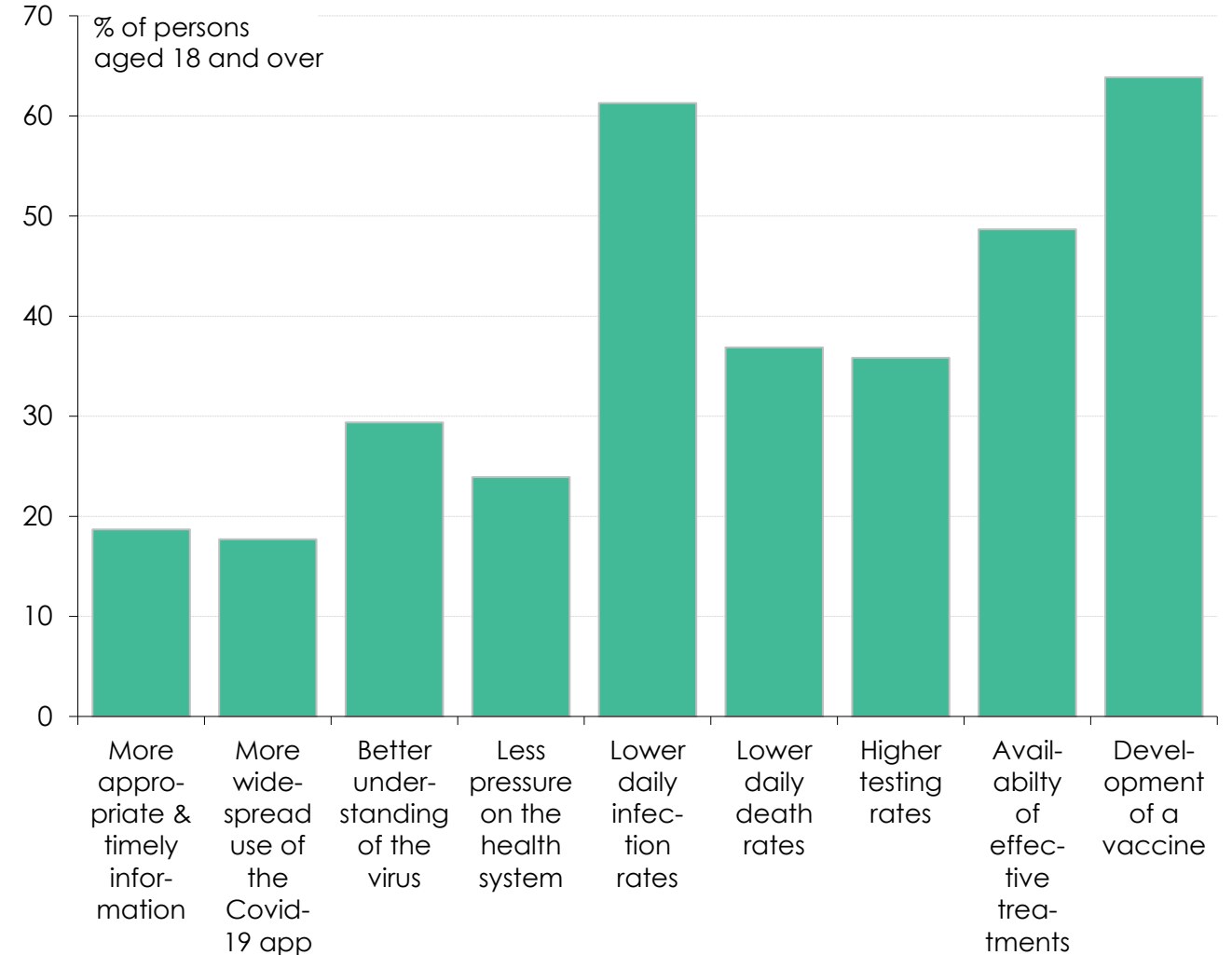
- ❑ **‘Social distancing’ requirements will be relaxed gradually rather than ‘all at once’ – and (as seen in Victoria) restrictions can be re-imposed in response to new outbreaks)**
 - new health and safety regulations will likely limit the number of employees and customers who can be ‘on premises’ (which may make it uneconomic for some businesses to re-open until restrictions are relaxed)
 - and many people may remain wary of exercising all of their newly-regained ‘freedoms’ (see next slide)
- ❑ **At least some businesses won’t have survived the shutdown period, and many of those which do will not immediately return to pre-outbreak levels of employment**
 - so employment will remain below pre-outbreak levels for some time rather than ‘snapping back’ quickly
 - and those returning to work may work reduced hours (compared with pre-outbreak) for some time
- ❑ **The recovery in household spending is likely to be gradual, rather than rapid**
 - if the recovery in employment is only gradual, so too will be the recovery in household disposable income
 - most households will have run down discretionary savings to at least some extent, as well as having their superannuation balances depleted by market movements and/or withdrawals – and so will likely want to rebuild savings
 - households with mortgages who have deferred repayments will face higher or longer mortgage repayments, constraining their spending capacity to some extent
 - household spending may also be affected by ‘negative wealth effects’ from lower property prices
- ❑ **Despite the recent extensions to JobKeeper and Jobseeker, on current policy settings there will still be an effective tightening of fiscal policy at the beginning of each of the December and March quarters**
- ❑ **International borders (except with NZ) will likely remain closed until a vaccine is widely available – which is in turn likely to be at least 12 months away**
 - implying that there will be no near-term recovery in international tourism or international education
- ❑ **Businesses are likely to be very hesitant about investment spending for an extended period (with some exceptions)**

Australians seem likely to continue to be wary of travel and large gatherings, at least until a vaccine for Covid-19 is developed

Proportion of adults feeling 'uncomfortable' with selected activities as restrictions are eased



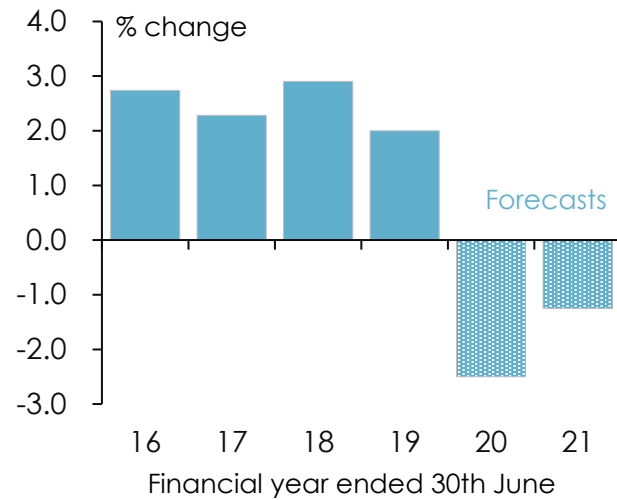
Actions that would improve people's comfort with activities as restrictions are eased



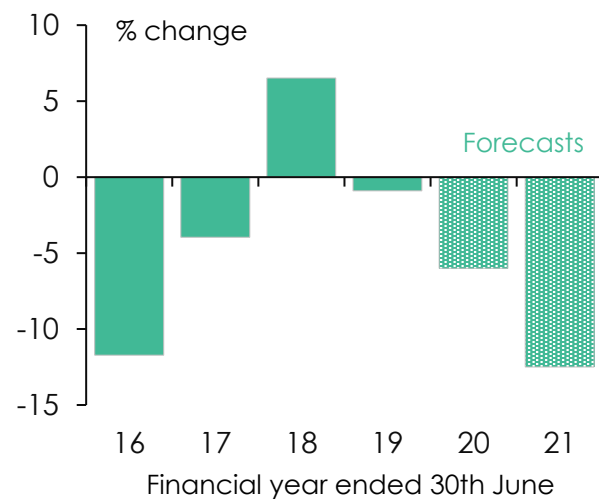
Source: ABS, Household Impacts of Covid-19 Survey, 26th-29th May (published 15th June).

Treasury's most recent forecasts, published last month, assumed a 6-week 'stage 3' shutdown in Victoria and no other 'second waves' ...

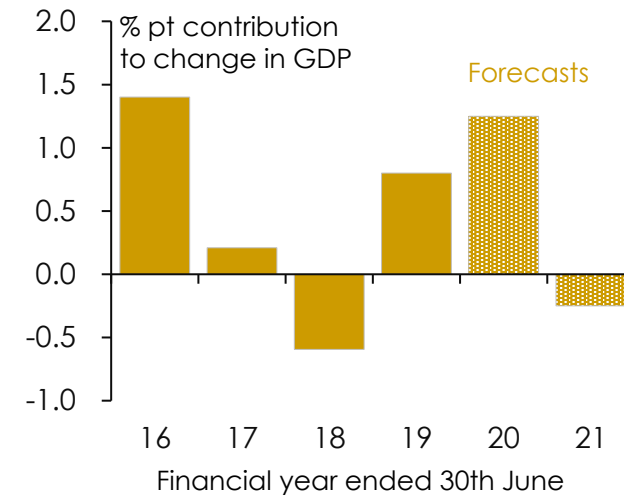
Household consumption



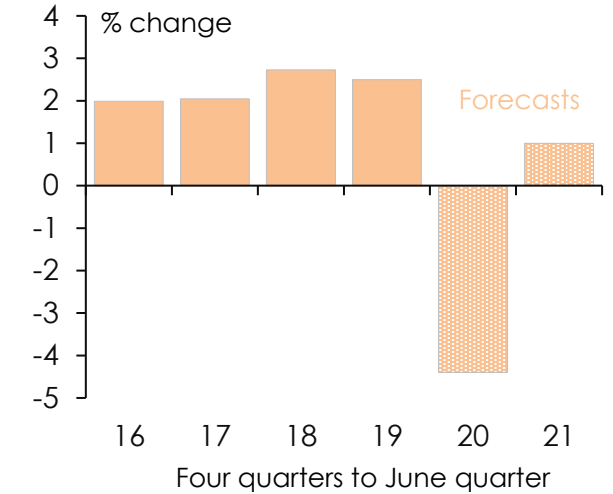
Business investment



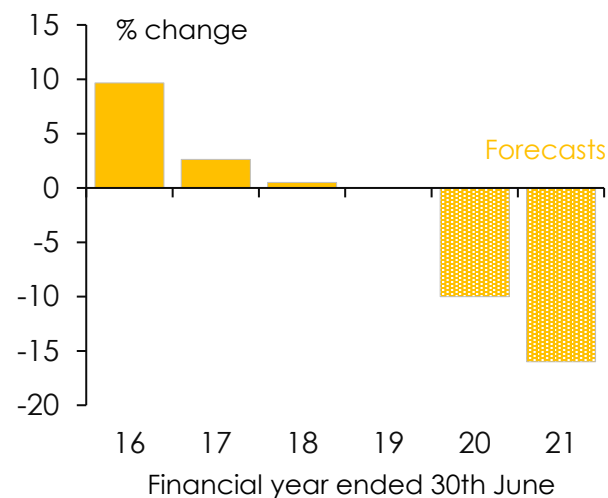
Net exports



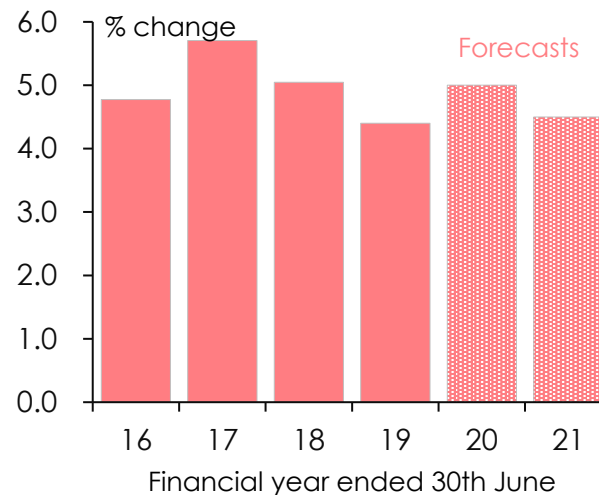
Employment



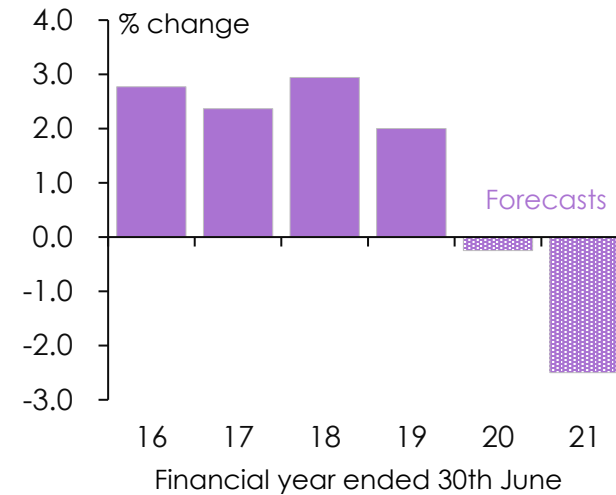
Dwelling investment



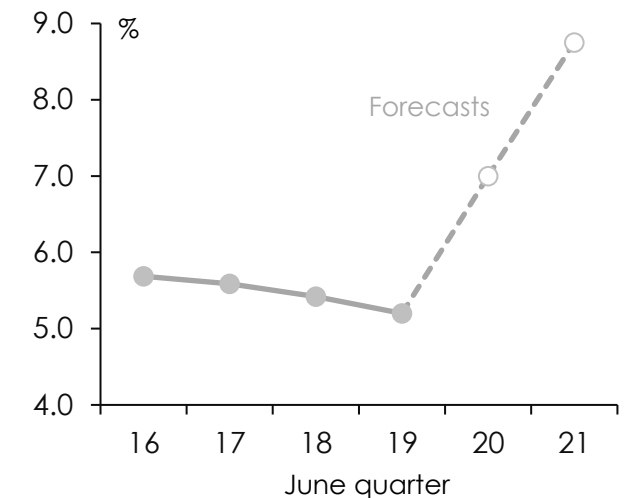
Public spending



GDP



Unemployment rate



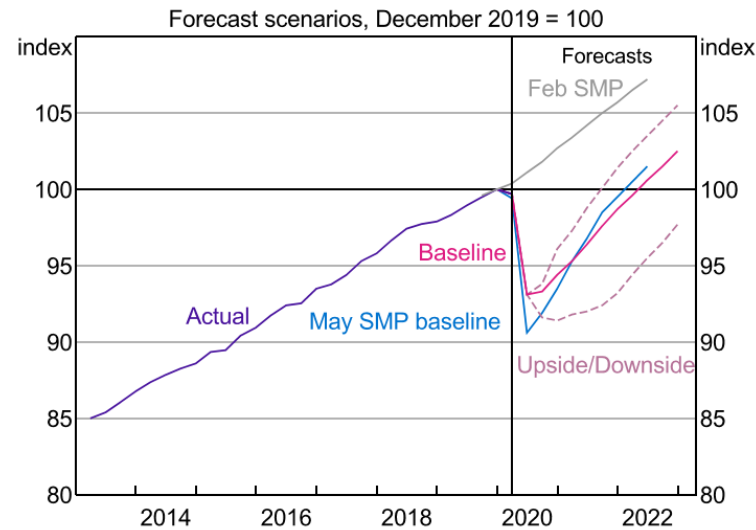
Note: Business investment and public spending exclude transactions in second-hand assets. Employment growth is June quarter on June quarter; unemployment rate is June quarter. Assumptions include current restrictions in Melbourne ending after 6 weeks, no further restrictions imposed, and other restrictions being eased in line with the '3-step process' outlined by the Government on 8th May. Net overseas migration assumed to fall from 232K in 2018-19 to 154K in 2019-20 and 31K in 2020-21; international travel bans lifted from 1st January 2021; the iron ore price falling to US\$55/t FoB by end-2020; metallurgical and thermal coal prices remaining at US\$110/t and \$54/t FoB respectively; and the A\$ remaining at around US69¢. Sources: ABS; Australian Treasury, *Economic and Fiscal Update*, 23rd July 2020.

.. but those forecasts will need to be revised downwards as a result of the harsher, longer, 'lockdown' in Victoria

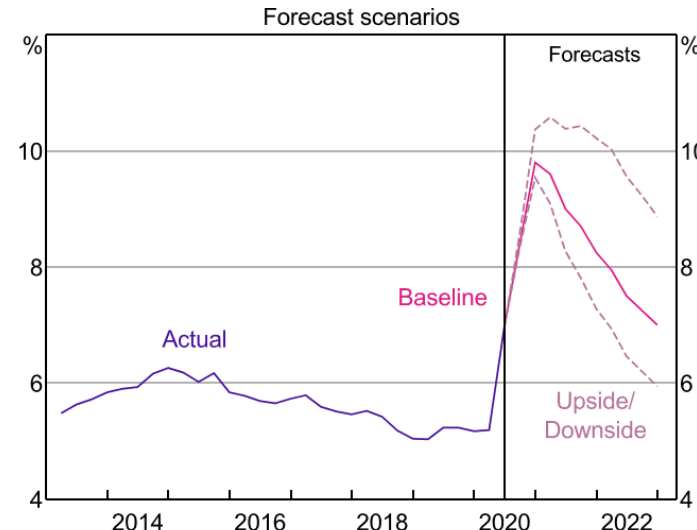
- ❑ In the Federal Government's *July Economic & Fiscal Update*, Treasury had estimated that real GDP had contracted by 7% in the June quarter, and forecast that it would increase by 1½% in the September quarter
 - the forecast explicitly assumed that Victoria's 'stage 3' lockdown restrictions were "not extended further", but rather would be eased from mid-September onwards, with the borders with NSW and SA opening on 19th August
 - Treasury also suggested that "if similar large scale restrictions were reimposed across Australia, this would ... cost the economy at least \$2bn per week"
 - for context, Treasury's forecasts implied that September quarter real GDP would be equivalent to about \$35¾bn per week
- ❑ This week, the Prime Minister suggested that, based on "preliminary estimates from Treasury", the new 'stage 4' restrictions in Melbourne and Mitchell Shire, combined with the extension of 'stage 3' restrictions to the rest of Victoria, would shrink real GDP by "between \$7bn and \$9bn" in the September quarter
 - these estimates appear to include (not unreasonably) additional allowance for 'spill-over effects' on other states due to supply-chain disruptions and an adverse impact on consumer and business confidence
- ❑ If correct, these Treasury estimates imply that (all else being equal), rather than increasing by 1½% in the September quarter, real GDP is now expected to decline by between 0.1% and 0.5% (following the 0.3% decline in the March quarter and an expected 7% decline in the June quarter)
 - this would mean Australia's recession extended into a third quarter, with a peak-to-trough decline of 7¼-7¾%
- ❑ It could also mean that growth in the December quarter (for which Treasury did not provide an estimate in the *July Update*) could be stronger than previously expected, based on a mechanical 'bounce-back' in Victoria
 - provided that isn't overwhelmed by the tightening of fiscal policy which will (on current policy settings) occur at the beginning of the December quarter (see slide 94)
- ❑ Treasury has also reportedly raised its forecast for the December quarter peak in the unemployment rate to 10% (from 9¼% in July), with the 'effective' rate now expected to peak in the 'high 13s'
 - despite an easing of eligibility criteria in response to the Victorian 'lockdown'

In this week's quarterly Monetary Policy Statement, the RBA slightly lowered its sights on the economic recovery from the pandemic

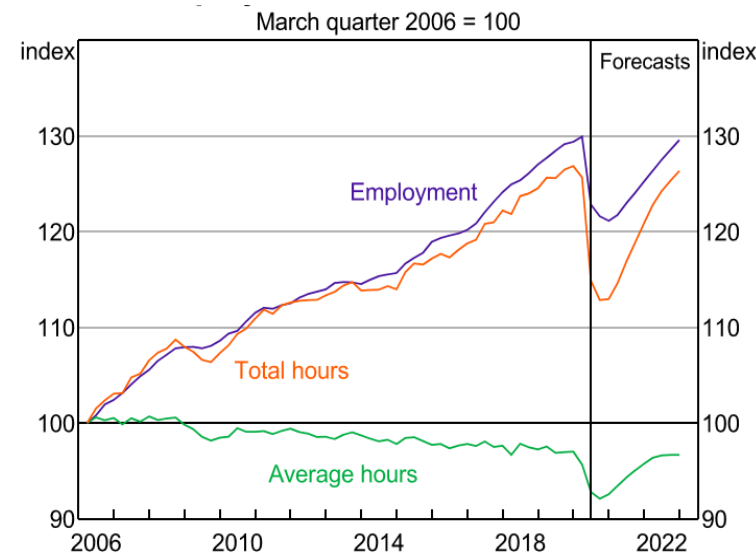
GDP



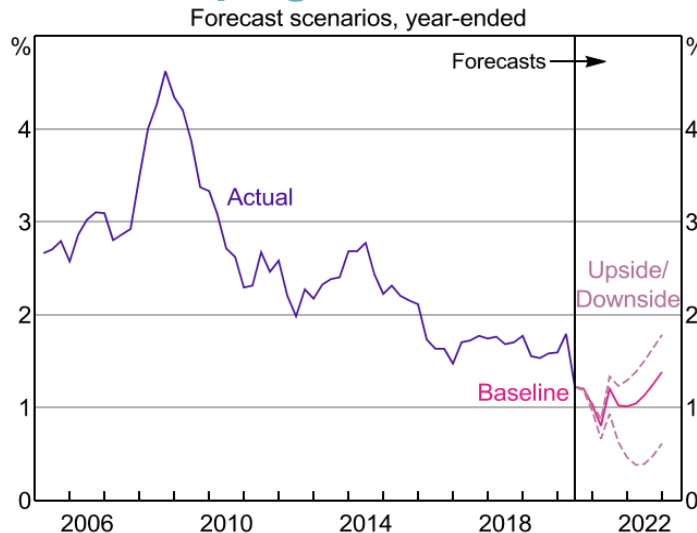
Unemployment



Employment & hours worked



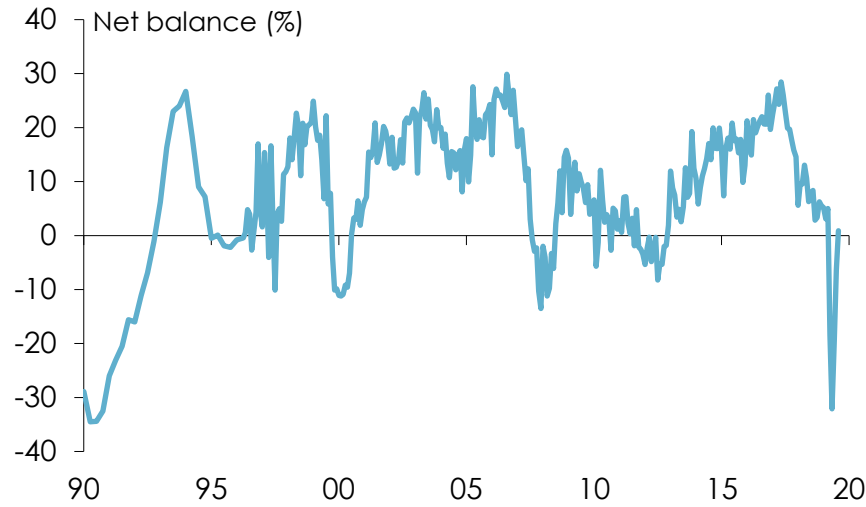
'Underlying' inflation



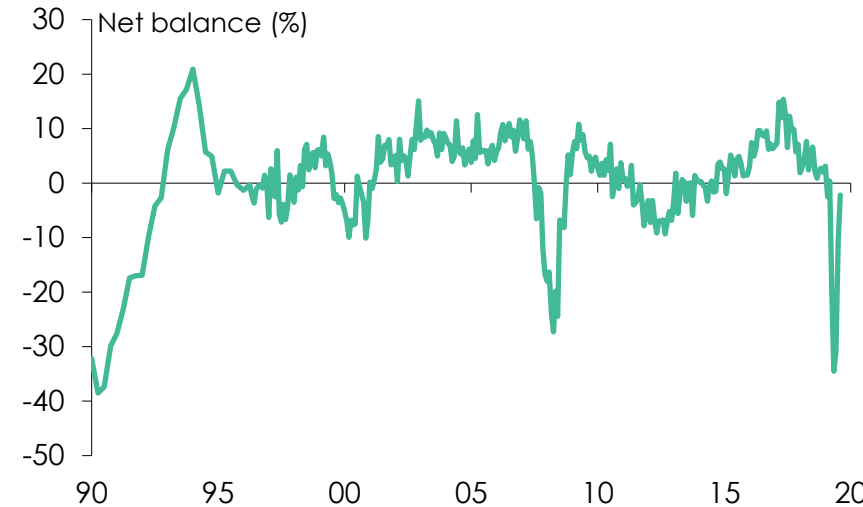
- ❑ The short-run economic effects of the initial 'lockdown' turned out to be less than the RBA had assumed in May – but it thinks the “on-going effects of weak demand are likely to be larger”, with additional headwinds stemming from the new Victorian 'lockdown'
- ❑ The RBA's latest 'baseline' scenario envisages real GDP declining by 6% over the year to Q4 (4% for 2020 as a whole) and rising by 5% (previously 6%) over the year to Q4 2021 (2% for the year as a whole), with 'official' unemployment peaking at 10% in Q4 (rather than Q2 as previously) and declining slowly to 8½% by Q4 2021 (previously 7½%) and to 7% by Q4 2022
- ❑ In an 'upside scenario' where the virus is contained more quickly and domestic restrictions lifted sooner, the unemployment rate would decline more quickly during 2021 and 2022, reaching 6% by Q4 2022
- ❑ But in a 'downside' scenario entailing periodic regional outbreaks of the virus and 'rolling lockdowns', with a widespread resurgence of infections globally, economic recovery would be delayed, unemployment would peak at ~ 11% and still be around 9% by Q4 2022
- ❑ In the RBA's 'baseline' scenario underlying inflation picks up gradually from 1% over the year to Q4 2020, to 1½% by Q4 2022 – but still remains below the target band, even in the 'upside' scenario

All of the components of the NAB monthly survey improved a bit further in July, after strong gains from a very low base in June

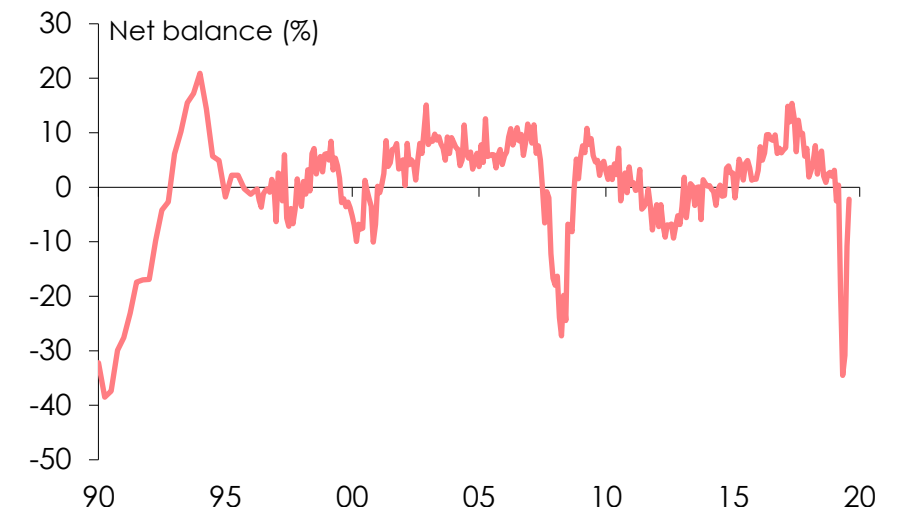
Trading conditions



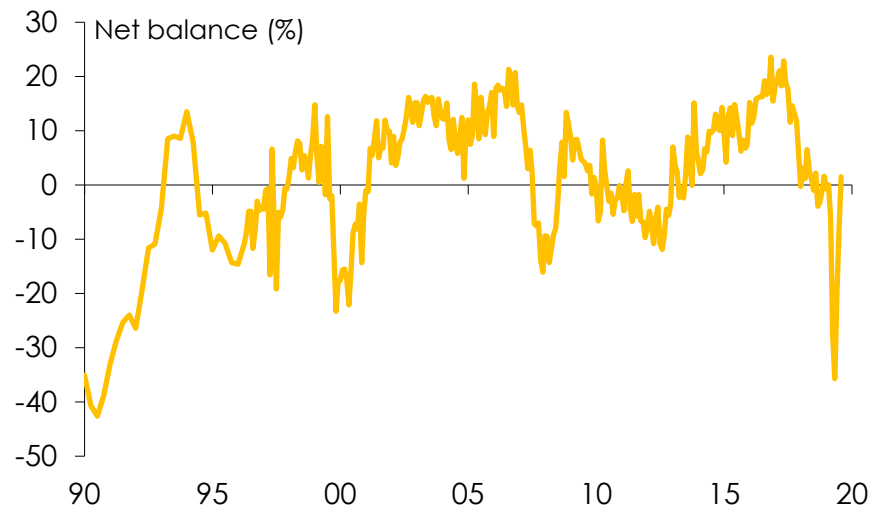
Forward orders



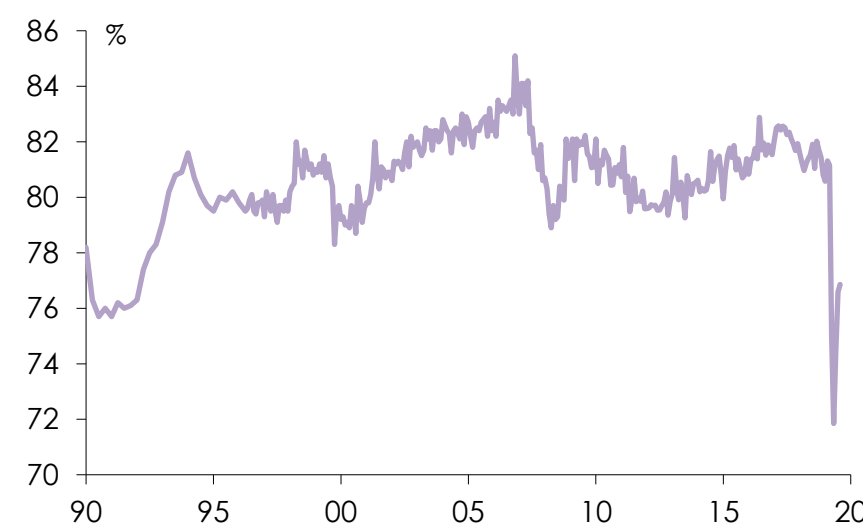
Employee hiring intentions



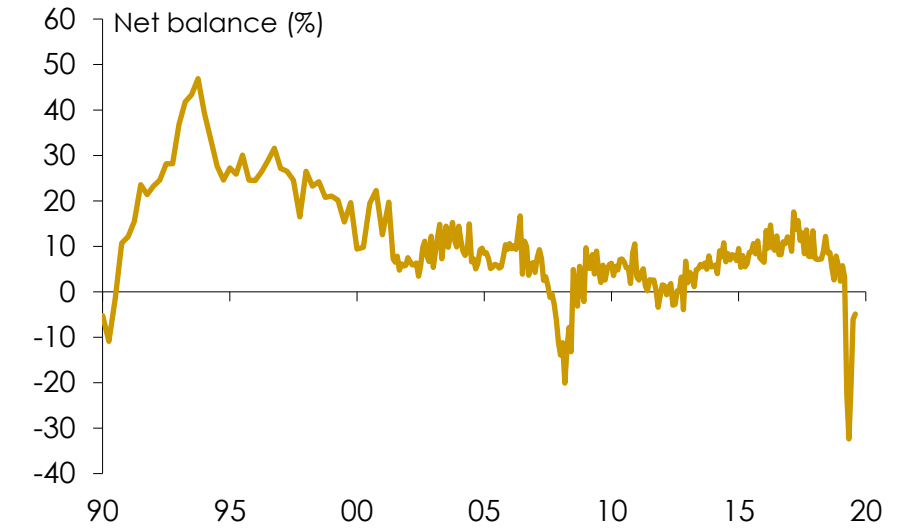
Profitability



Capacity utilization



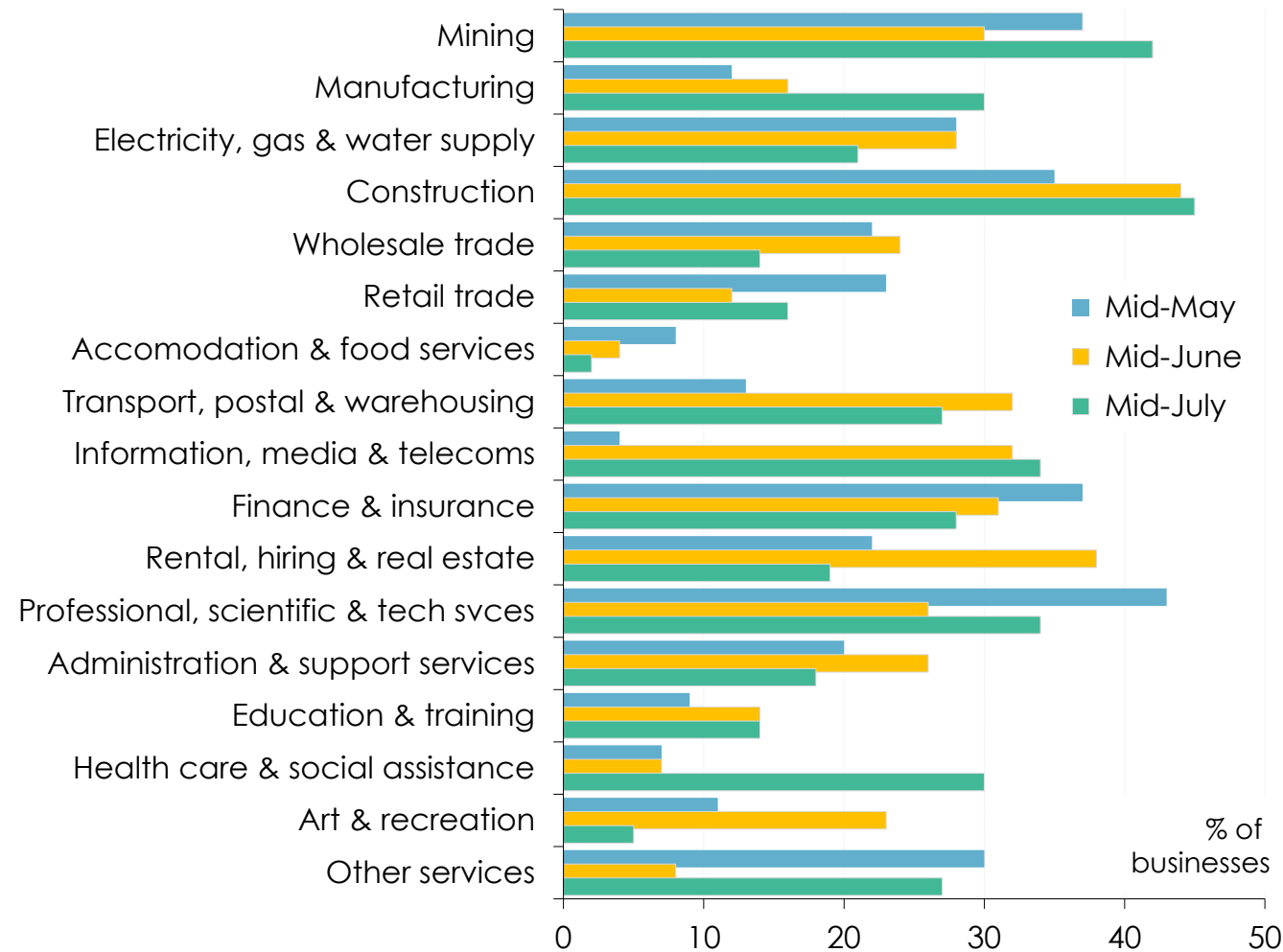
Capital expenditure intentions



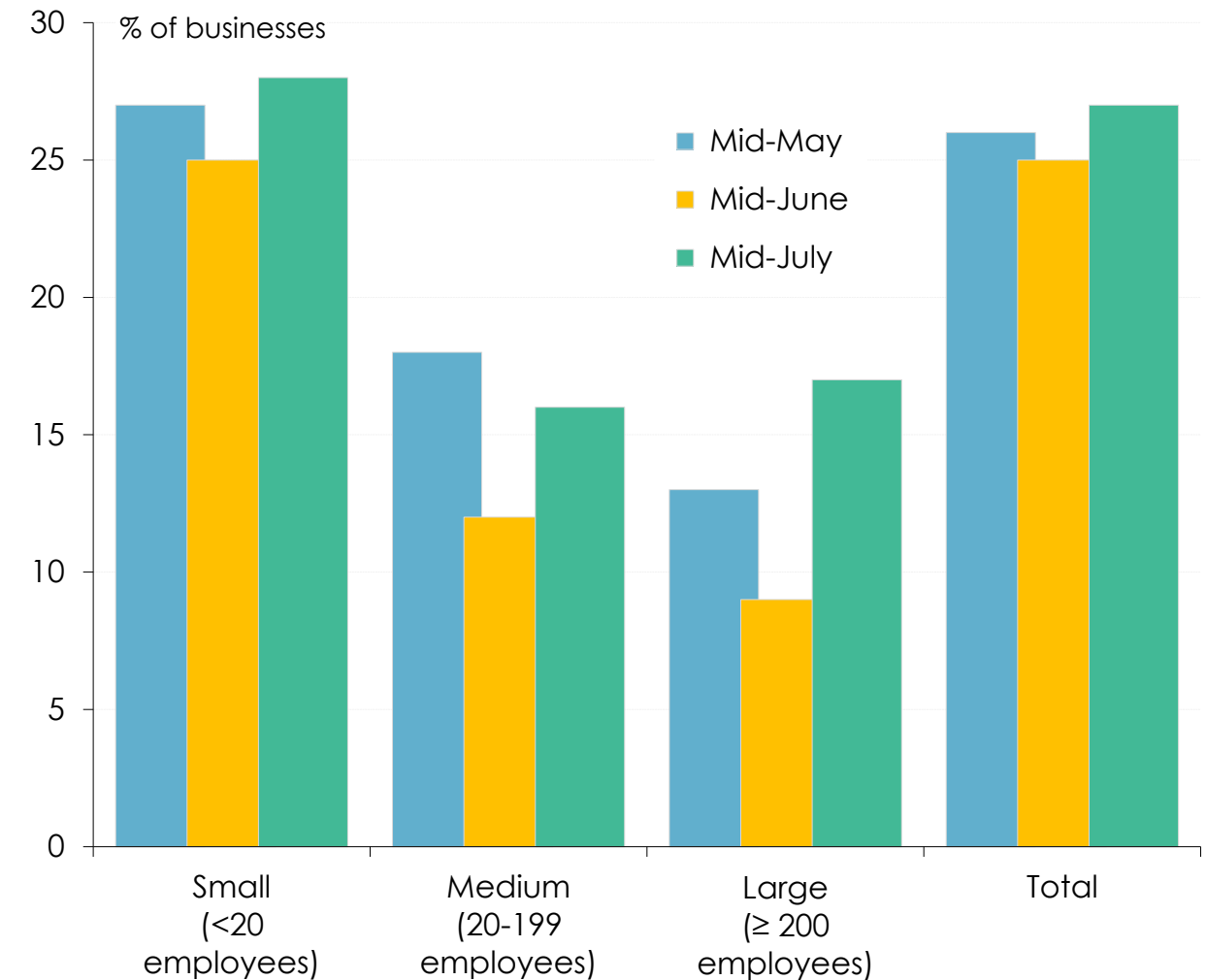
Note: Quarterly data up to March 1987 (May 2002 for capex intentions), monthly thereafter (latest data July 2020 – note that the July survey was conducted before the announcement of 'stage 4' restrictions in Victoria. See also chart of business confidence on slide 75). Source: National Australia Bank (August survey results will be released on 8th September).

Still only about one-quarter of businesses are operating 'as normal' – with fewer large business operating as 'normal' than small ones

Proportion of 'trading businesses' which are operating 'as normal' – by industry



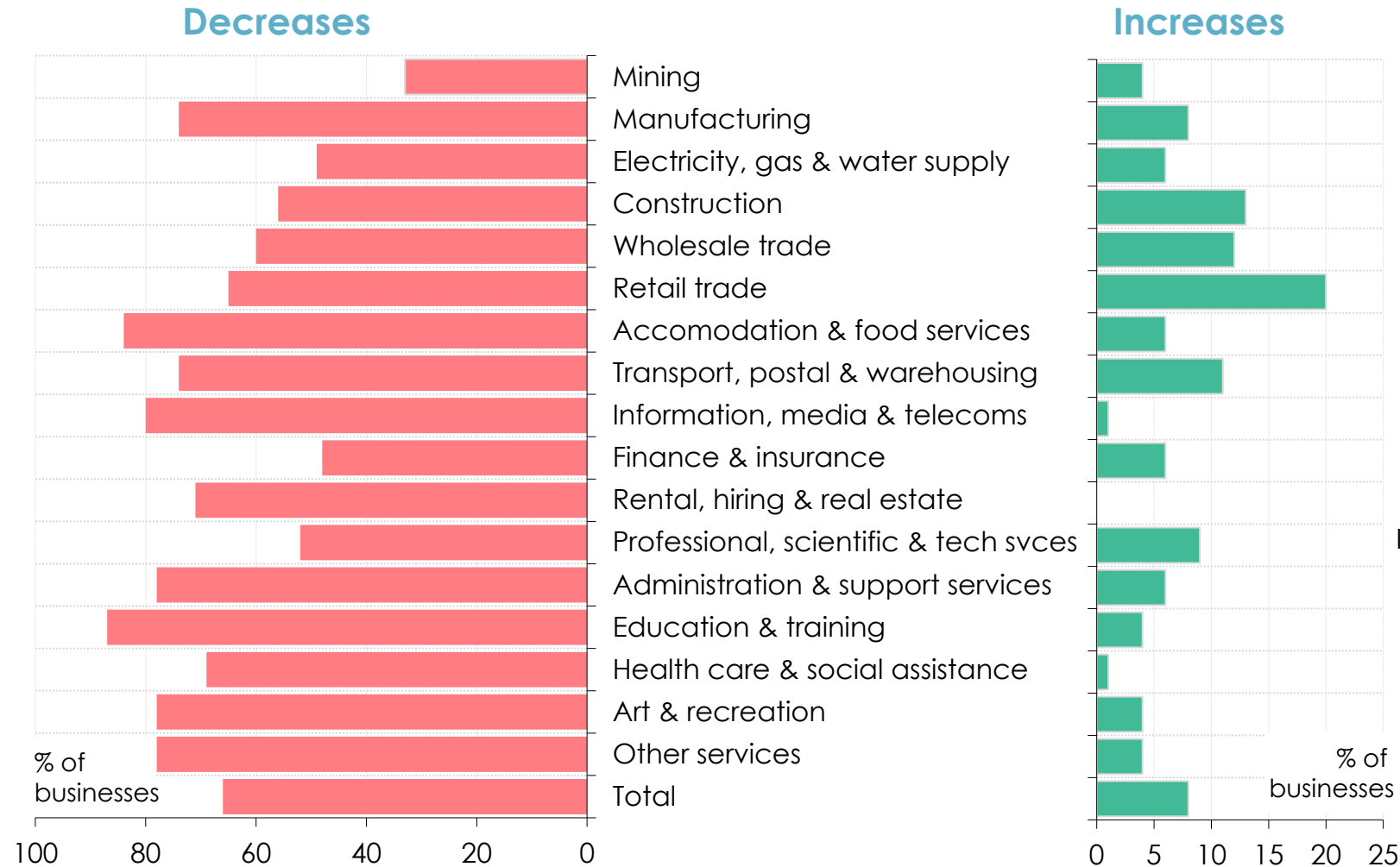
Proportion of 'trading businesses' which are operating 'as normal' – by size



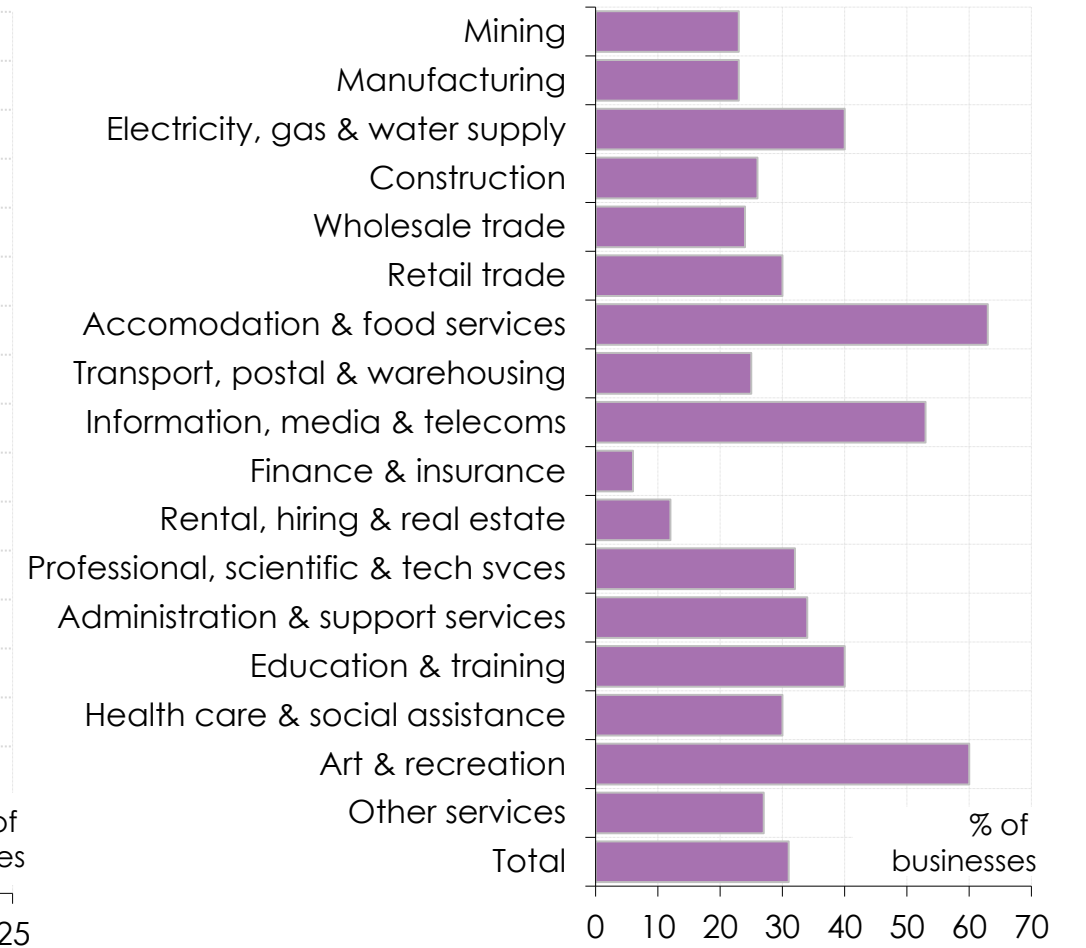
Source: ABS Business Indicators, Business Impacts of COVID-19, May 2020 (based on survey conducted between 13th and 22nd May), June 2020 (based on survey conducted between 10th and 17th June), and July (survey conducted between 15th and 23rd July).

Two-thirds of all businesses reported lower revenue in June compared with June last year – and 30% of them reported declines of more than 50%

Proportion of businesses reporting decreases or increases in revenue in June 2020 cf. June last year, by industry



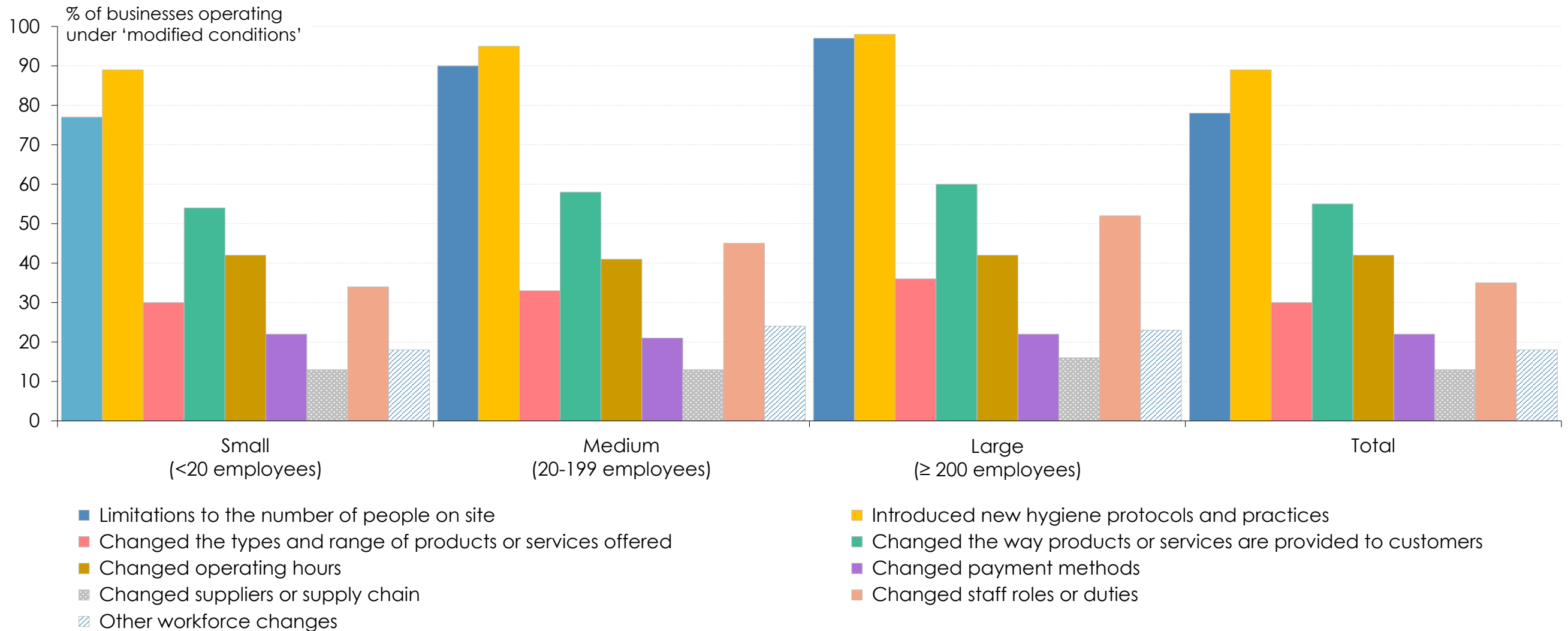
Businesses with revenue decreases of 50% or more in June cf. June last year, as a pc of businesses with lower revenue



Source: ABS Business Indicators, Business Impacts of COVID-19, June 2020 (based on survey conducted between 10th and 17th June).

The biggest changes made by businesses have been limits on the no. of people on site, hygiene protocols, product delivery methods and staff roles

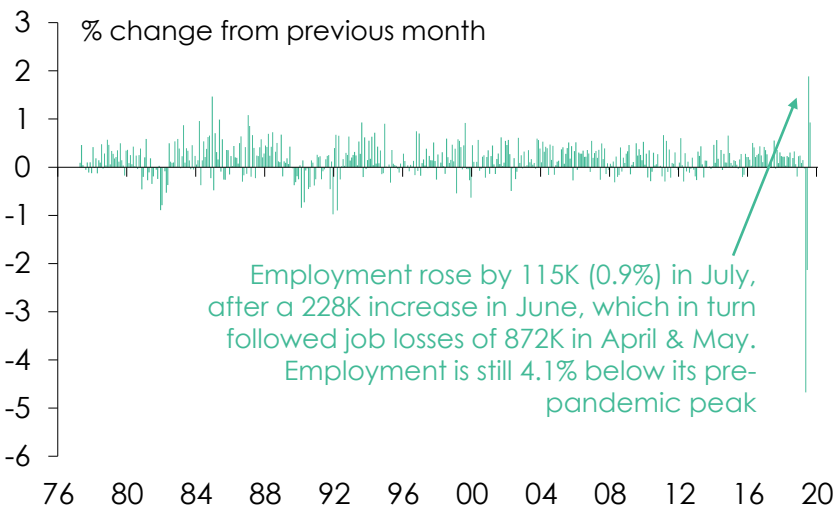
Changes made to business operations, by size of business



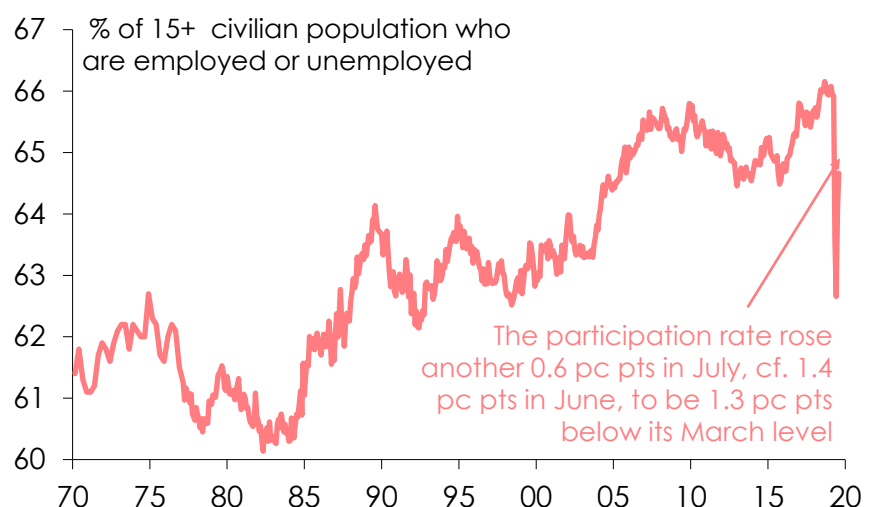
Source: ABS Business Indicators, Business Impacts of COVID-19, June 2020 (based on survey conducted between 10th and 17th June).

343,100 (39%) of those who lost their jobs in March-April are now back at work, while another 86,000 started looking for work

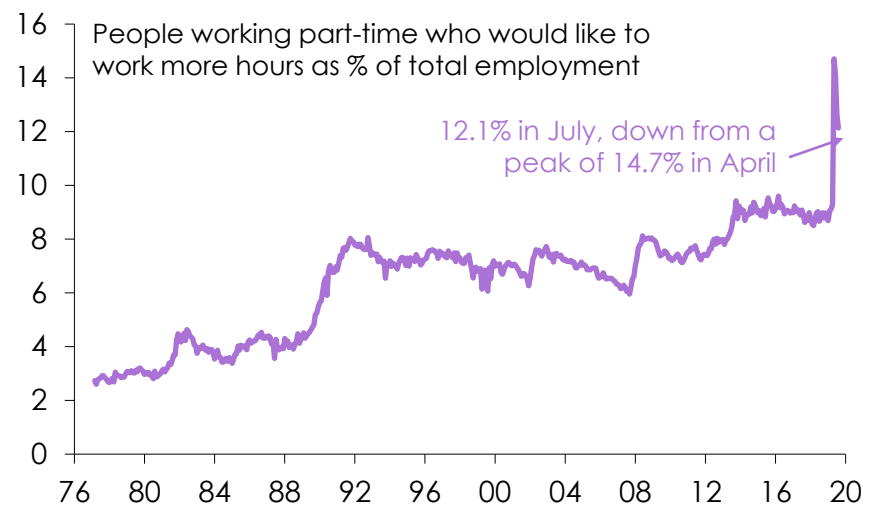
Employment



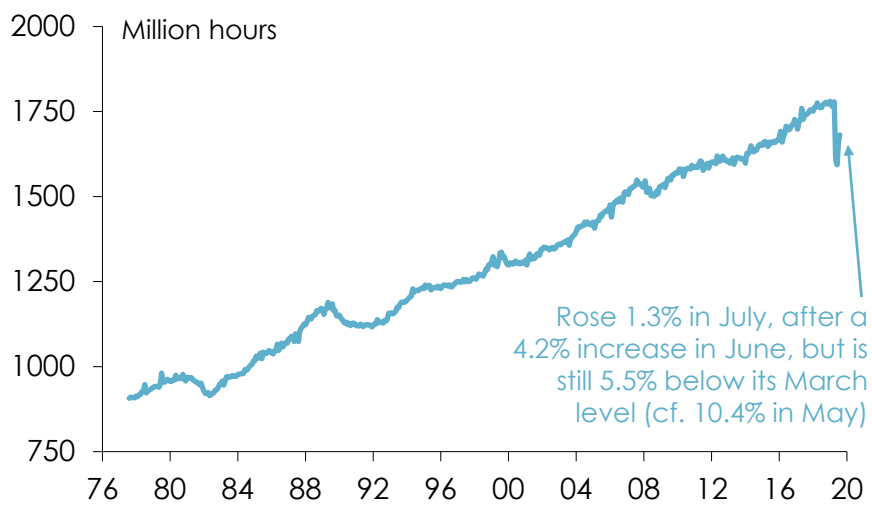
Labour force participation rate



Under-employment ratio



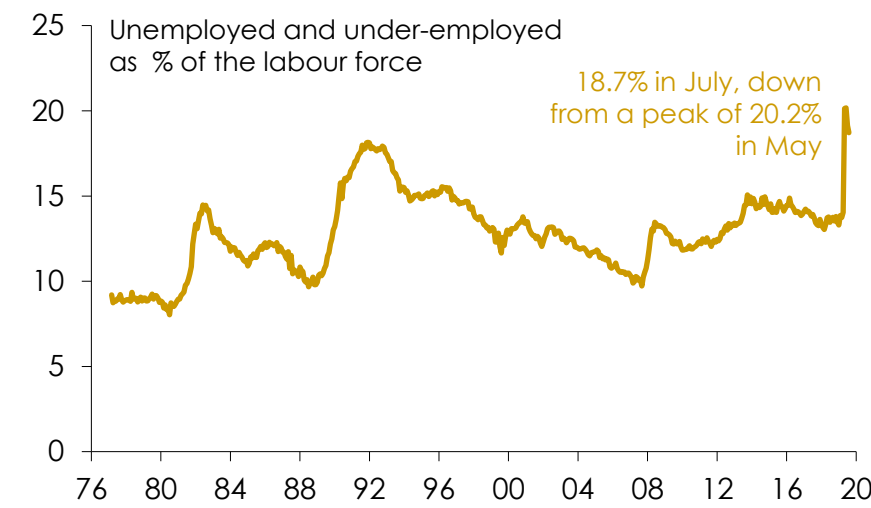
Total hours worked



Unemployment rate



'Under-utilization' rate



Note: The ABS classifies people on JobKeeper who worked zero hours in the survey week as 'employed'. Had it not done so, the unemployment rate in May would have been 9.5% (down from 11.7% in April). The 'under-employment ratio' is the percentage of employed persons who are working fewer hours than they are willing and able to work. The 'under-utilization rate' is the proportion of the labour force who are unemployed or underemployed. Source: ABS. August data will be released on 17th September.

The July unemployment rate would have been 11.3% if people working zero hours and those who dropped out of the labour force were counted

Alternative measures of unemployment

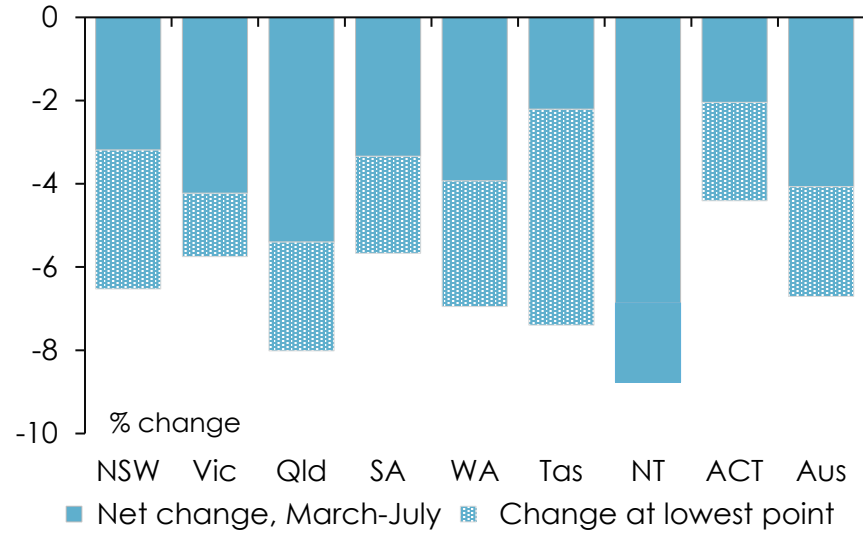


Source: ABS; Corinna.

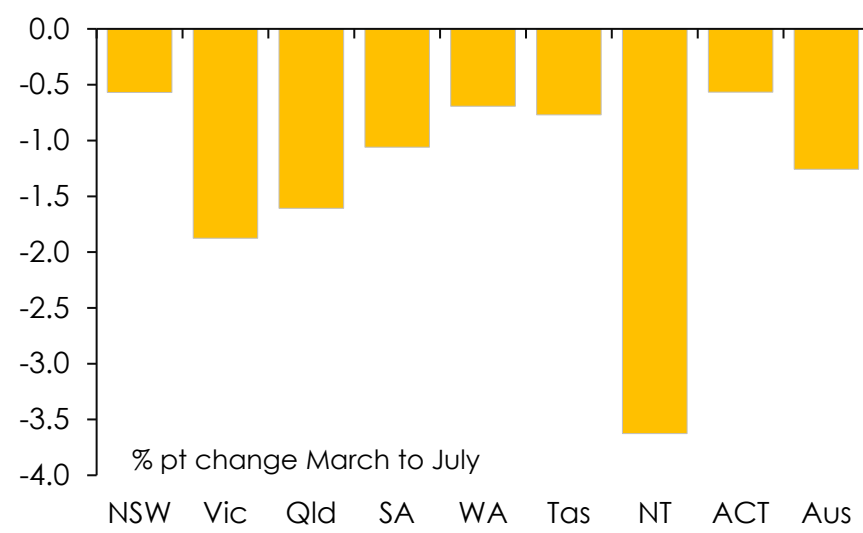
- ❑ The Government's JobKeeper program pays eligible employers a subsidy of \$1500 per fortnight for each eligible employee kept on the payroll between 30 March and 27 September (the level of payments will step down in October and January)
- ❑ Eligible employers are those with
 - annual turnover of <\$1bn whose turnover has fallen by >30%
 - annual turnover of >\$1bn (other than major banks) whose turnover has fallen by >\$1bn
 - Registered charities whose turnover has fallen by >15%
- ❑ Eligible employees are Australian citizens who are (or were at 1 March) permanent full- or part-time employees, or casuals who had at least 12 months 'regular employment'
- ❑ For labour force survey purposes the ABS classifies people being paid through JobKeeper as 'employed' – even if they have been stood down, or worked no hours during the survey week
 - in the US and Canada, such people are classified as unemployed
- ❑ If these people, and those who've dropped out of the labour force since March, were counted as unemployed, then the unemployment rate in July would have been 11.3% - down from 13.9% in May and 14.9% in April

Tasmania, NSW and WA have seen the strongest recoveries in employment over the past two months

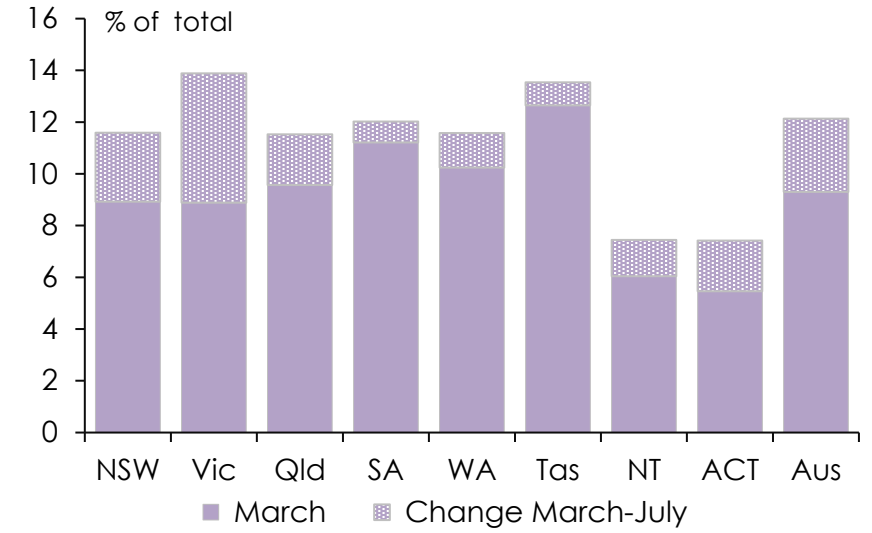
Employment



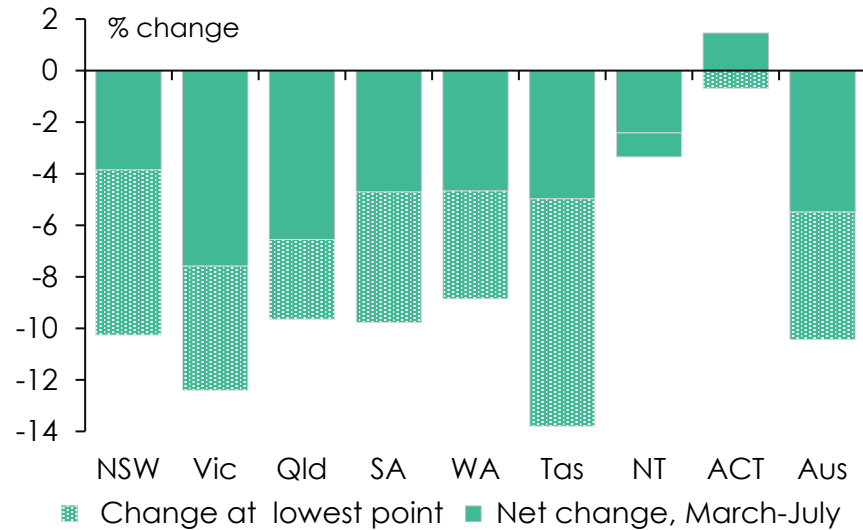
Labour force participation rate



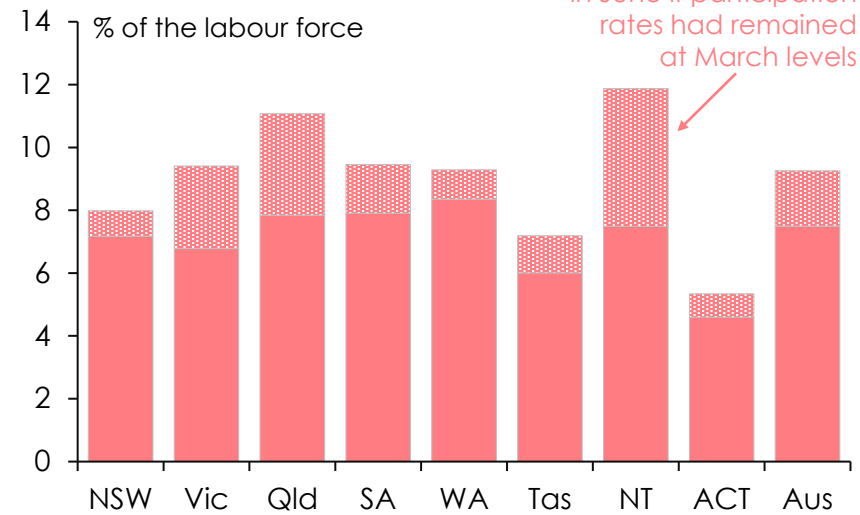
Under-employment ratio



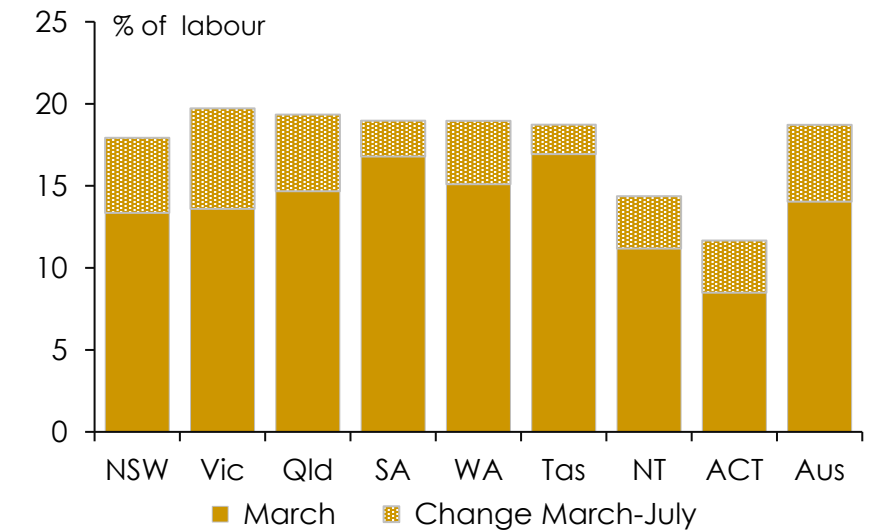
Total hours worked



Unemployment rate



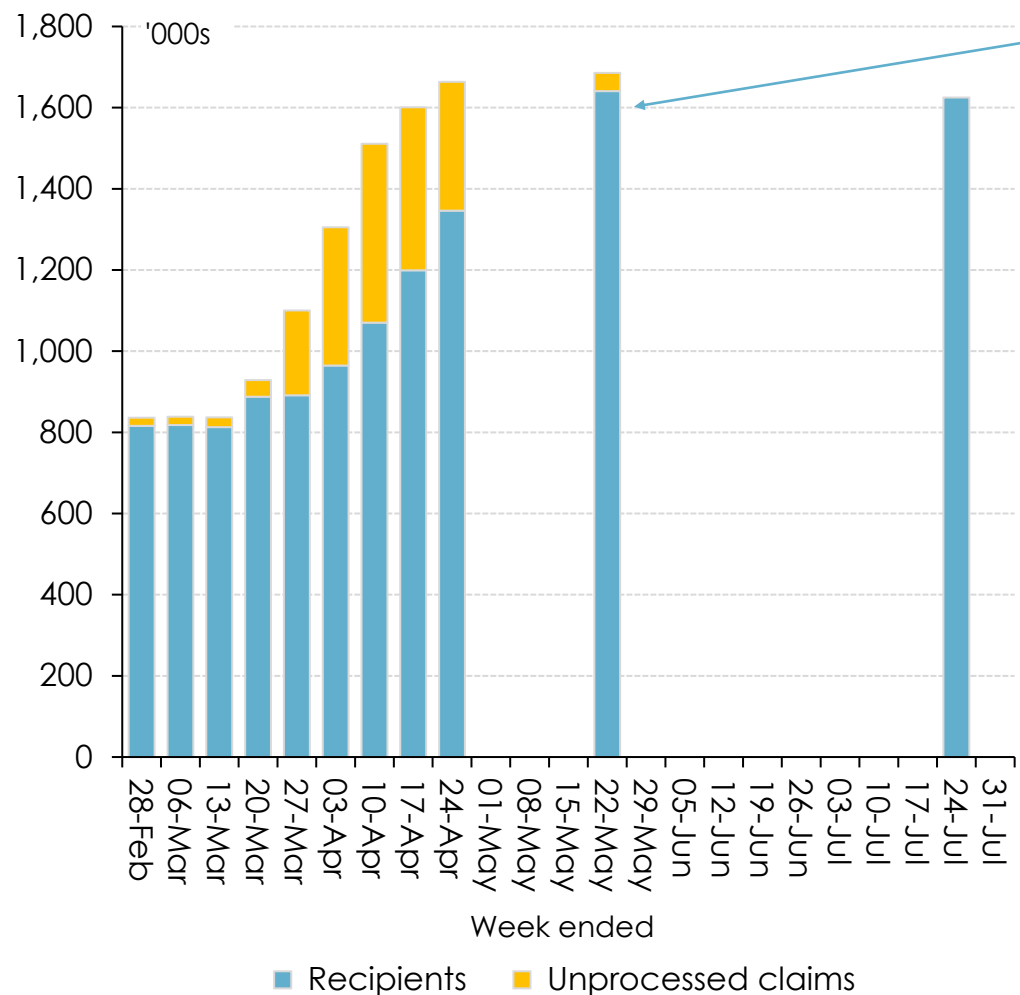
'Under-utilization' rate



Note: The 'under-employment ratio' is the percentage of employed persons who are working fewer hours than they are willing and able to work. The 'under-utilization rate' is the proportion of the labour force who are unemployed or underemployed. Source: ABS; August data will be released on 17th September.

The measured unemployment rate is understating the 'true' extent of job losses

Number of people receiving or seeking Newstart/JobSeeker or Youth Allowance payments

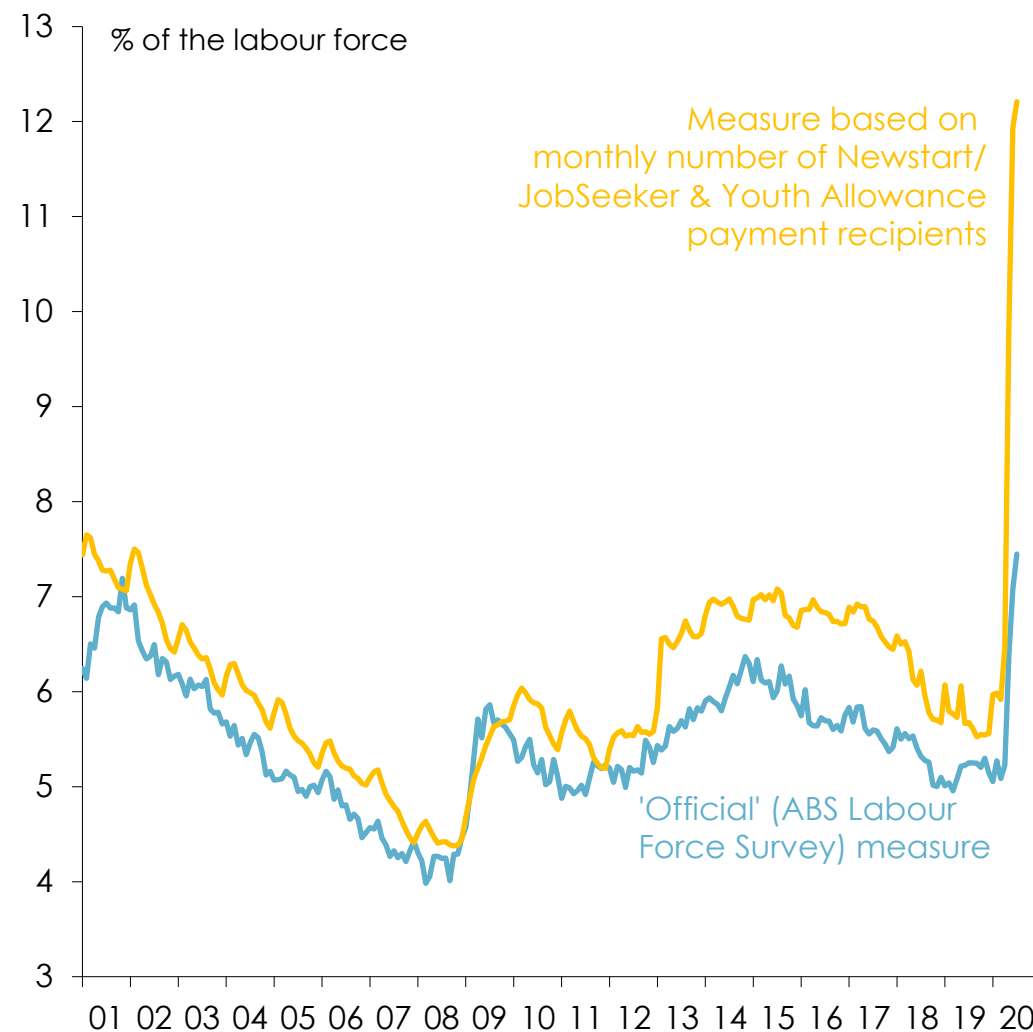


These numbers (up to 22nd May) were provided by the Dep't of Social Security to a Senate Economics Committee hearing.

The DSS this week agreed to provide fortnightly data to this Committee for the duration of its inquiry.

But the weekly numbers will still be a 'state secret' (unlike in the US where they have been published for 52 years); the fortnightly numbers won't be on data.gov.au; and what happens when the inquiry is finished?

Alternative measures of the 'unemployment rate'

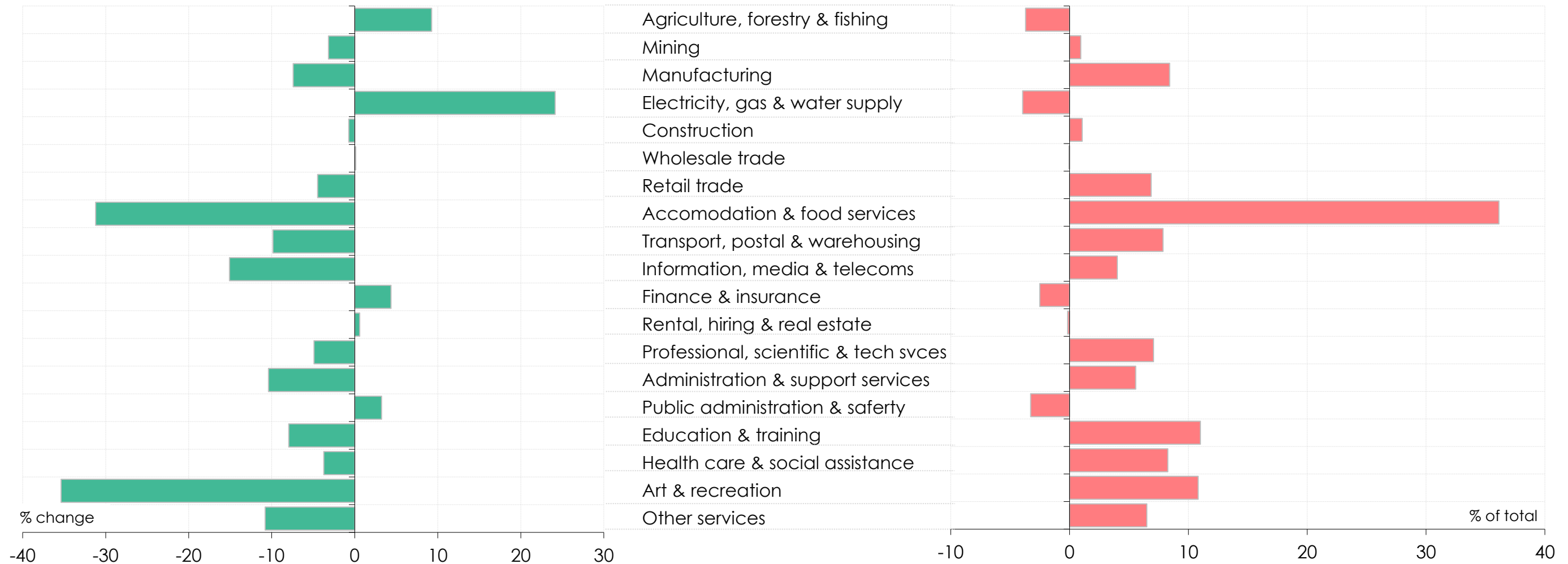


Sources: Department of Social Security; ABS. Note: Youth Allowance recipients excludes full-time students. Number of Newstart/JobSeeker and Youth Allowance recipients is not seasonally adjusted. Latest (monthly) data is for June 2020.

58% of total job losses between February & May were in accommodation & food services, education & training, and arts & recreation

Change in employment between February and March 2020, by industry

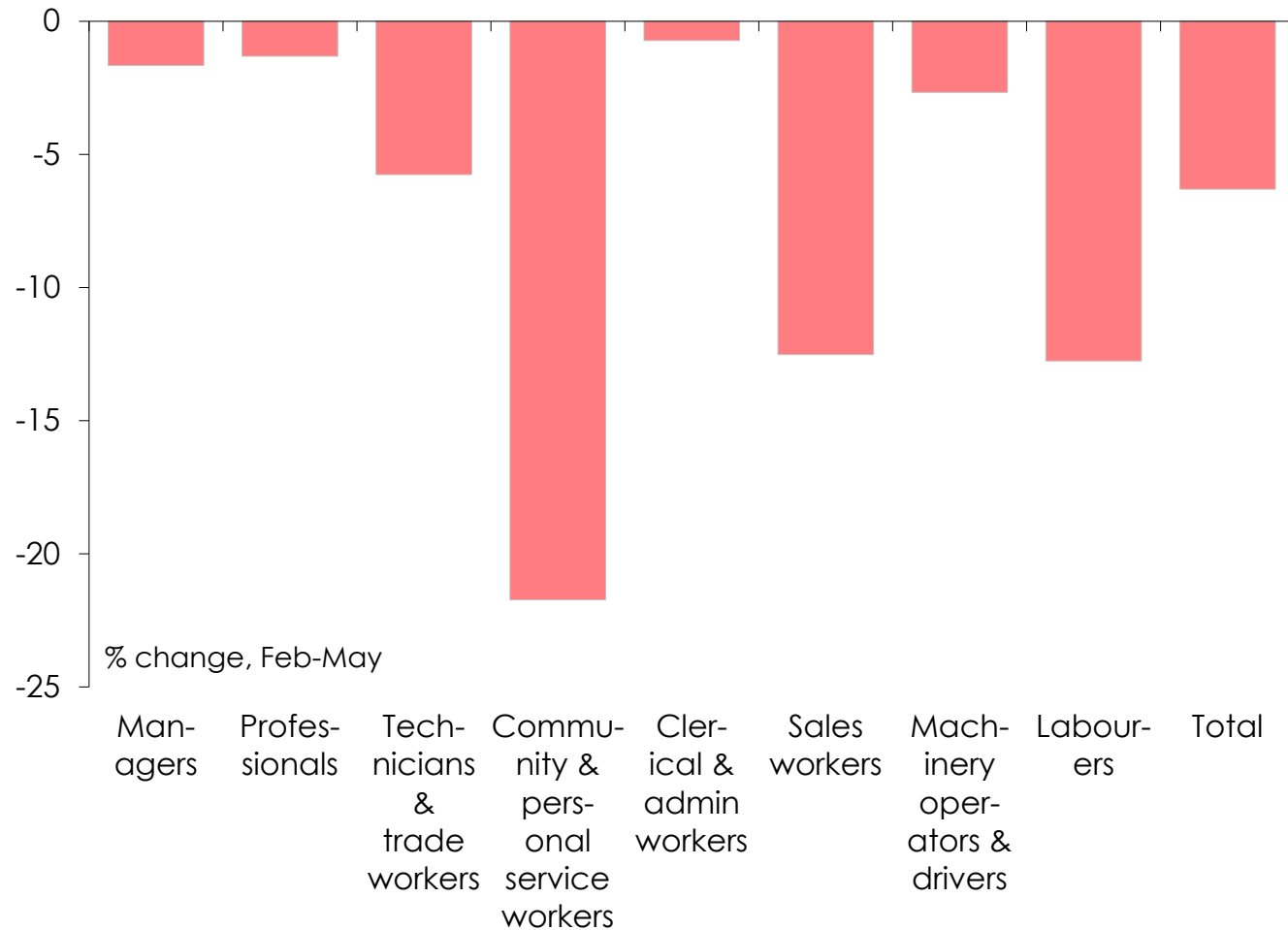
Proportion of change in total employment between February and March 2020, by industry



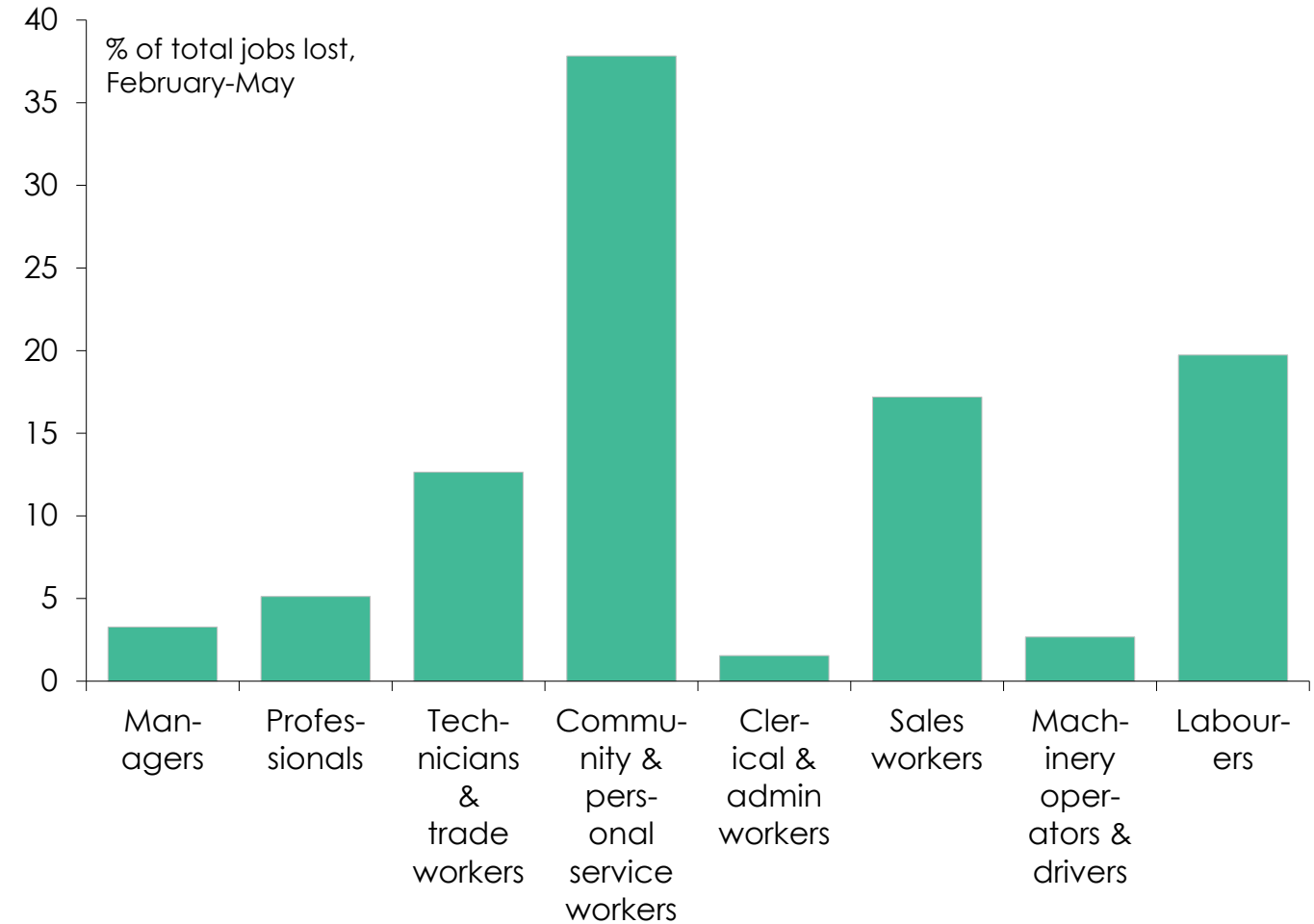
Note: The accommodation & food services, education & training, and arts & recreation services sectors accounted for 15% of total employment in February.
 Source: ABS, Detailed quarterly labour force data, May 2020. August data will be released on 24th September.

Community & personal service workers, sales workers and labourers have accounted for 75% of job losses since February

Change in employment between February and March 2020, by occupation



Proportion of change in total employment between February and March 2020, by occupation



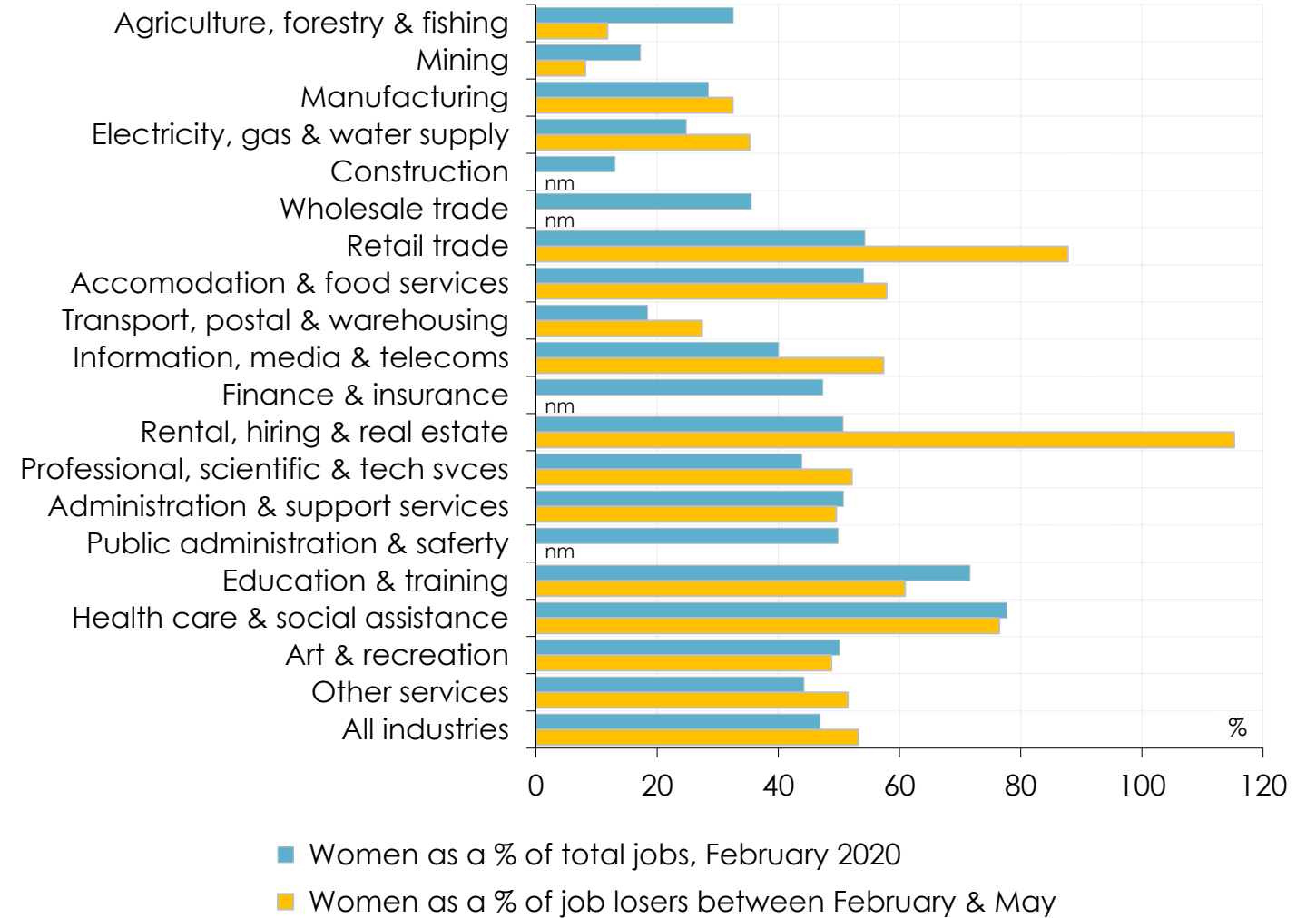
Source: ABS, Detailed quarterly labour force data, May 2020. August data will be released on 24th September.

Women bore 53% of the job losses between February & May, in part because they typically work in occupations or industries which have been hardest hit

Women's share of jobs in February, and of job losses since February, by occupation



Women's share of jobs in February, and of job losses since February, by industry

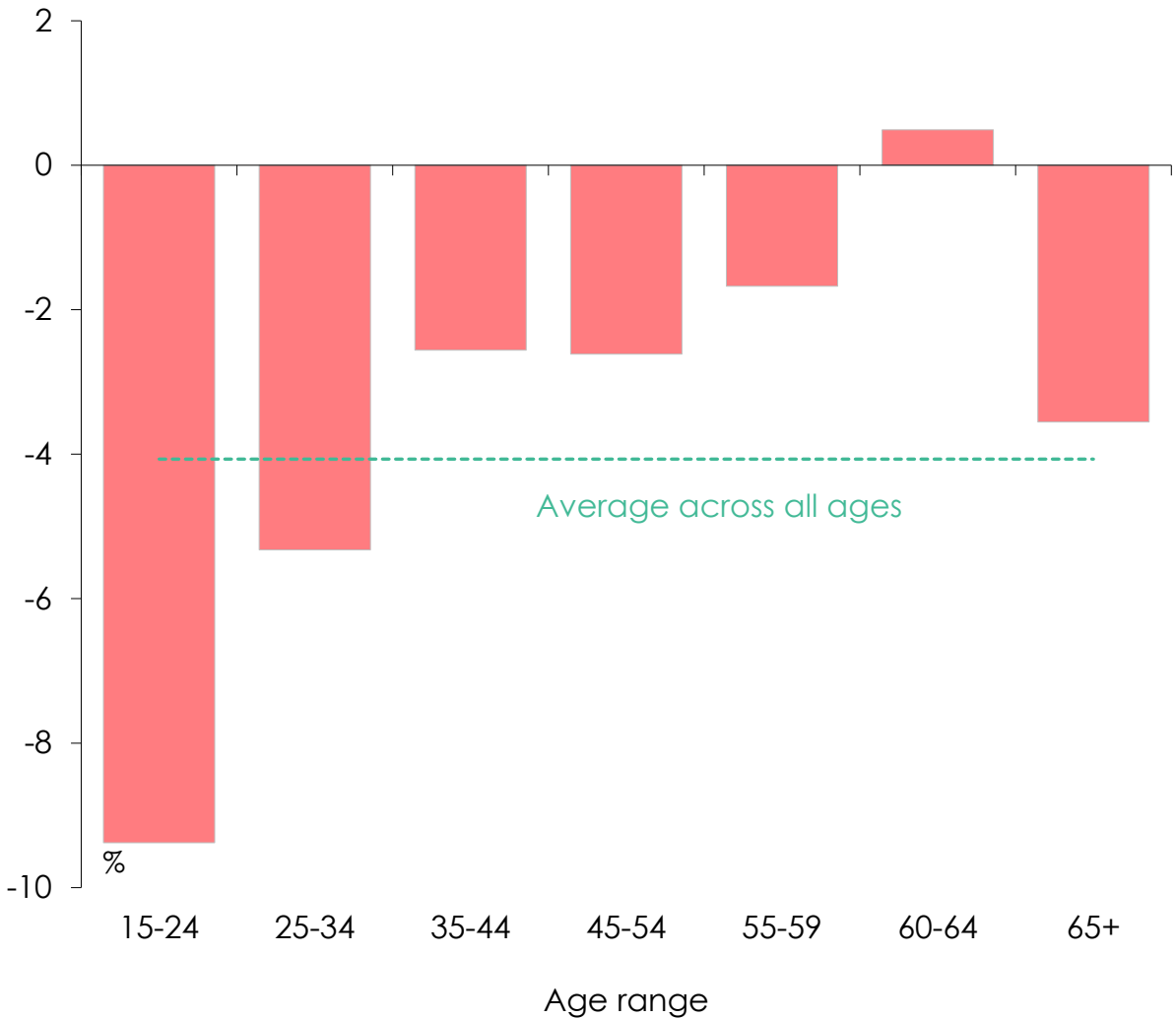


Note: Data depicted in these charts are not seasonally adjust. "nm" = "not meaningful", because employment of women in the industry thus marked either increased between February and May 2020; or fell despite total employment in that industry rising between February and May.

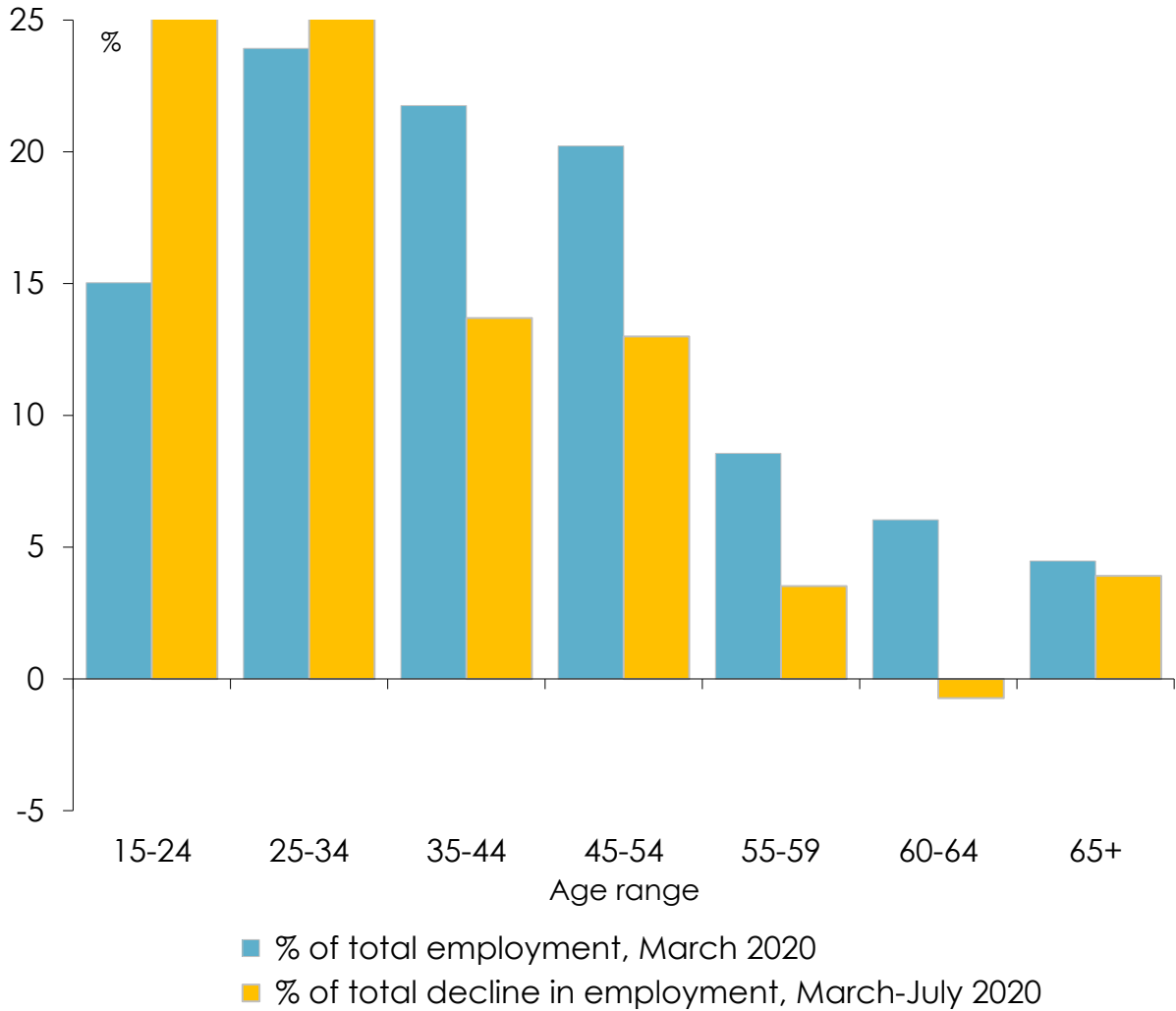
Source: ABS, Detailed quarterly labour force data, May 2020. August data will be released on 24th September.

People aged 15-34 accounted for 39% of total pre-pandemic employment but have experienced 66% of the jobs lost since March

Change in employment, March-July 2020, by age range



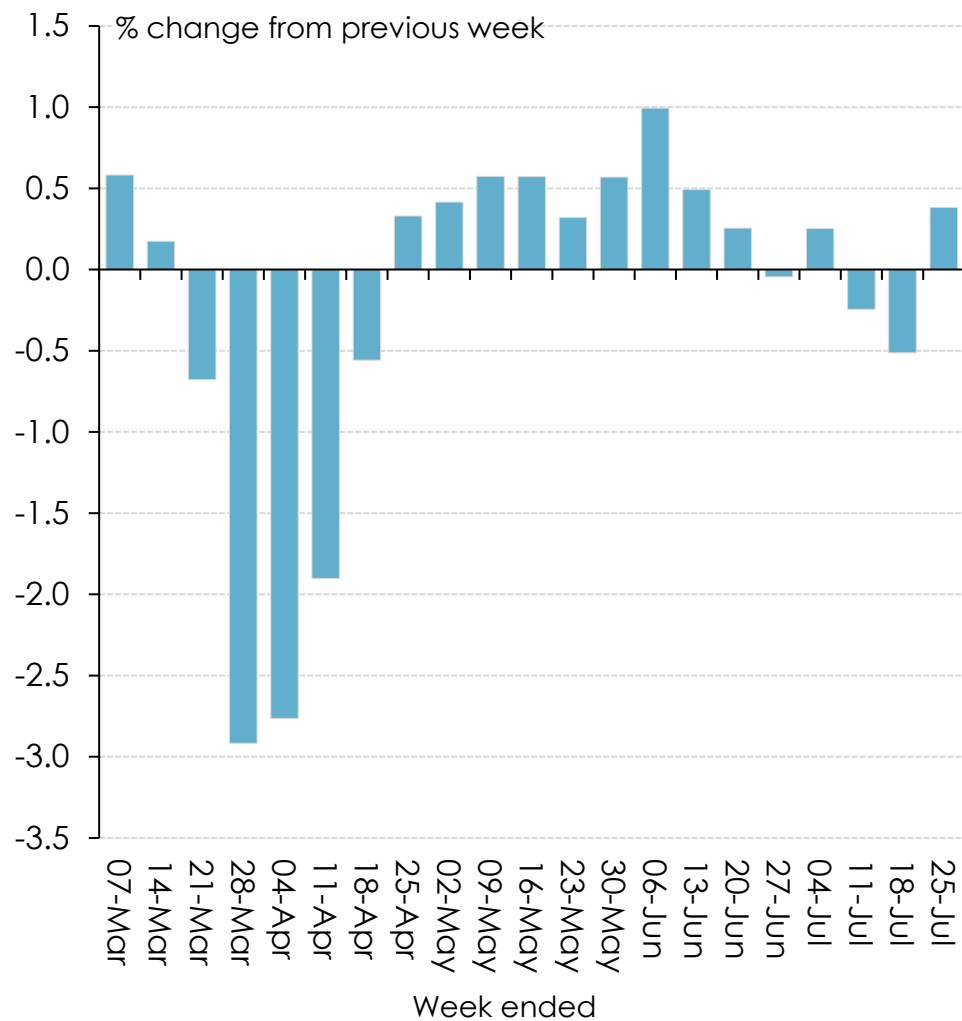
Share of total job losses between March and July 2020 and share of total employment in March, by age group



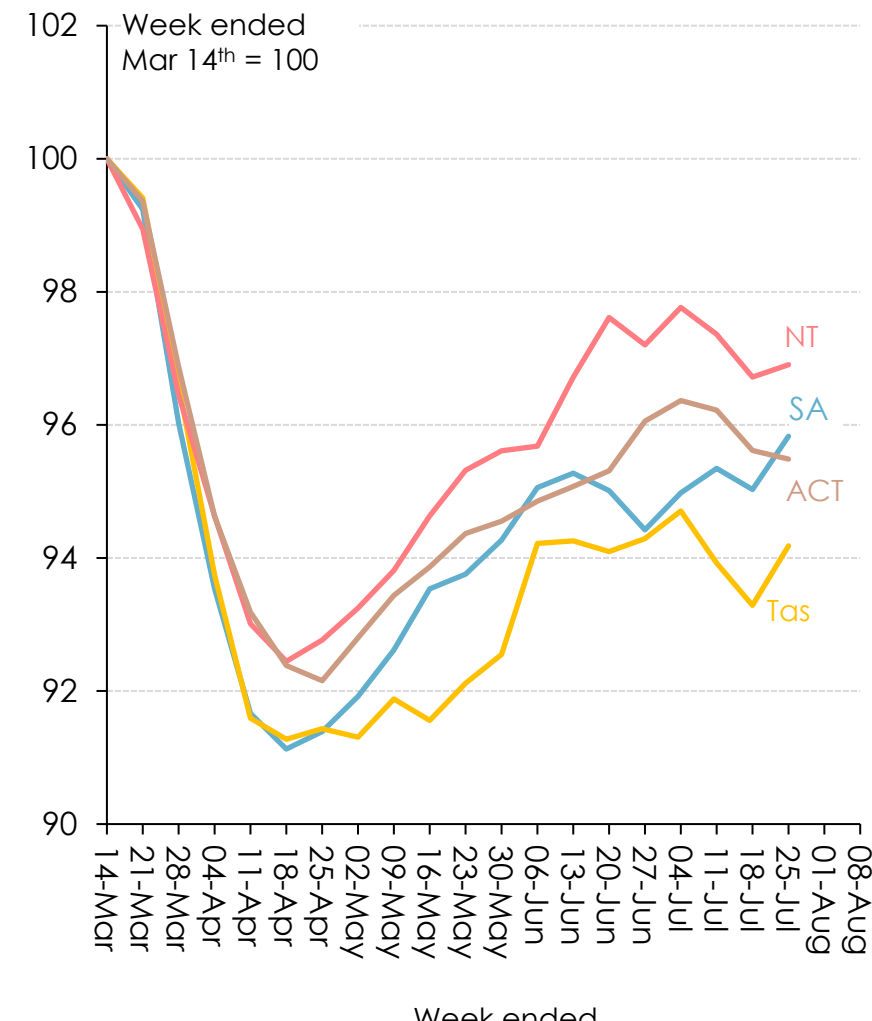
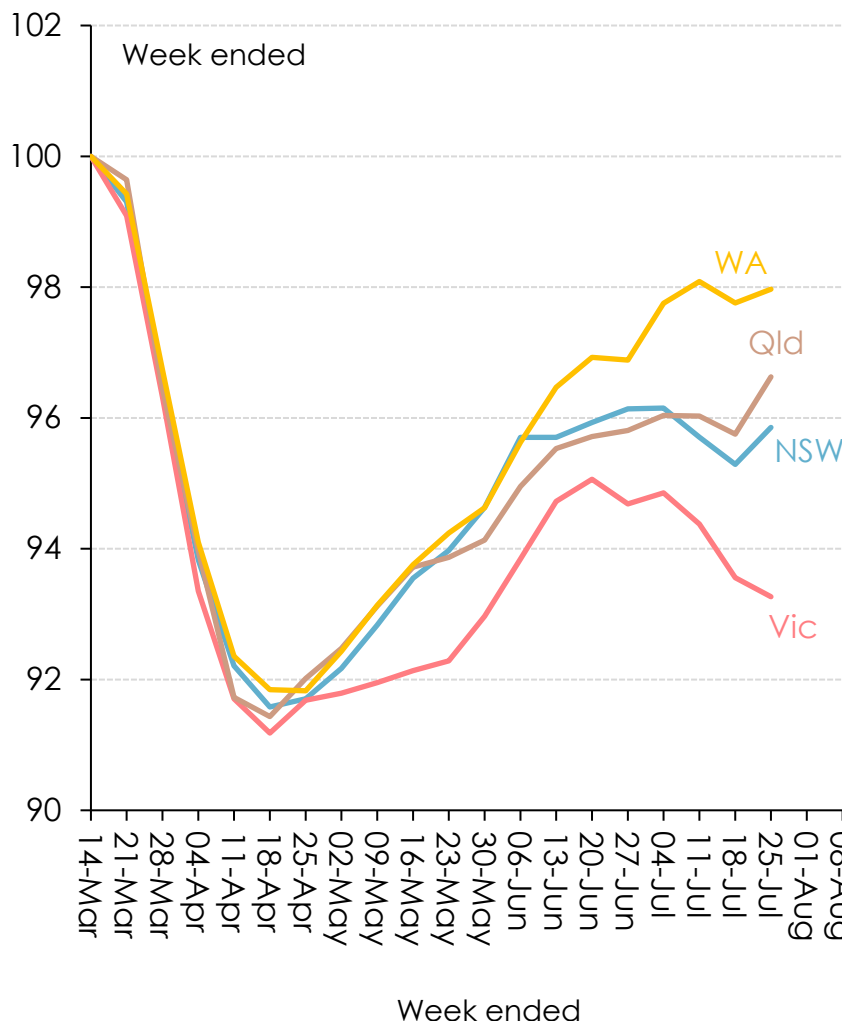
Source: ABS detailed monthly labour force data, July 2020; Corinna. August data will be released on 24th September.

Victoria now more clearly a drag on employment growth while jobs stabilize in other states and territories

Weekly change in number of payroll jobs



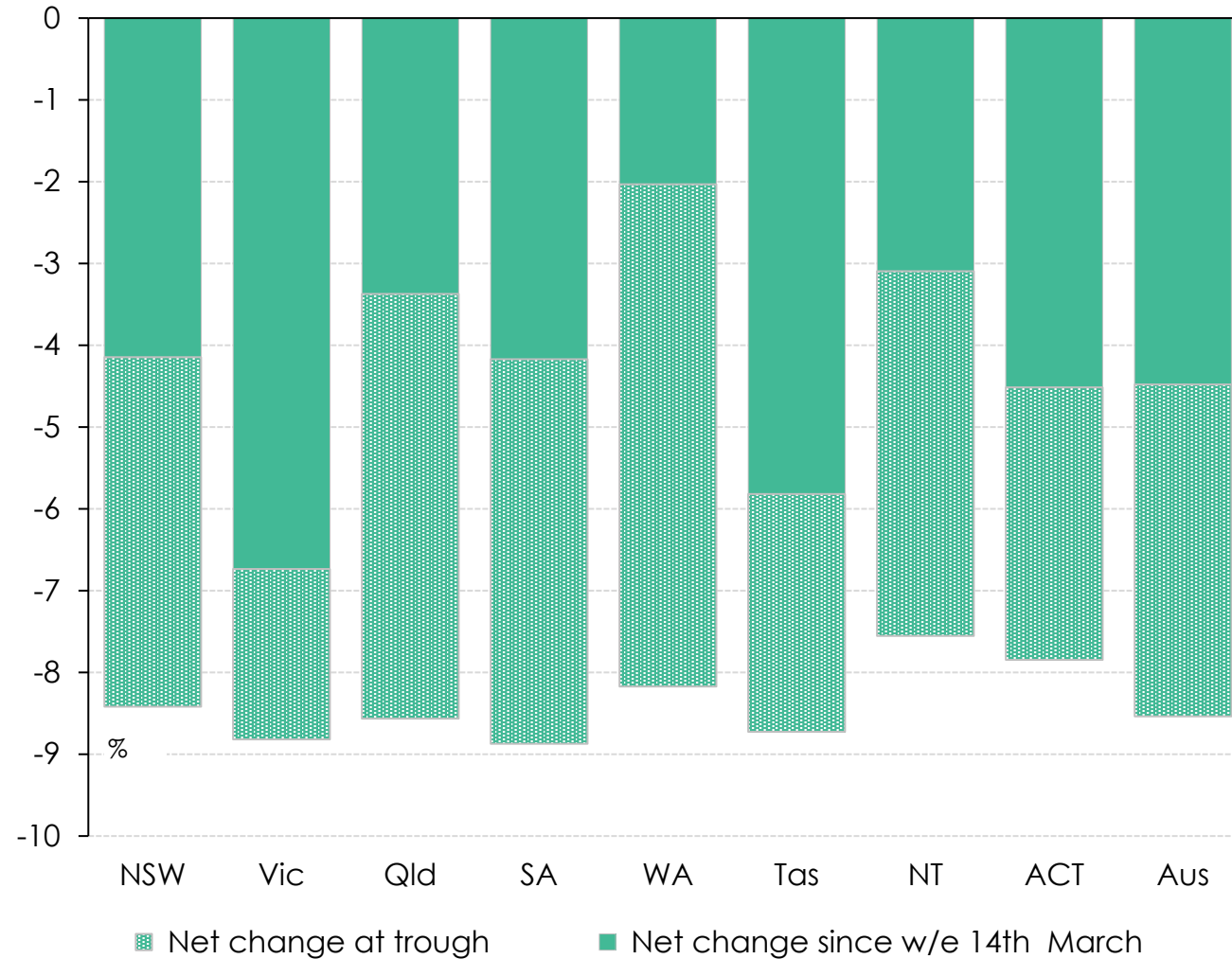
Payroll jobs by State & Territory



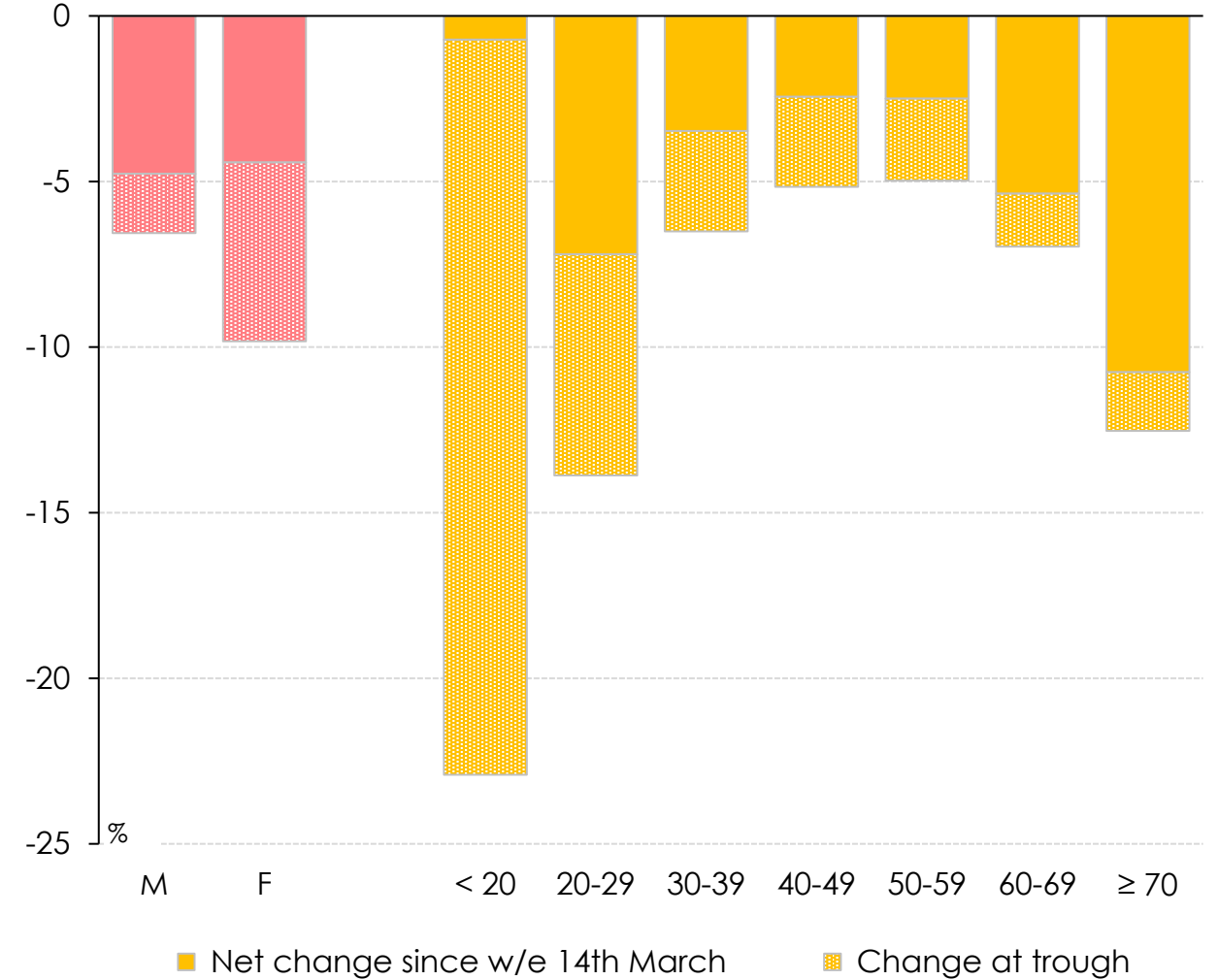
Source: ABS. Data refers to the number of payroll jobs at businesses participating in the Australian Taxation Office's Single Touch Payroll system, which covers 99% of employers with 20 or more employees and about 71% of smaller employees. People with two or more jobs (about 6% of the total) are double-counted; employers and the self-employed are not included. Data are not seasonally adjusted (so at least some of the week-to-week variations could be due to 'normal' seasonal factors). Data for weeks up to week ended 8th August will be released on 25th August.

Victoria and Tasmania continue to have experience the largest net job losses – but it's no longer true that women and teenagers have

Net change in the number of payroll jobs since the week ended 14th March, by state and territory



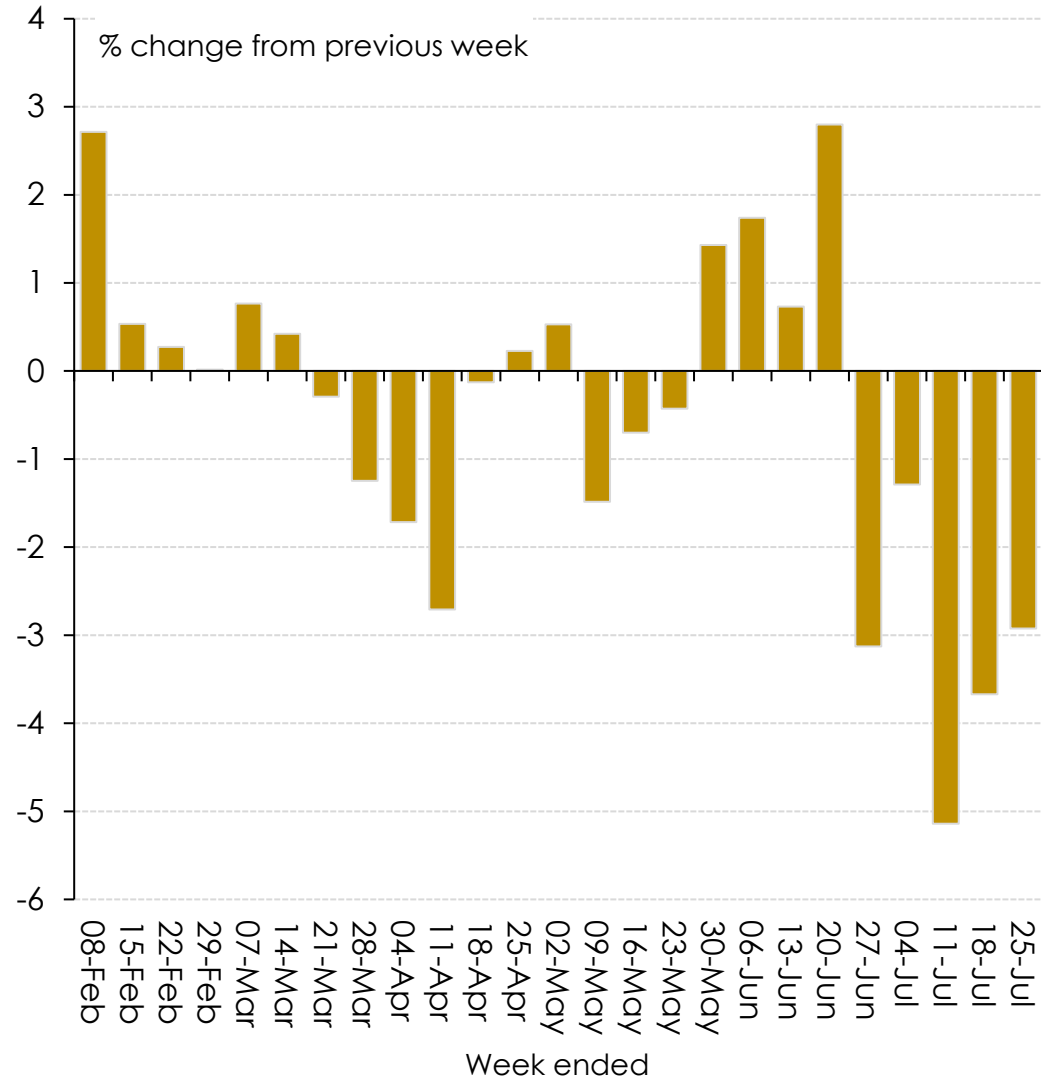
Net change in the number of payroll jobs since the week ended 14th March, by gender and age group



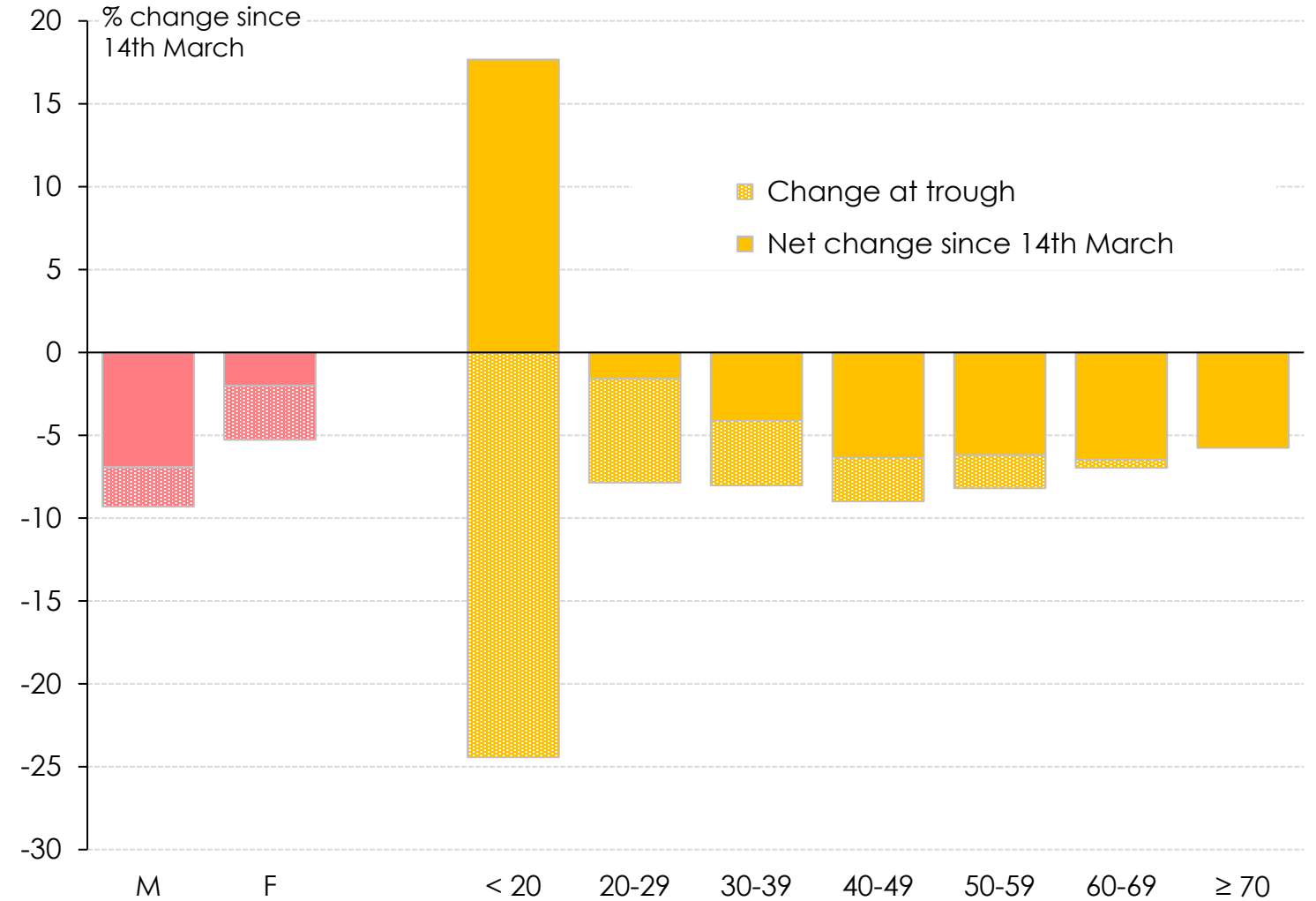
Source: ABS. Data refers to the number of payroll jobs at businesses participating in the Australian Taxation Office's Single Touch Payroll system, which covers 99% of employers with 20 or more employees and about 71% of smaller employees. People with two or more jobs (about 6% of the total) are double-counted; employers and the self-employed are not included. 'Trough' refers to the week in which payroll employment for the state/territory, gender or age group was at its lowest level since mid-March. Data for weeks up to week ended 8th August will be released on 25th August.

Wage payments fell in the last week of June and the first half of July; women and younger workers have benefited more from JobKeeper payments

Weekly change in total wages paid



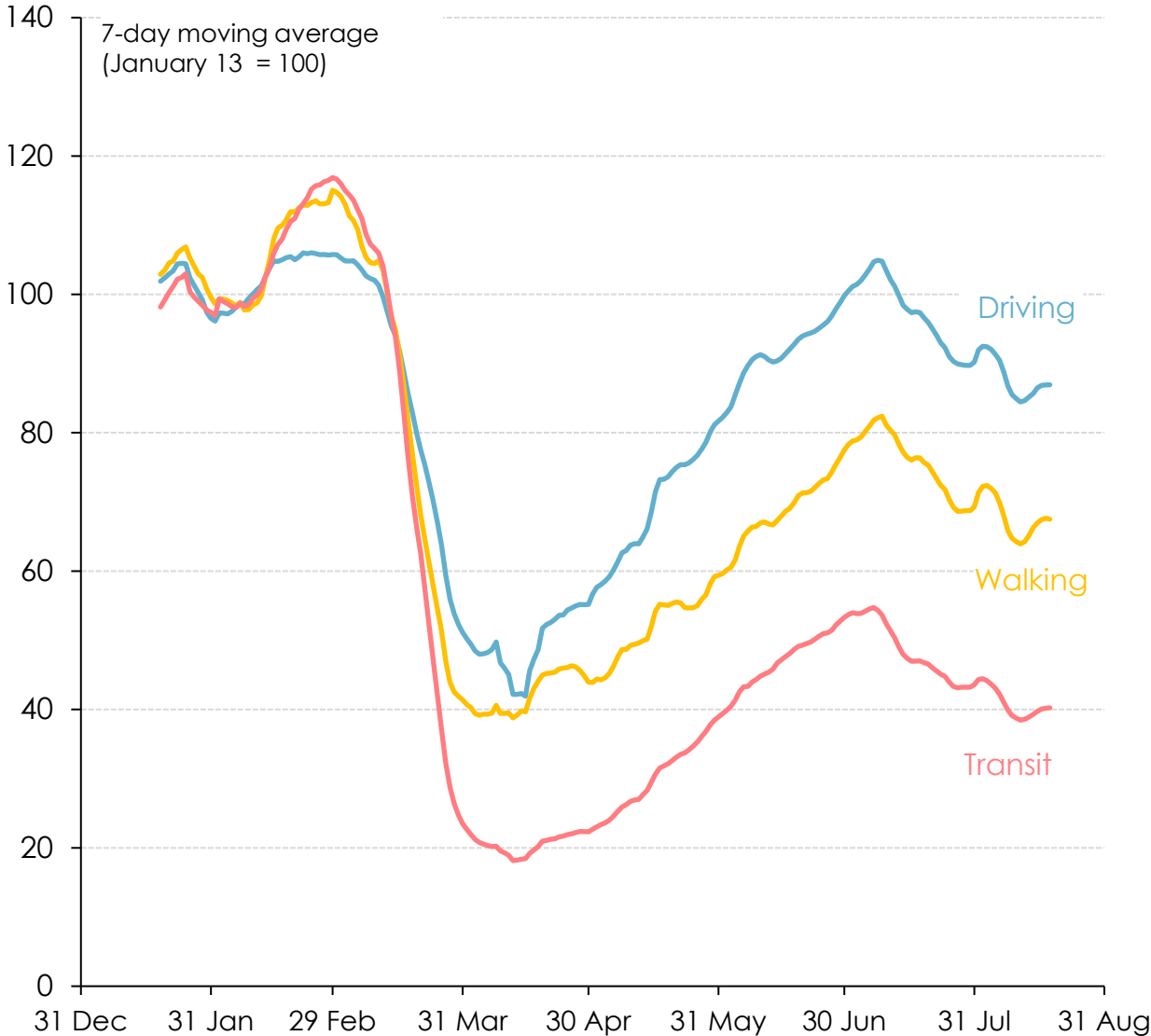
Change in total wages paid by gender and age group



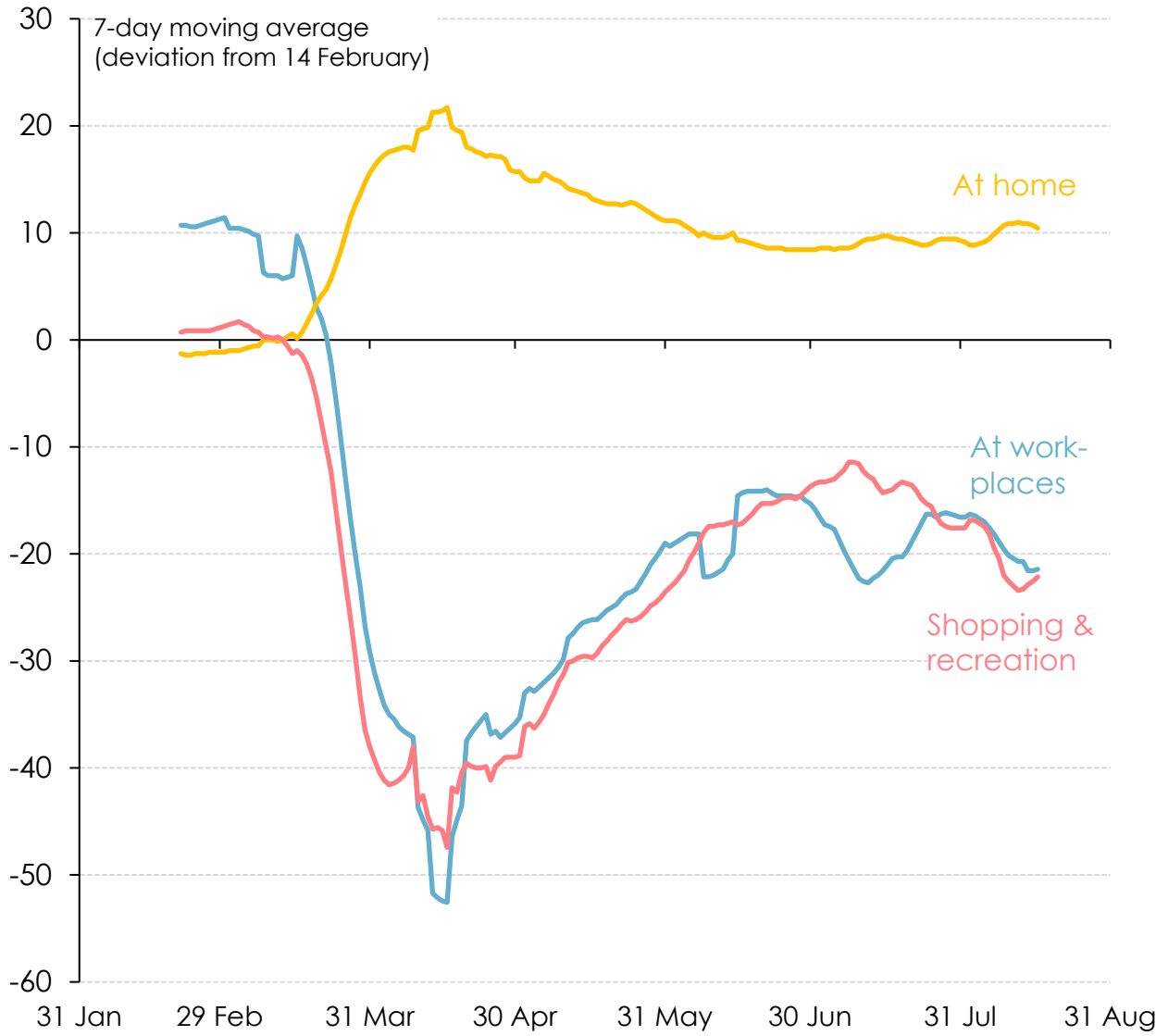
Note: The smaller fall in women's wages than men's likely reflects the fact that JobKeeper payments (at a flat rate of \$1500 per employee per fortnight) represent a higher proportion of women's (lower) average earnings than men's. Ditto for teenagers (most of whom work part-time). Source: ABS. 'Trough' refers to the week in which payroll employment for the state/territory, gender or age group was at its lowest level since mid-March. Data are not seasonally adjusted, so some of the week-to-week movements in wages could be due to 'normal' seasonal factors (for example end-of-financial year bonuses).

The decline in mobility prompted by the imposition of harsher restrictions in Victoria seems to have 'bottomed out' over the past week

Time spent driving, walking and in transit



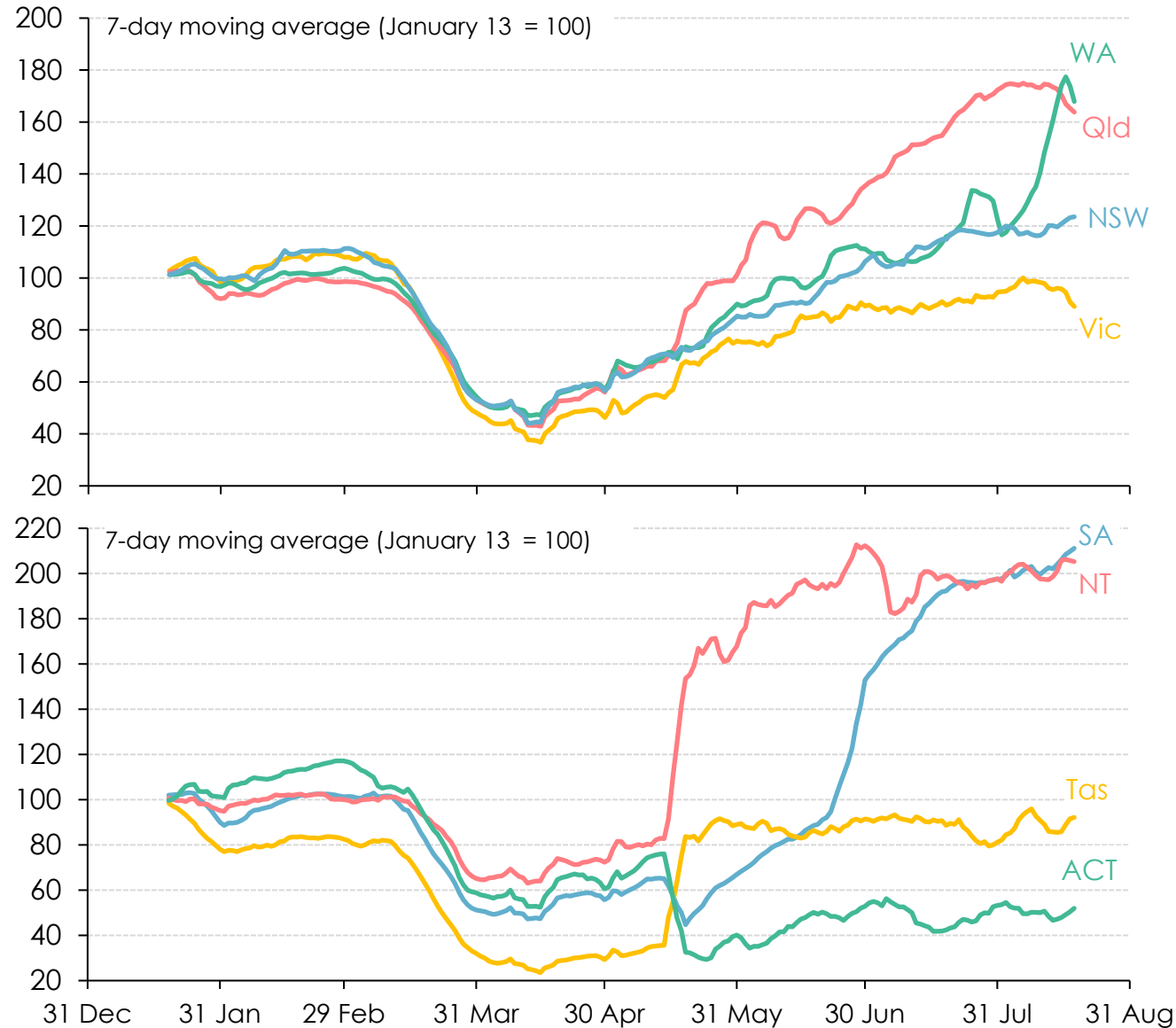
Time spent working, at home, shopping & playing



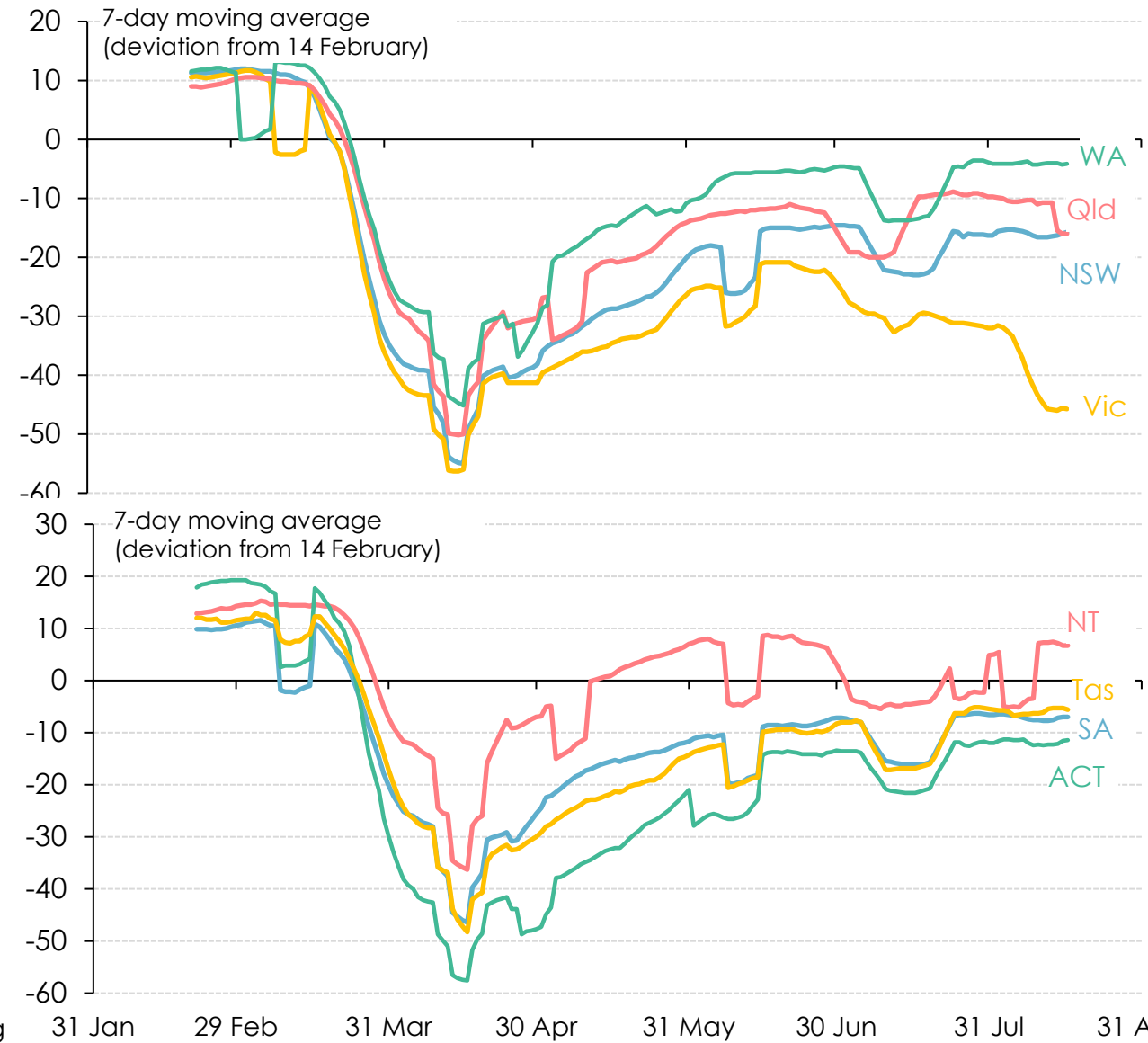
Note: 'transit' means using public transport. Note also that these data will reflect normal seasonal variations in activities as well as the effects of government restrictions and individual responses to the risks posed by the virus. Sources: Apple Mobility Trends Reports (data up to 18th August); Google Covid-19 Community Mobility Reports (data up to 16th August). For state-level data see next slide.

The impact of 'stage 4' restrictions on mobility in Victoria is clear, but most mobility measures in other states have also been tracking sideways

Time spent driving, by State and Territory



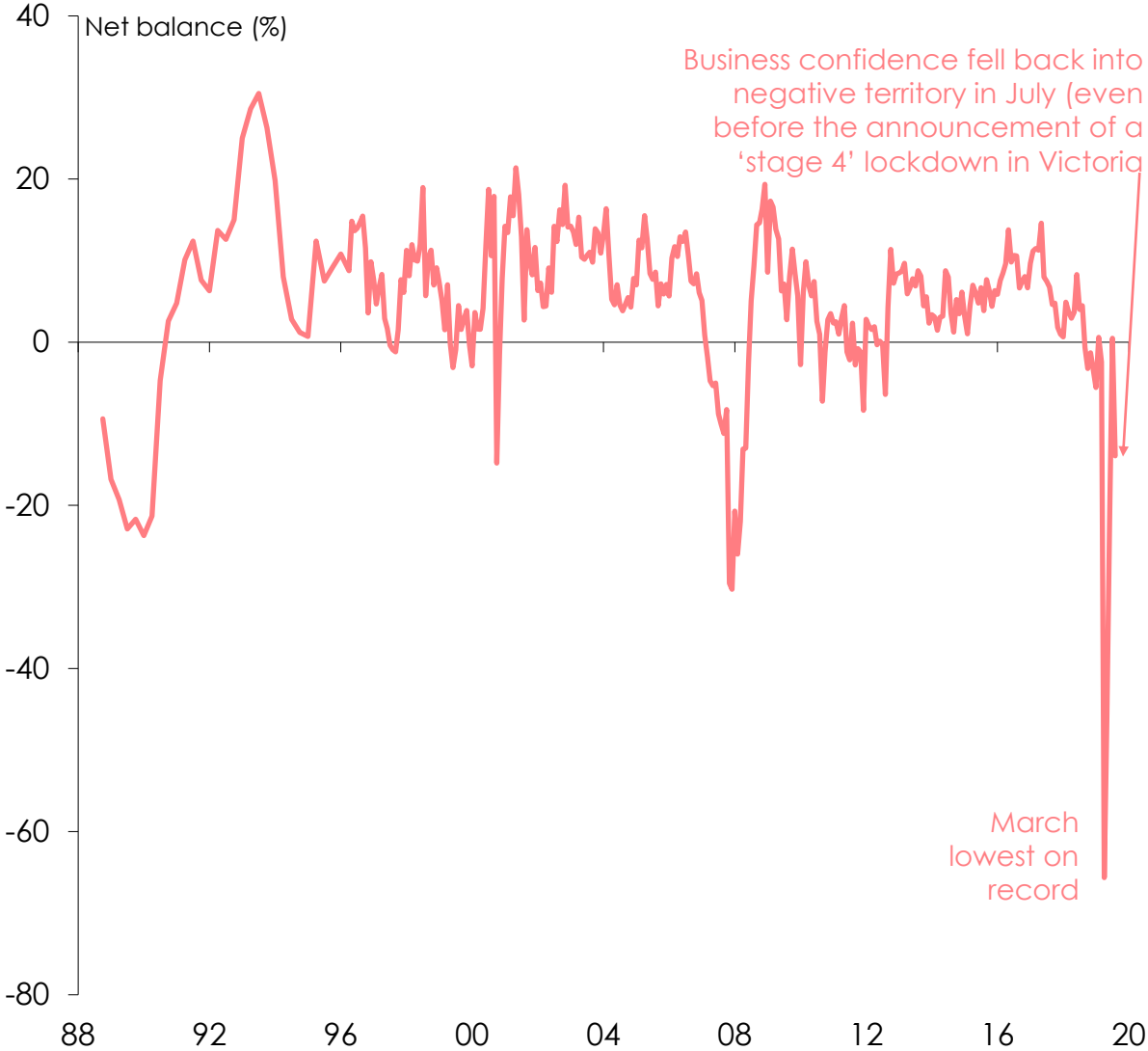
Time spent working, by State and Territory



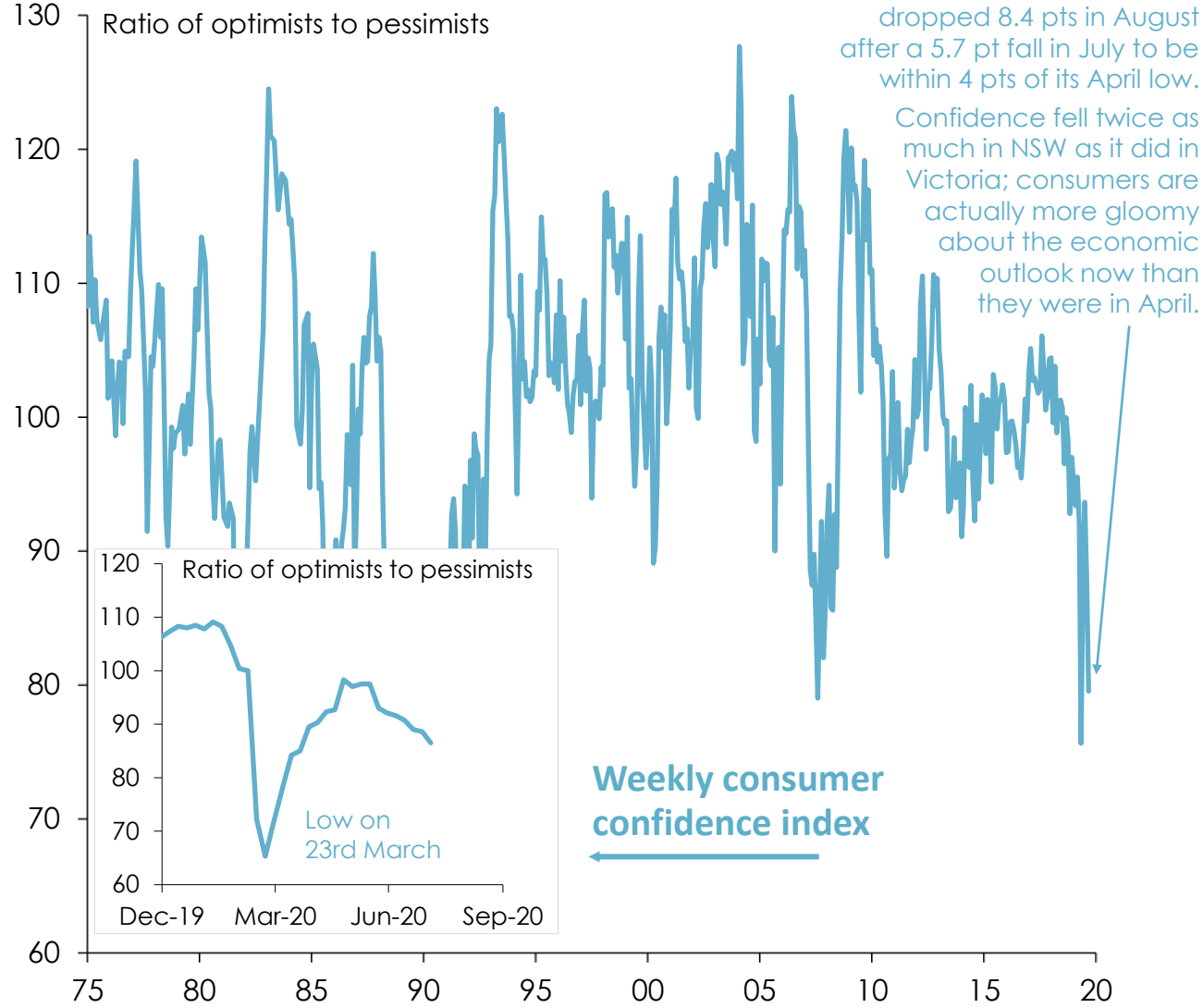
Note: these data will reflect normal seasonal variations in activities as well as the effects of government restrictions and individual responses to the risks posed by the virus. Sources: Apple Mobility Trends Reports (data up to 18th August); Google Covid-19 Community Mobility Reports (data up to 16th August).

Business confidence fell back in July (before the 'stage 4' restrictions in Victoria were announced), and consumer confidence fell more in August

Business confidence



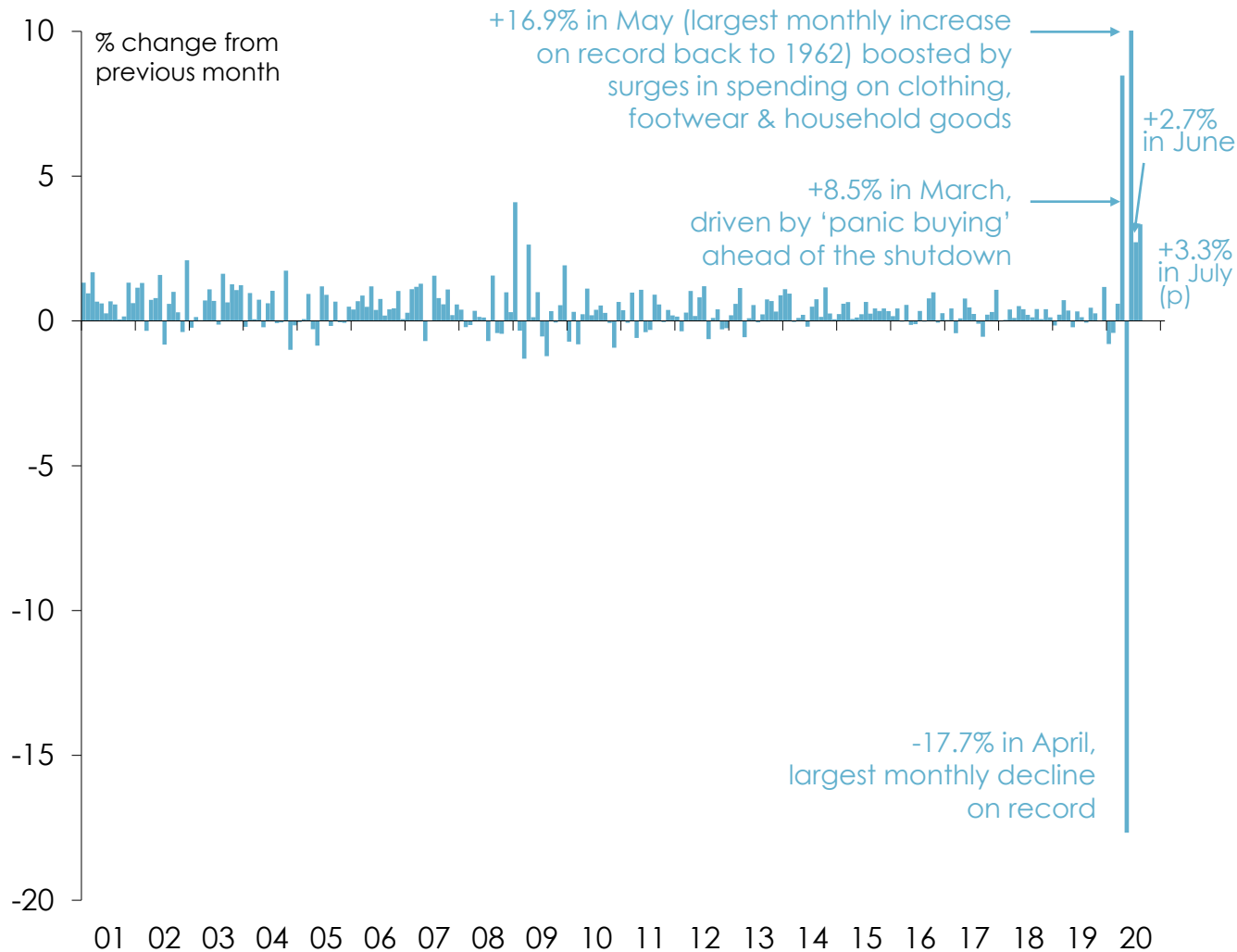
Consumer confidence



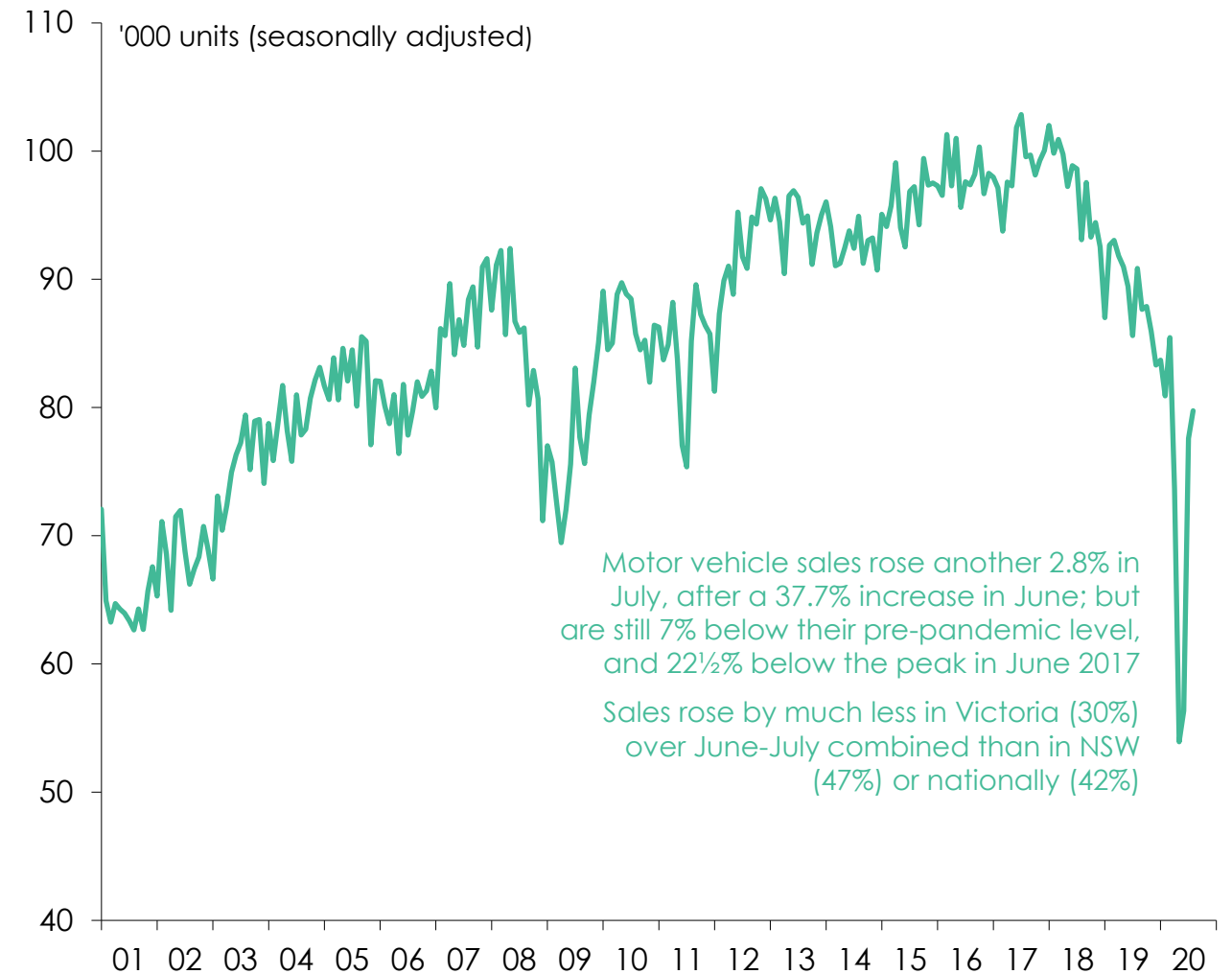
Sources: National Australia Bank; Westpac-Melbourne Institute; ANZ-Roy Morgan (weekly index). See slide 58 for other components of the NAB monthly business survey from which the business confidence figure is derived/ August business confidence and September consumer confidence data will be released on 8th and 9th September, respectively.

Retail sales rose 3.3% in July (preliminary estimate), led by a surge in supermarket sales in Victoria ahead of the lockdown

Retail sales



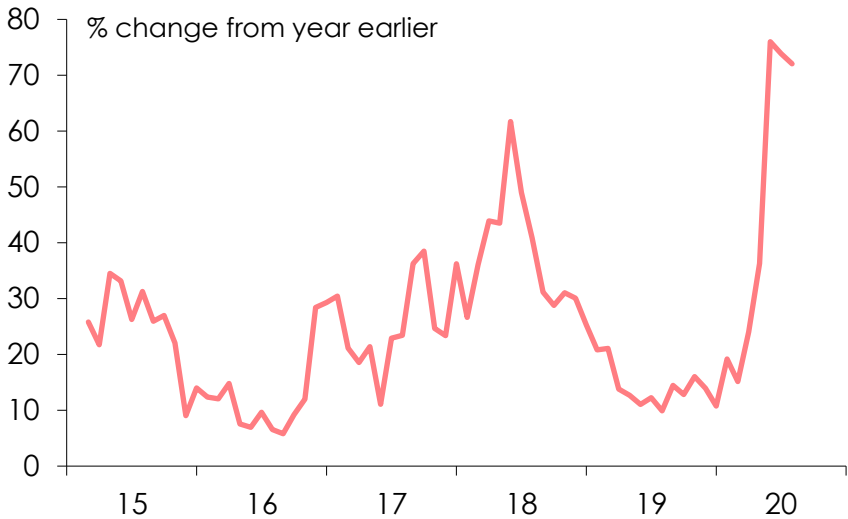
Motor vehicle sales



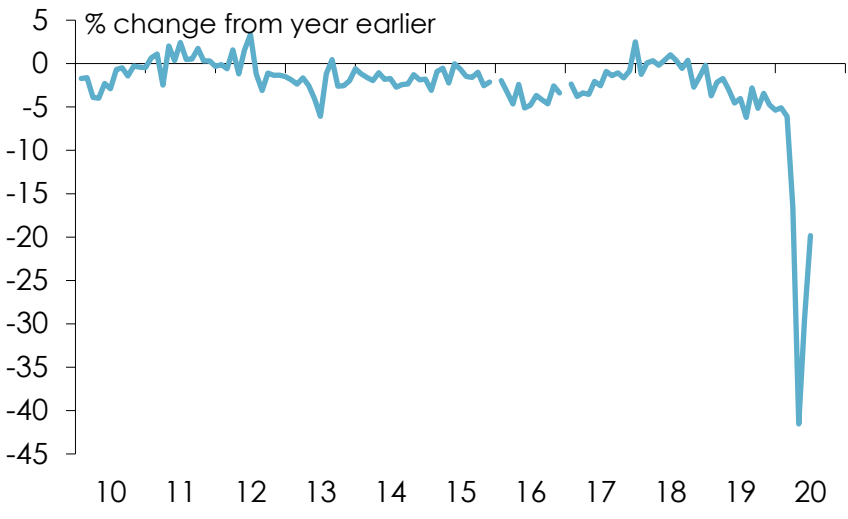
Sources: ABS; Federal Chamber of Automotive Industries VFACTS (seasonal adjustment of FCAI data by Corinna). Final retail sales data for July will be released on 4th September.

The pandemic and lockdown has accelerated changes in the way Australians shop, and make payments

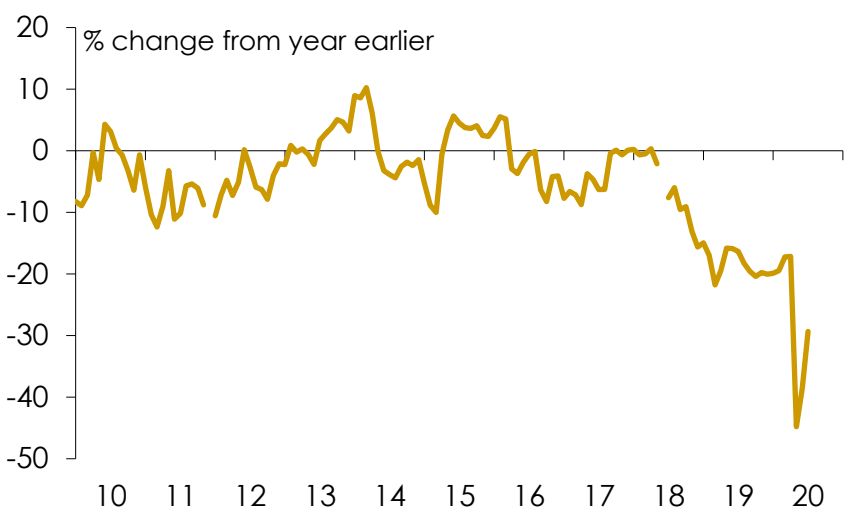
Growth in online retail sales



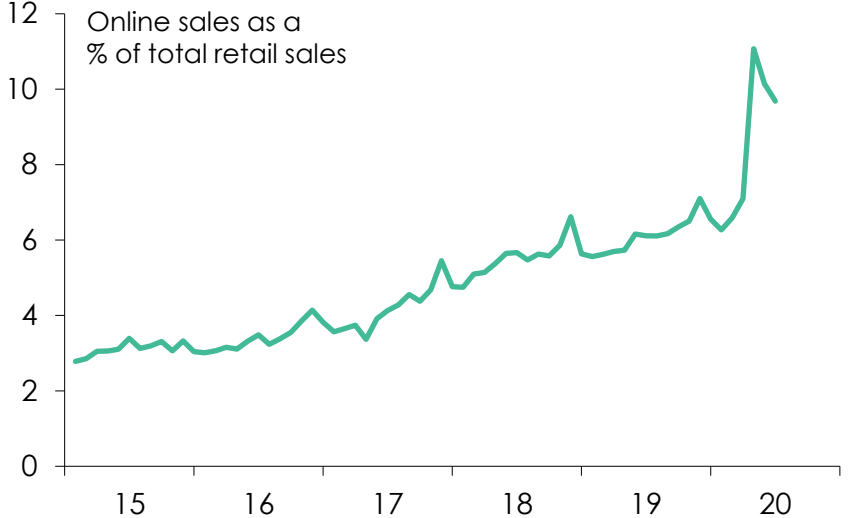
ATM cash withdrawals



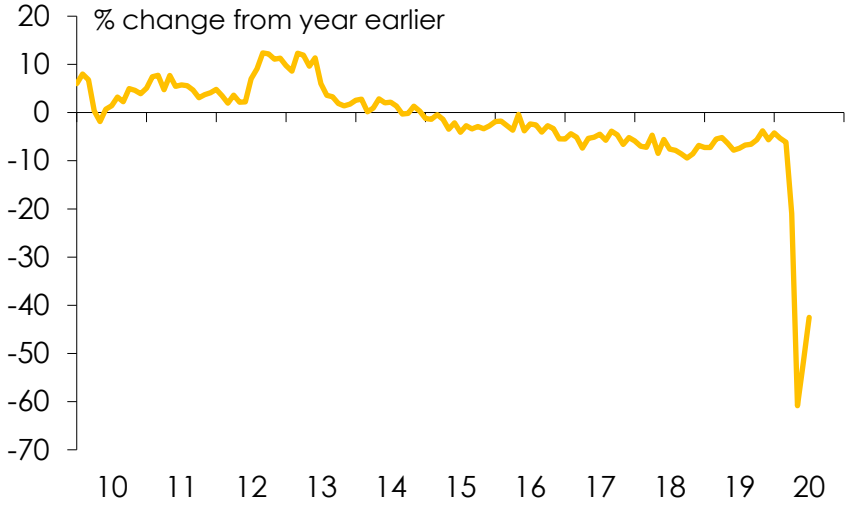
Credit card cash advances



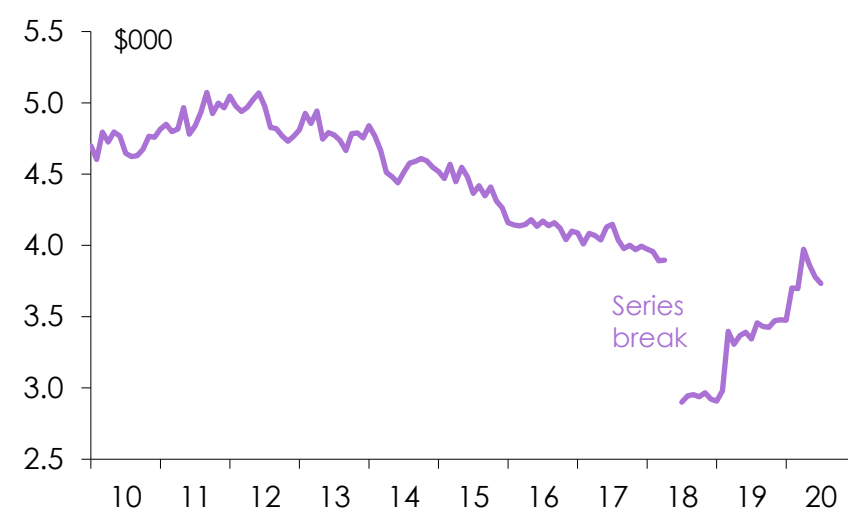
Online retail 'market share'



Debit card cash-outs



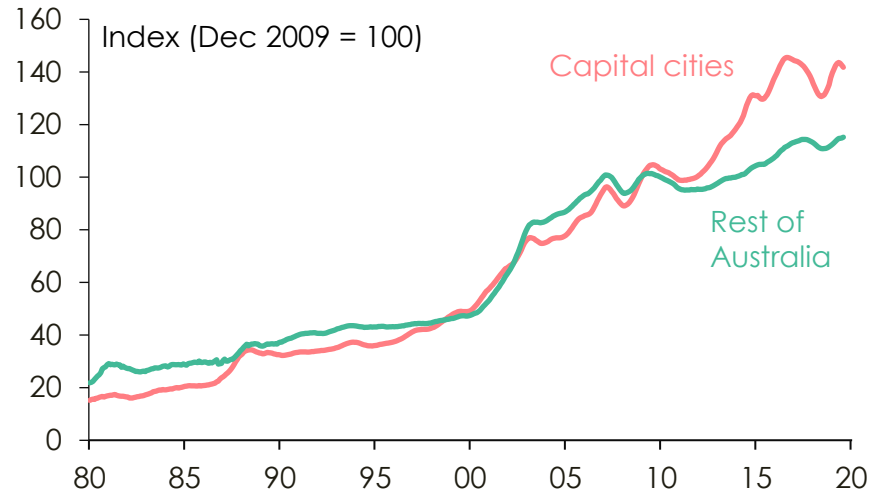
Direct entry payments



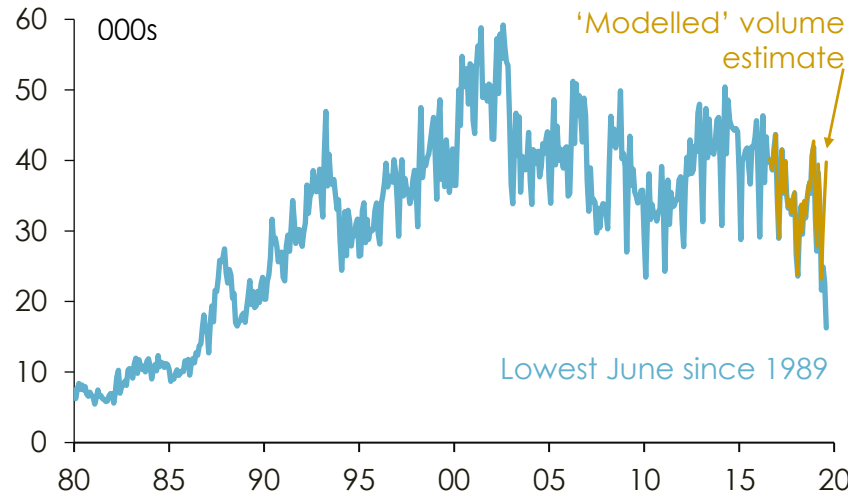
Sources: ABS; RBA. Latest data are for June; online retail sales data for July will be released on 4th September, and payments system data for July on 7th September.

Property prices fell by an average of 0.9% between April and July, on thin volumes, with bigger falls in cities than regions, and in 'top tier' properties

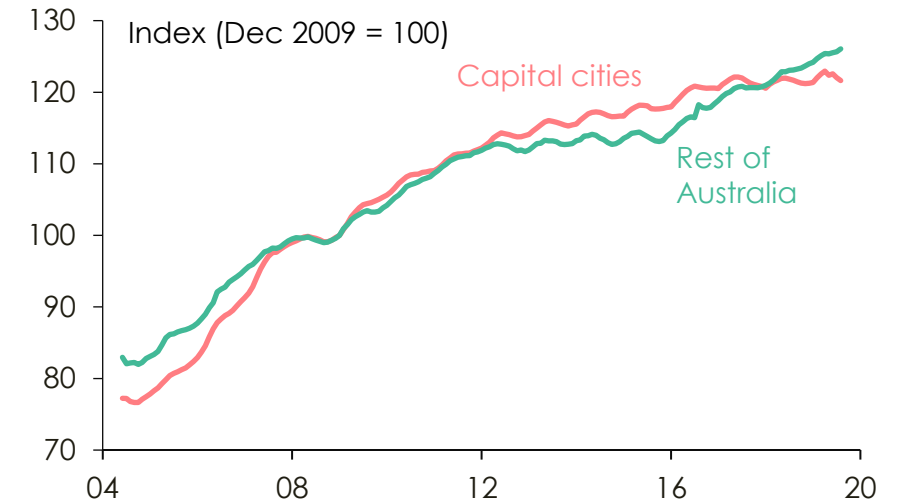
Residential property prices



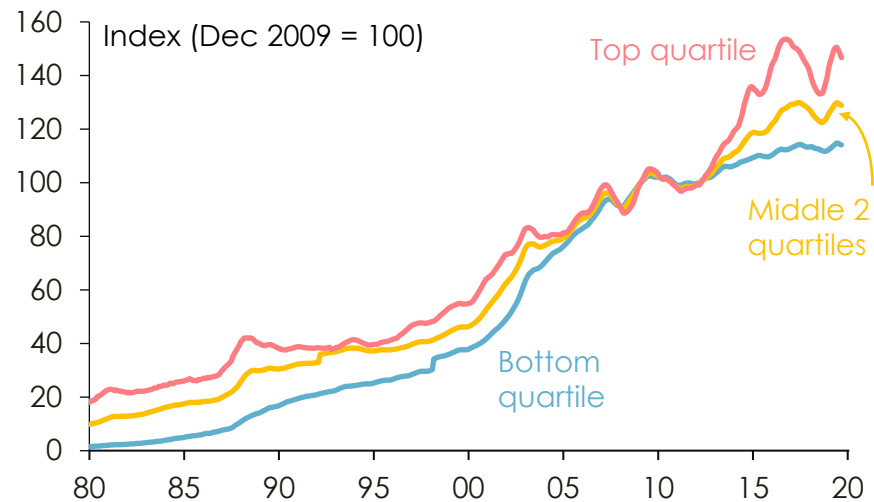
Residential property sales volumes



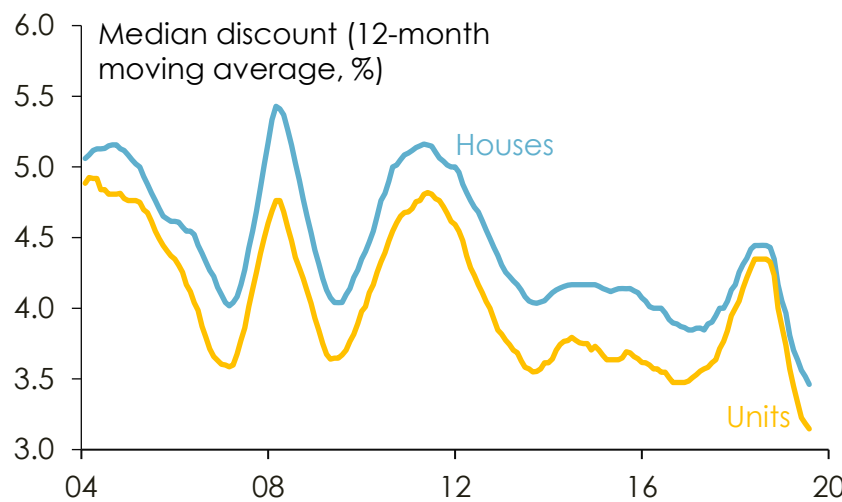
Residential rents



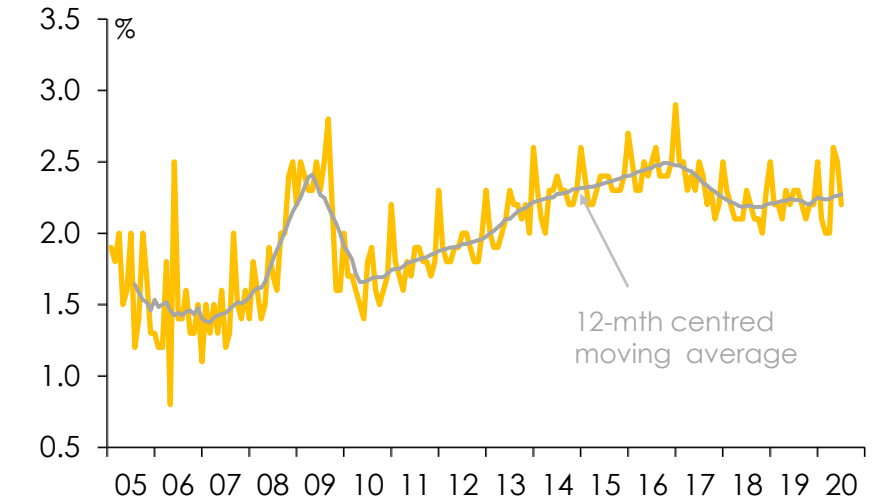
Property prices by tier



Vendor discounting



Capital city rental vacancy rates

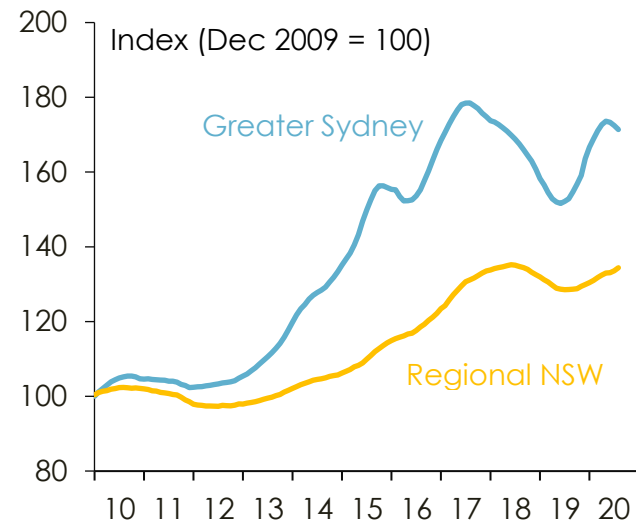


Note: The index of property prices measures the 'organic' change in underlying sales values by using a hedonic regression methodology that takes account of changes in the characteristics of properties being sold from month to month. Property price data are now seasonally adjusted. The index of residential rents uses a similar methodology to measure the 'organic' change in underlying rents. The 'modelled' sales volume estimates seek to account for delays in receiving information on transactions that have yet to settle (which can be more than six weeks after the contract date). Latest data are for July 2020; August data released on 1st September.

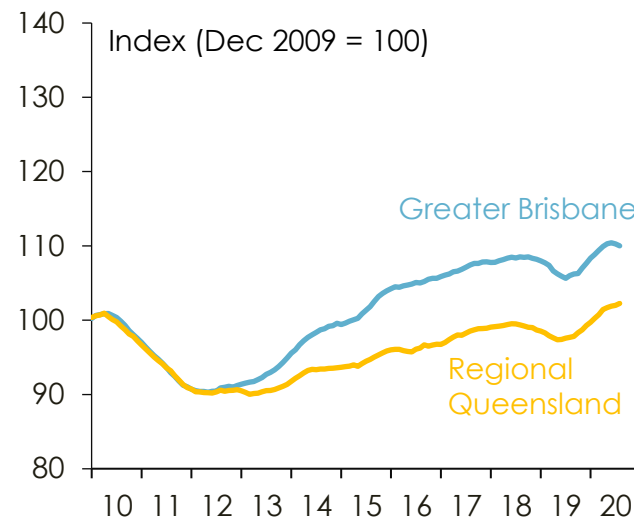
Sources: CoreLogic; SQM Research.

Property prices have fallen more in regional WA, Melbourne, Perth, Darwin and Sydney since March than in other cities or regions

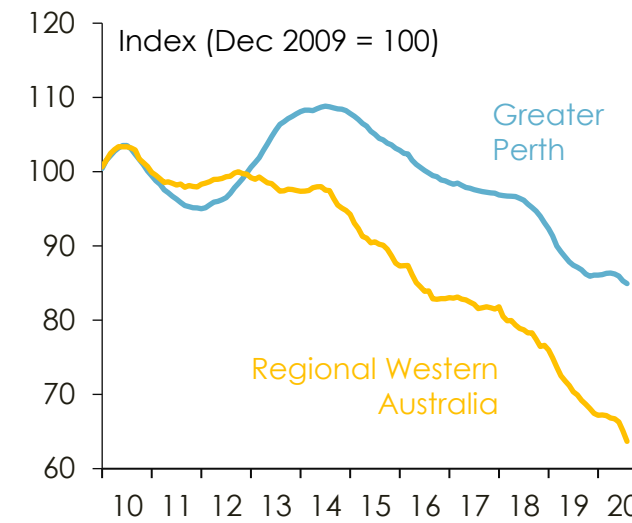
New South Wales



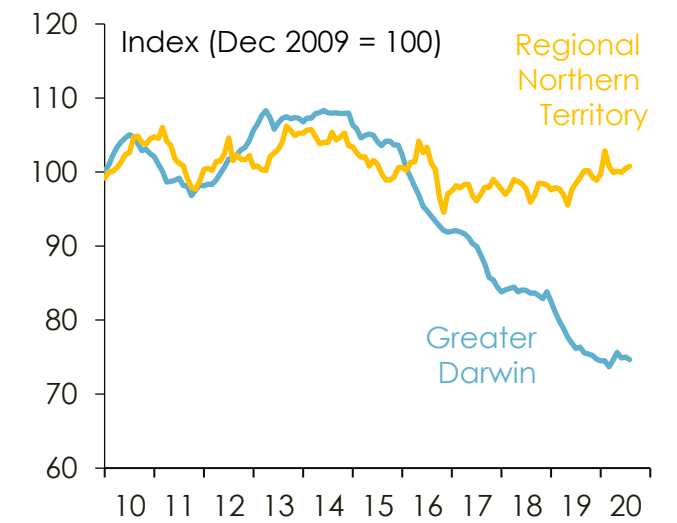
Queensland



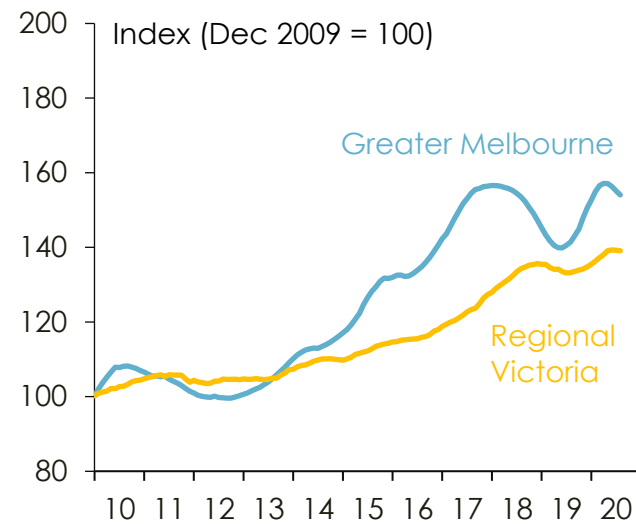
Western Australia



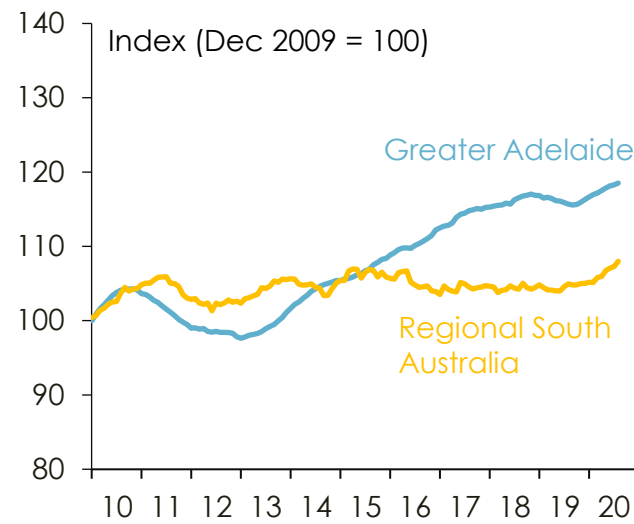
Northern Territory



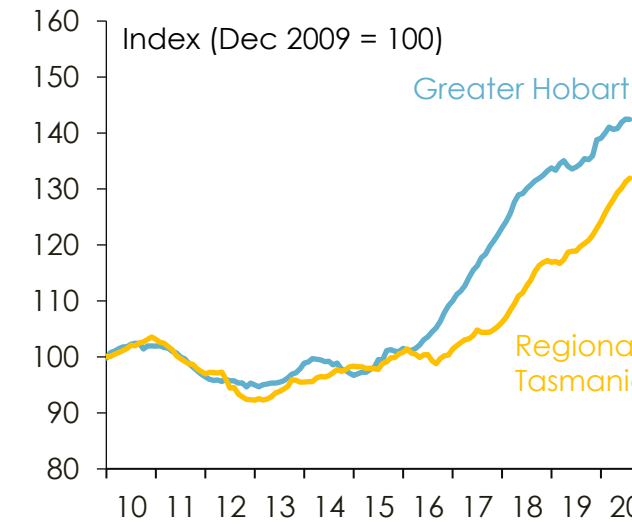
Victoria



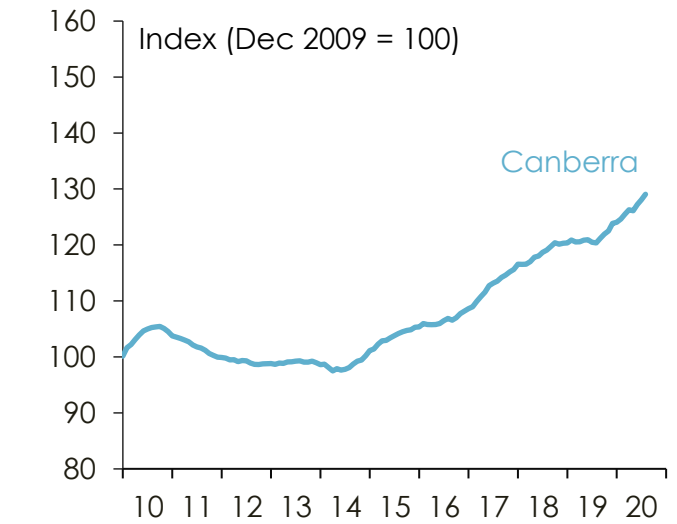
South Australia



Tasmania



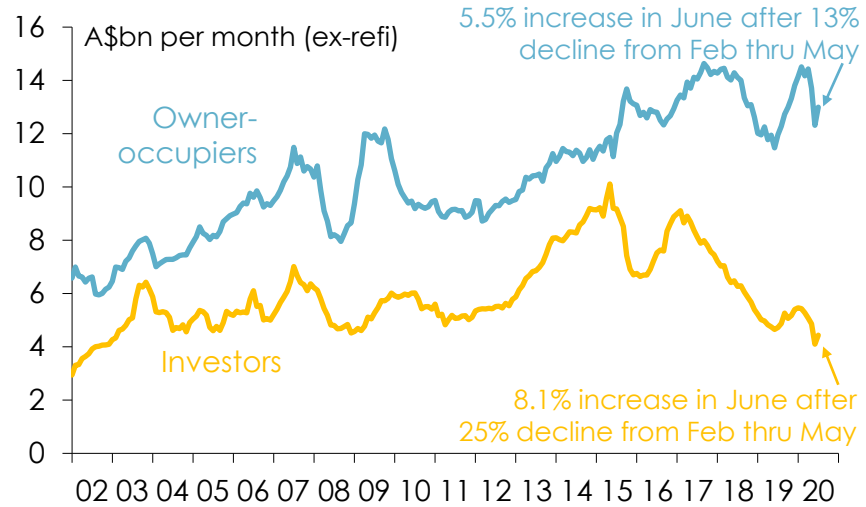
Australian Capital Territory



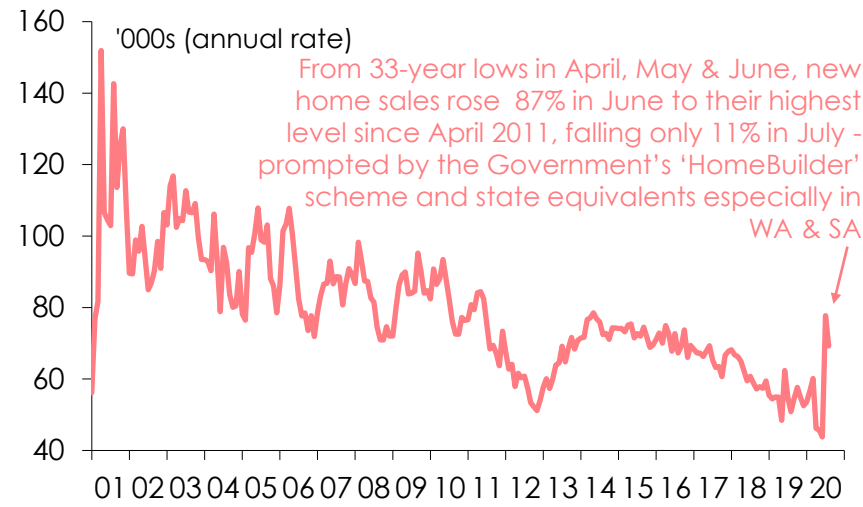
Note: The index of property prices measures the 'organic' change in underlying sales values by using a hedonic regression methodology that takes account of changes in the characteristics of properties being sold from month to month. Property price data are now seasonally adjusted. Latest data are for July 2020; August data released on 1st September. Source: CoreLogic.

Residential building activity will turn down over the next few months and longer-term will be adversely affected by sharply lower immigration

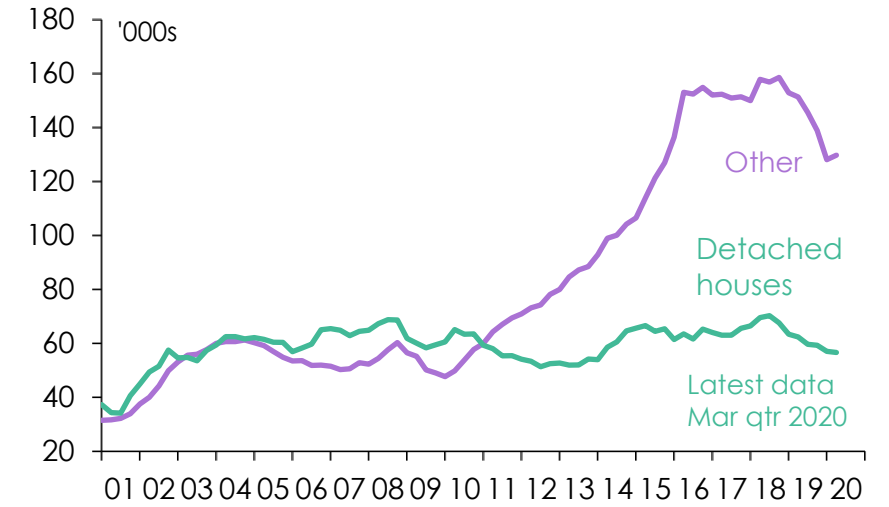
Housing finance commitments



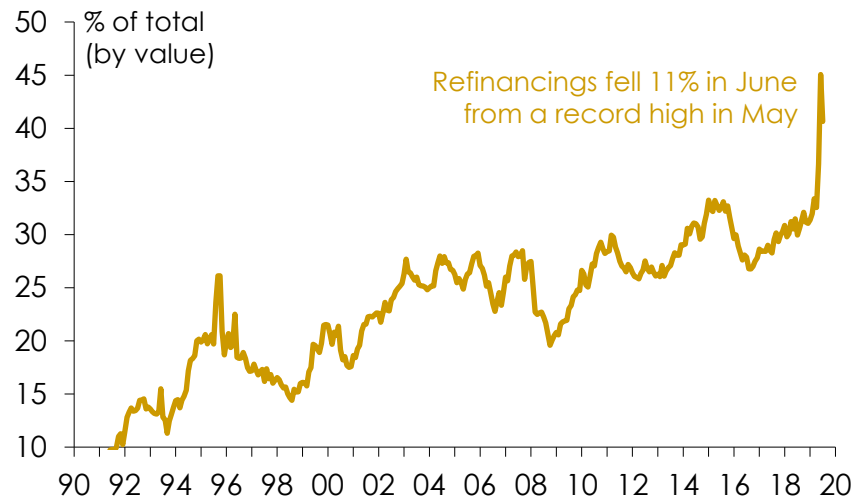
Large builders' new home sales



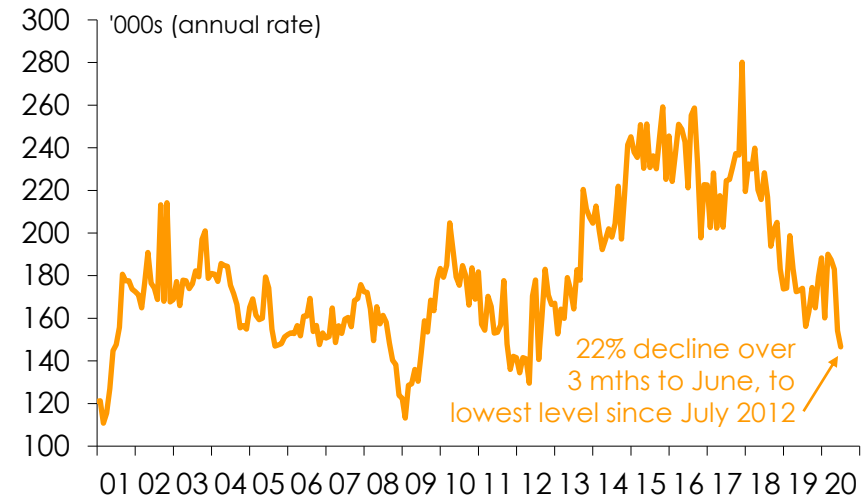
Dwellings under construction



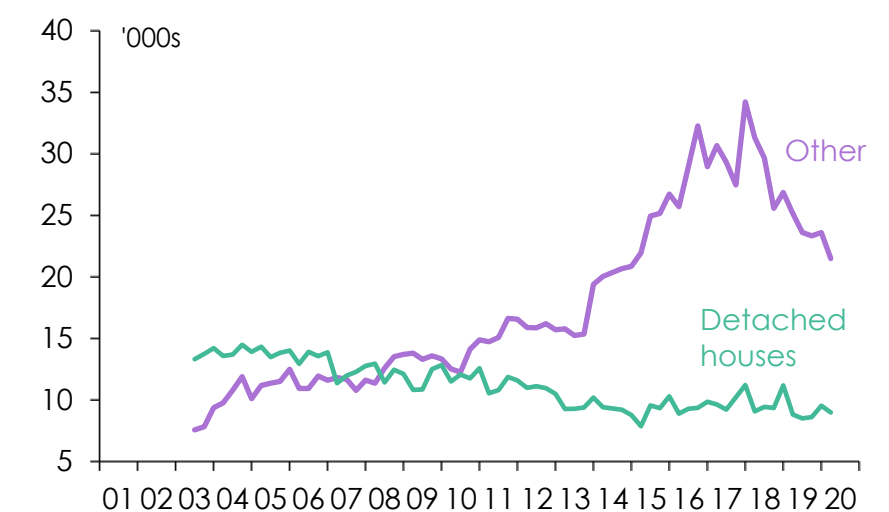
Refinancings as pc of total



Residential building approvals



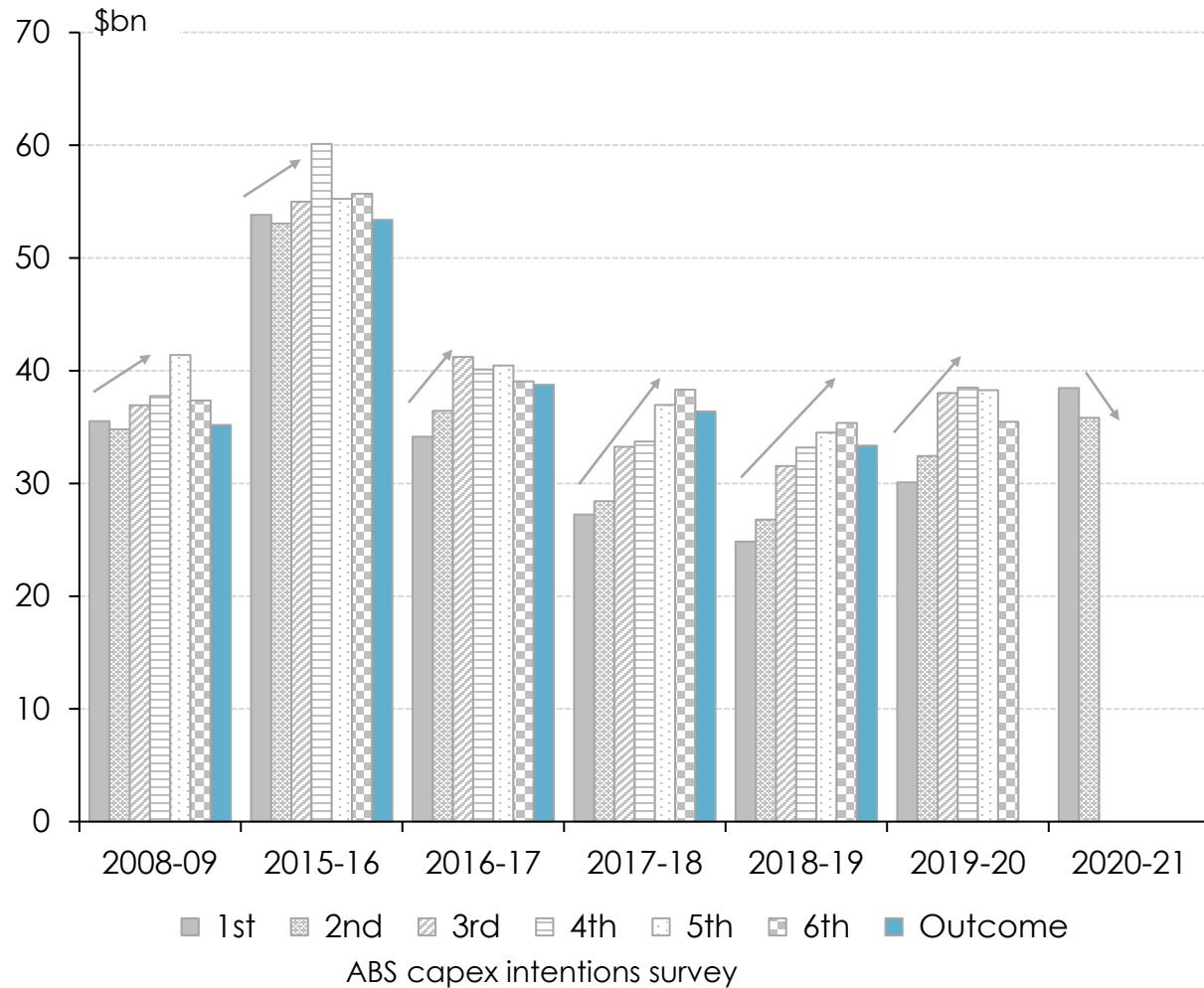
'Pipeline' of work yet to be done



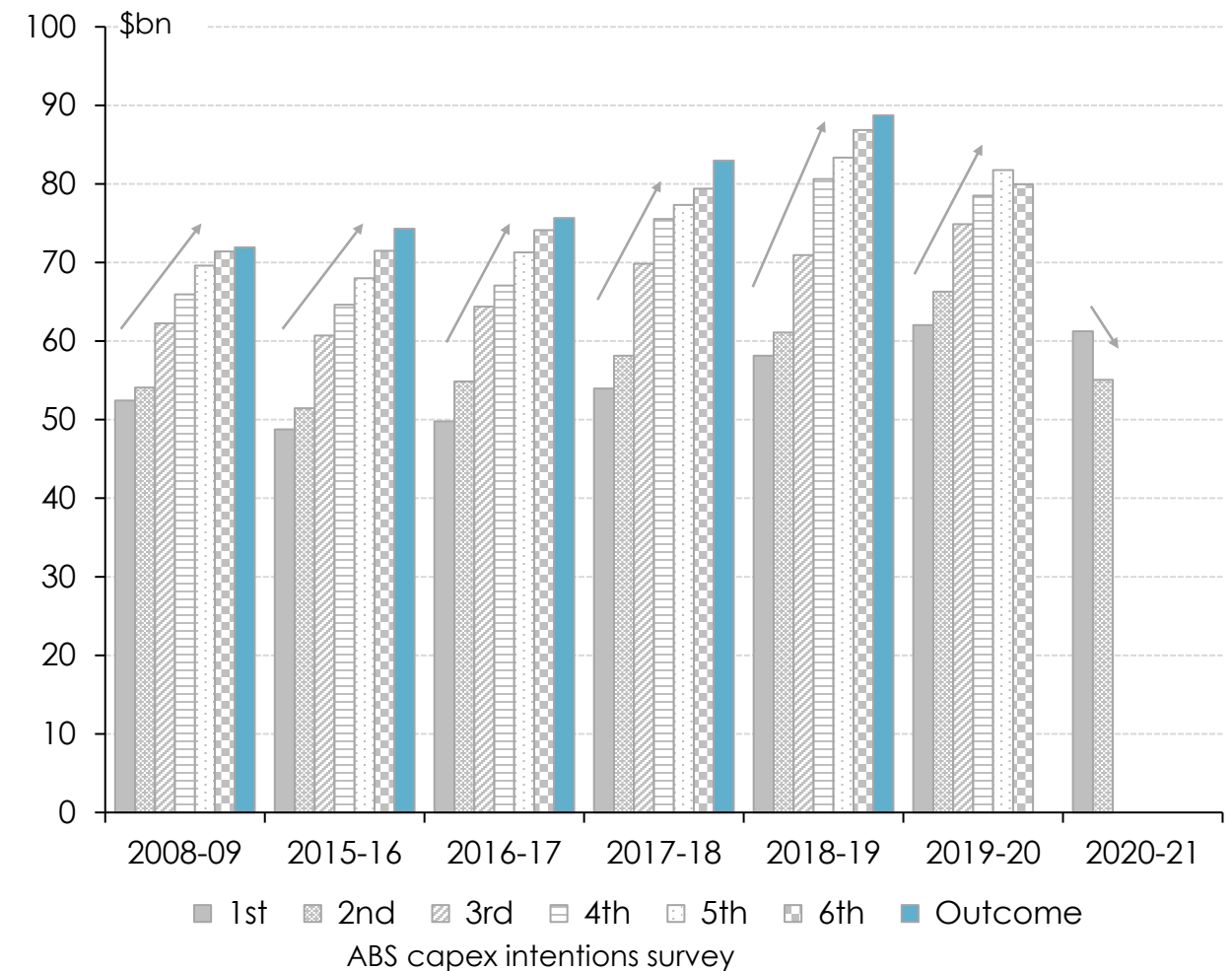
Note: 'New home sales' are of detached dwellings only and exclude small-scale builders. Sources: ABS; Housing Industry Association. July residential building approvals will be released on 1st September; July housing finance data on 9th September; and June quarter dwellings under construction and 'pipeline' data on 14th October.

Businesses have cut back their capital expenditure intentions for 2020-21, which is unusual for this time of year

Capital expenditure intentions - mining

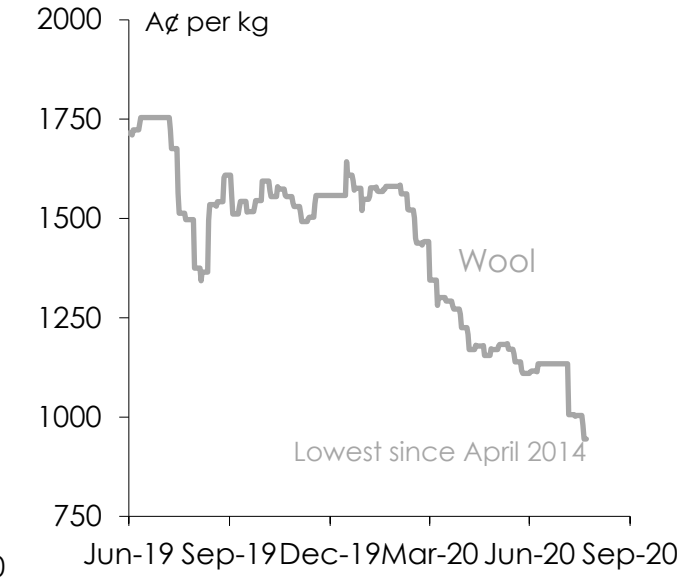
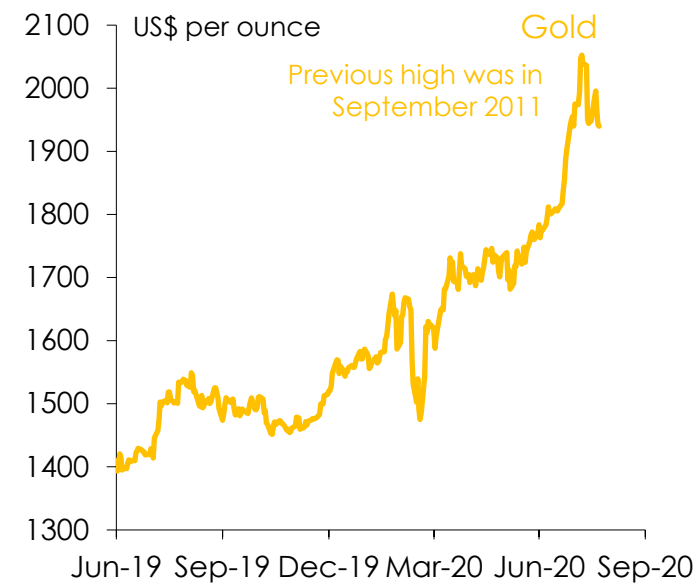
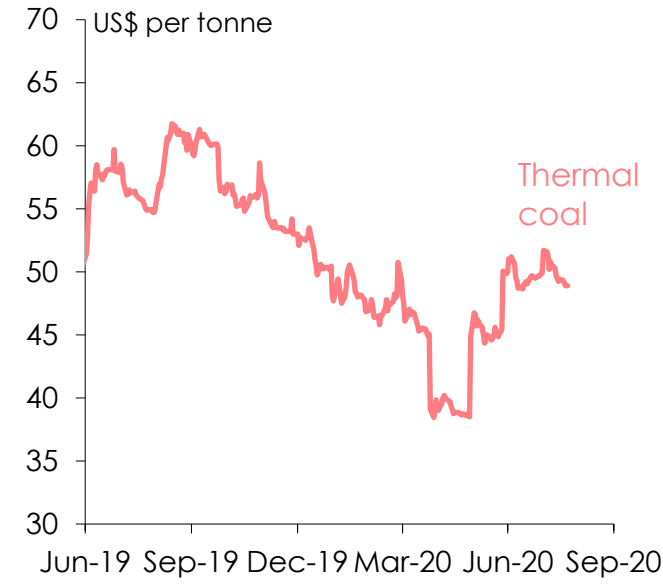
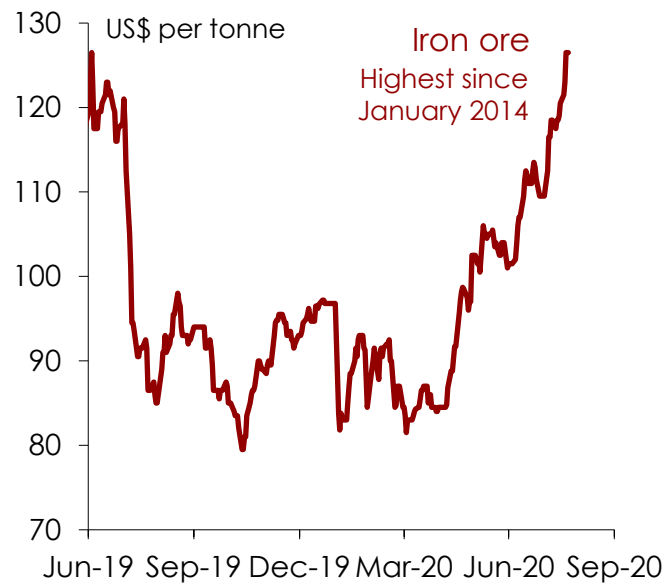
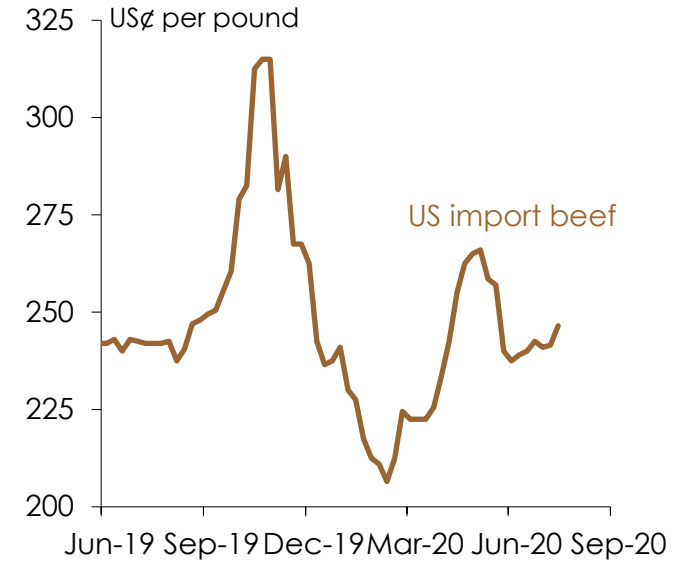
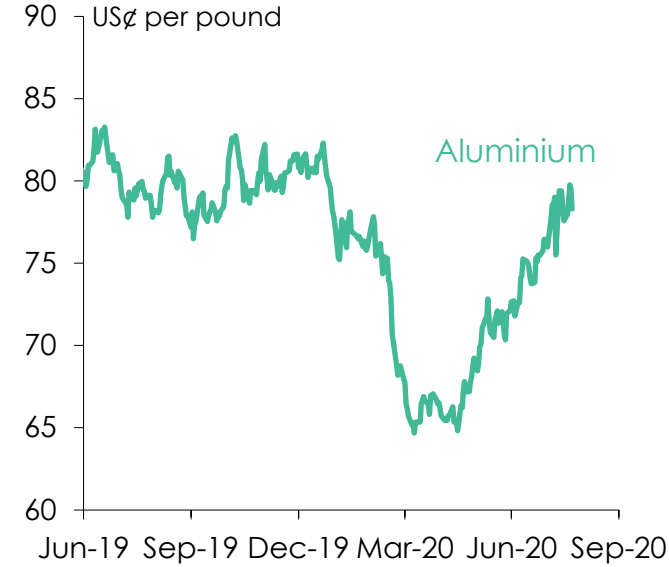
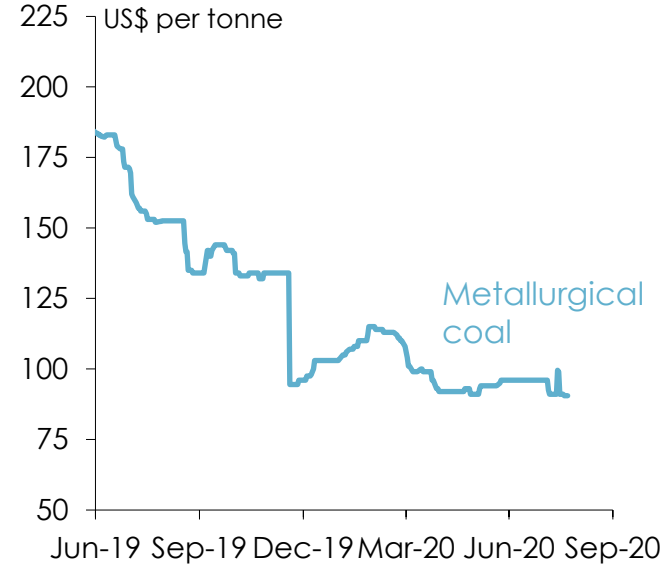
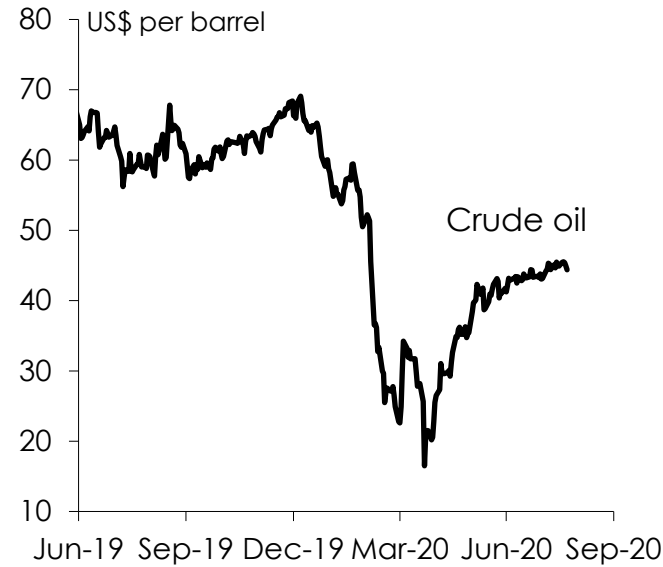


Capital expenditure intentions – non-mining



Note: The ABS conducts six surveys of business' capital expenditure intentions in respect of each financial year. The first is conducted in January & February prior to the commencement of the financial year, the second in May & June, the third in July & August of the financial year, the fourth in October & November, the fifth in January & February of the financial year, and the sixth in May & June. The outcome (actual capital expenditure in the financial year) is determined from the survey taken in July & August after the end of the financial year. The survey excludes businesses in the agriculture, forestry & fishing; and public administration and safety sectors, and also superannuation funds. The education & training, and health care & social assistance sectors have been included in the surveys since December 2019 but are not included in the above charts (to assist in comparisons). Source: ABS (next update 27th August).

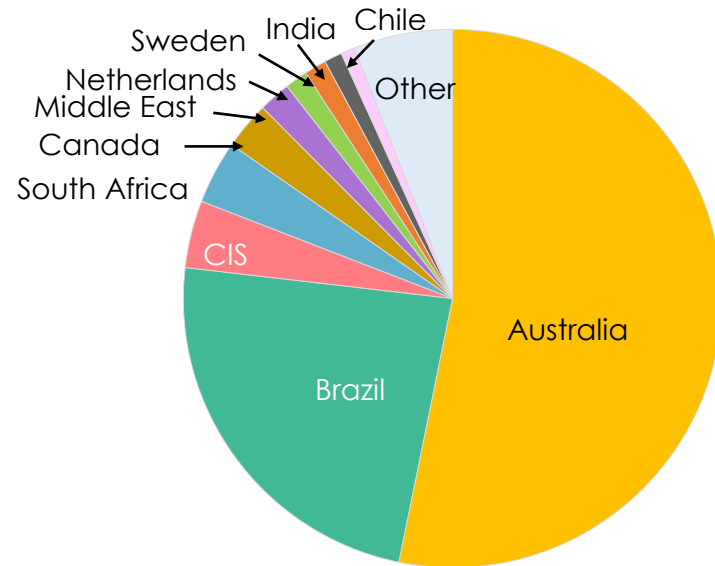
Iron ore prices rose another 5% this week, to be up 36% year-to-date, while gold prices are down 7³/₄% from their 10th August high



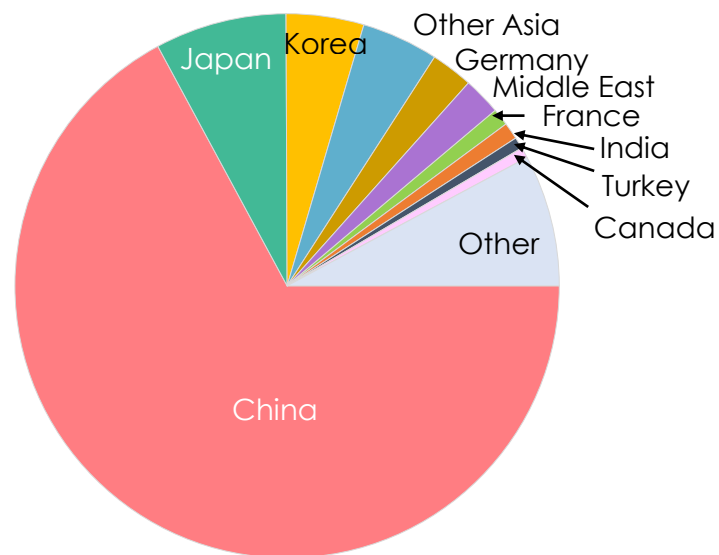
Sources: Refintiv Datastream; Meat & Livestock Australia; Australian Wool Innovation. See slide 83 for more on iron ore prices. Data up to 21st August.

The resilience of iron ore prices stems from strong Chinese demand, declining Chinese production and constraints on Brazilian exports

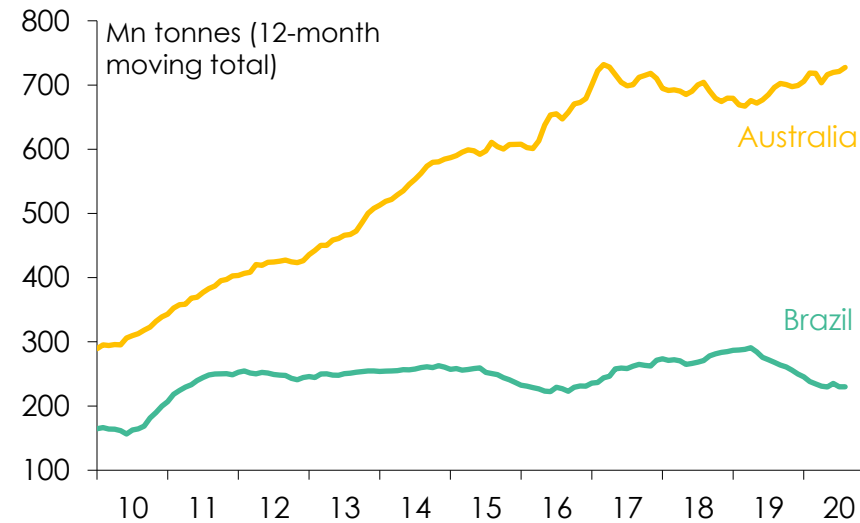
Iron ore exports, 2018



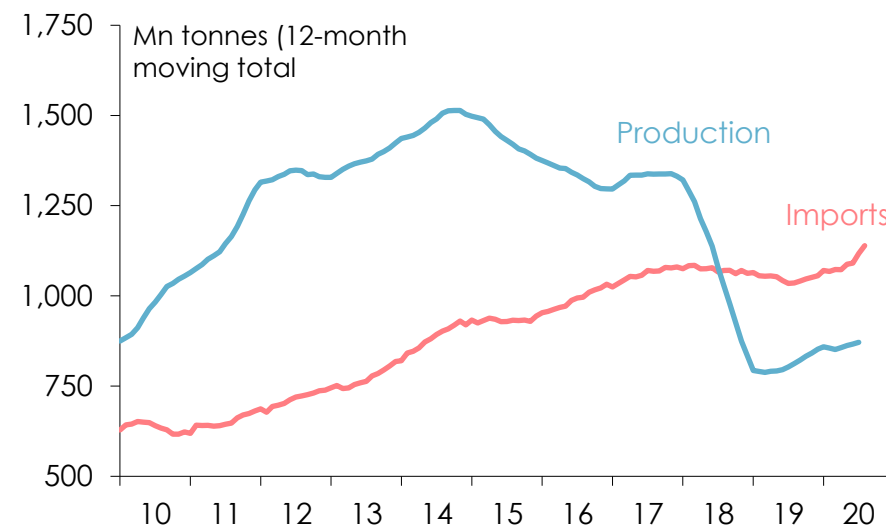
Iron ore imports, 2018



Australia & Brazil iron ore exports



China iron ore production & imports

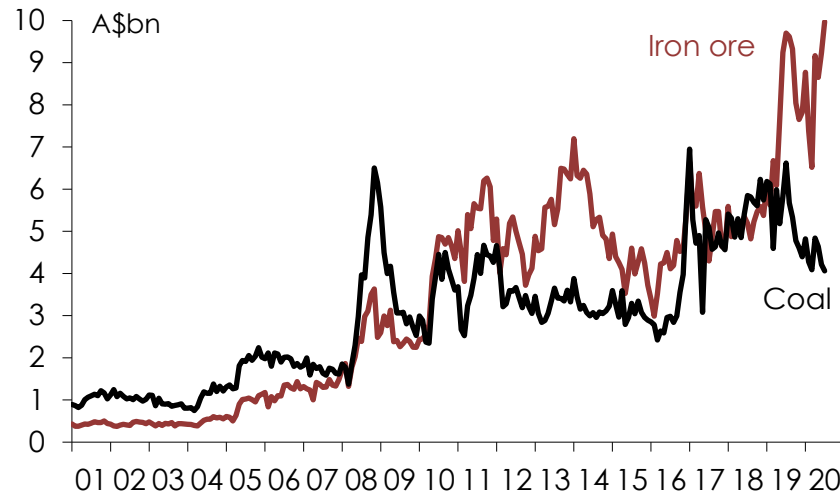


- ❑ The global seaborne iron ore trade is dominated by shipments from Australia & Brazil to China (which accounts for 53% of global steel production and 51% of steel use)
- ❑ Chinese iron ore production has fallen by more than 34% since 2017, largely because of rapidly declining quality – forcing Chinese steel mills to become more dependent on imports
- ❑ Brazilian production and exports have been curtailed by a series of tailing dam collapses over the past five years, and more recently by Covid-19 outbreaks at four large mine sites
- ❑ China is seeking to develop other sources in West Africa although there are big logistical hurdles to be overcome there
- ❑ BHP said this week that iron ore prices “can be expected to ease as Brazilian supply recovers” and that “in the second half of the 2020s, China’s demand for iron ore is expected to be lower than today as crude steel production plateaus and the scrap-to-steel ratio rises”

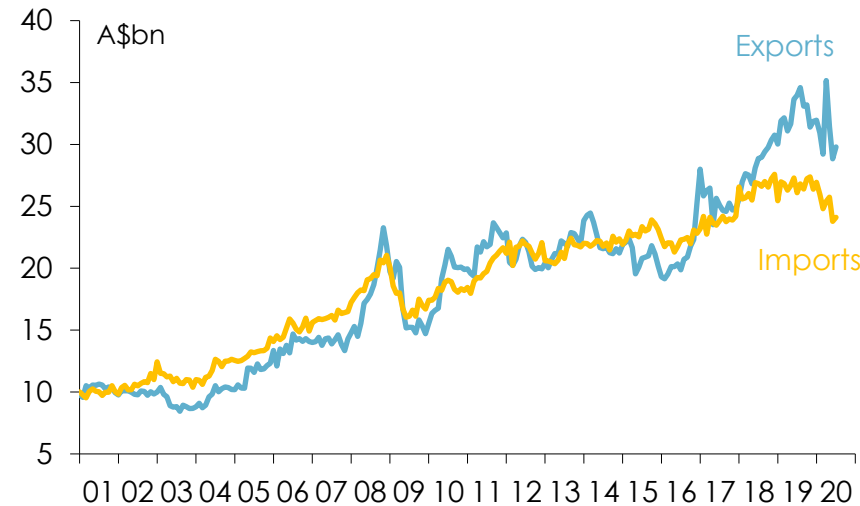
Note: Export volume data for Australia and Brazil derived by dividing export values (in US\$) from ABS and IGBE by the average US\$ price of Chinese iron ore imports.
Sources: World Steel Association; China National Bureau of Statistics; China General Administration of Customs; Refinitiv Datastream; ABS; IGBE; BHP; Corinna.

Exports of most items except iron ore have fallen since March, but that's been offset by big falls in imports, especially services & consumer goods

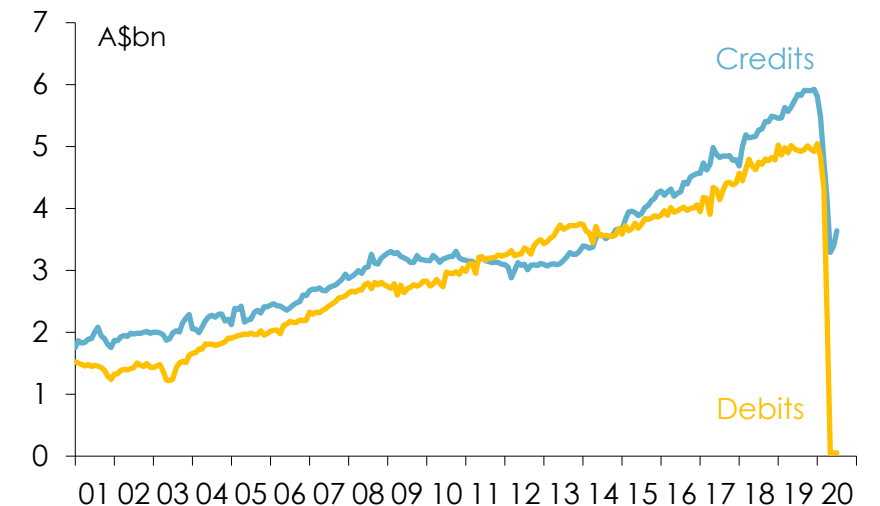
Iron ore and coal exports



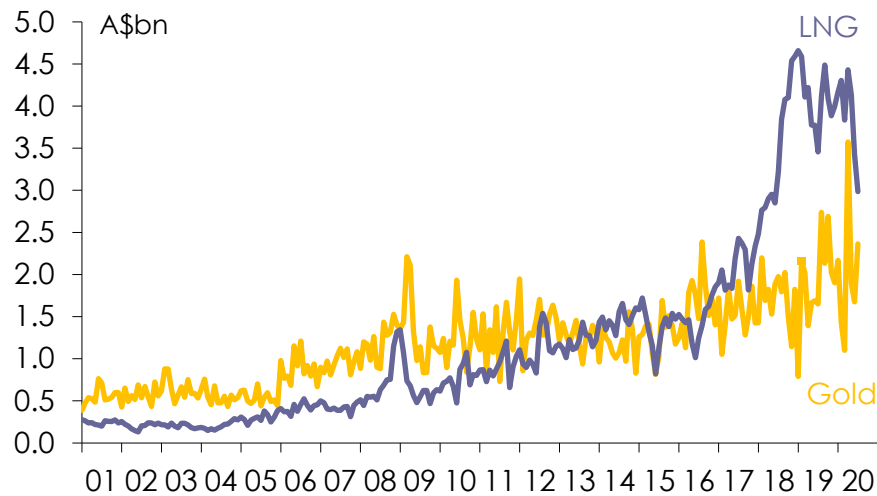
Merchandise exports and imports



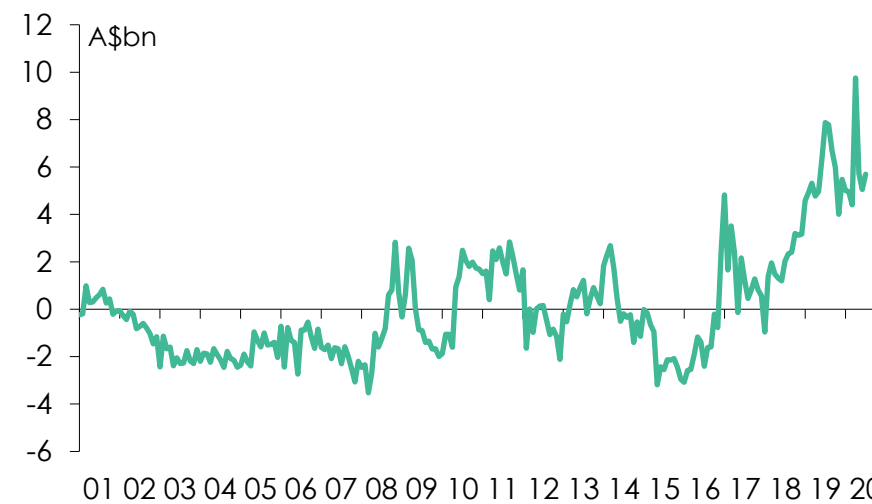
Tourism-related services trade



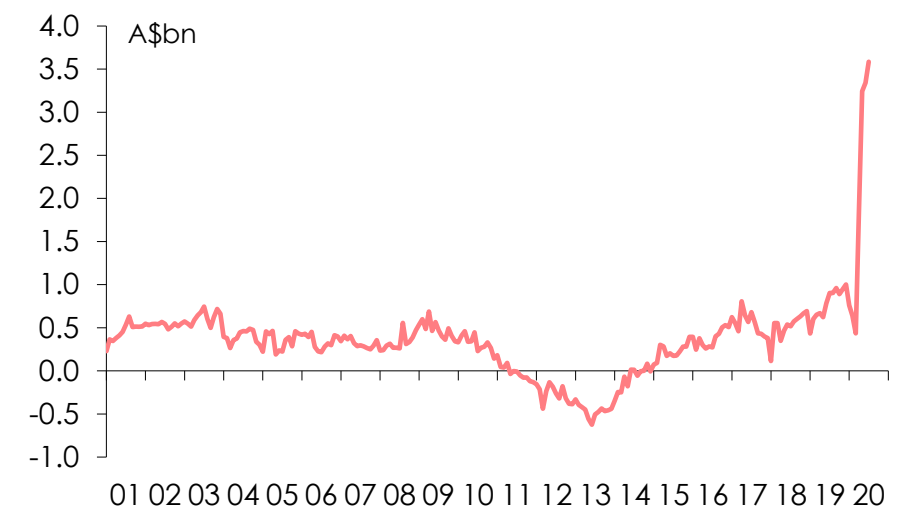
LNG and gold exports



Merchandise trade balance



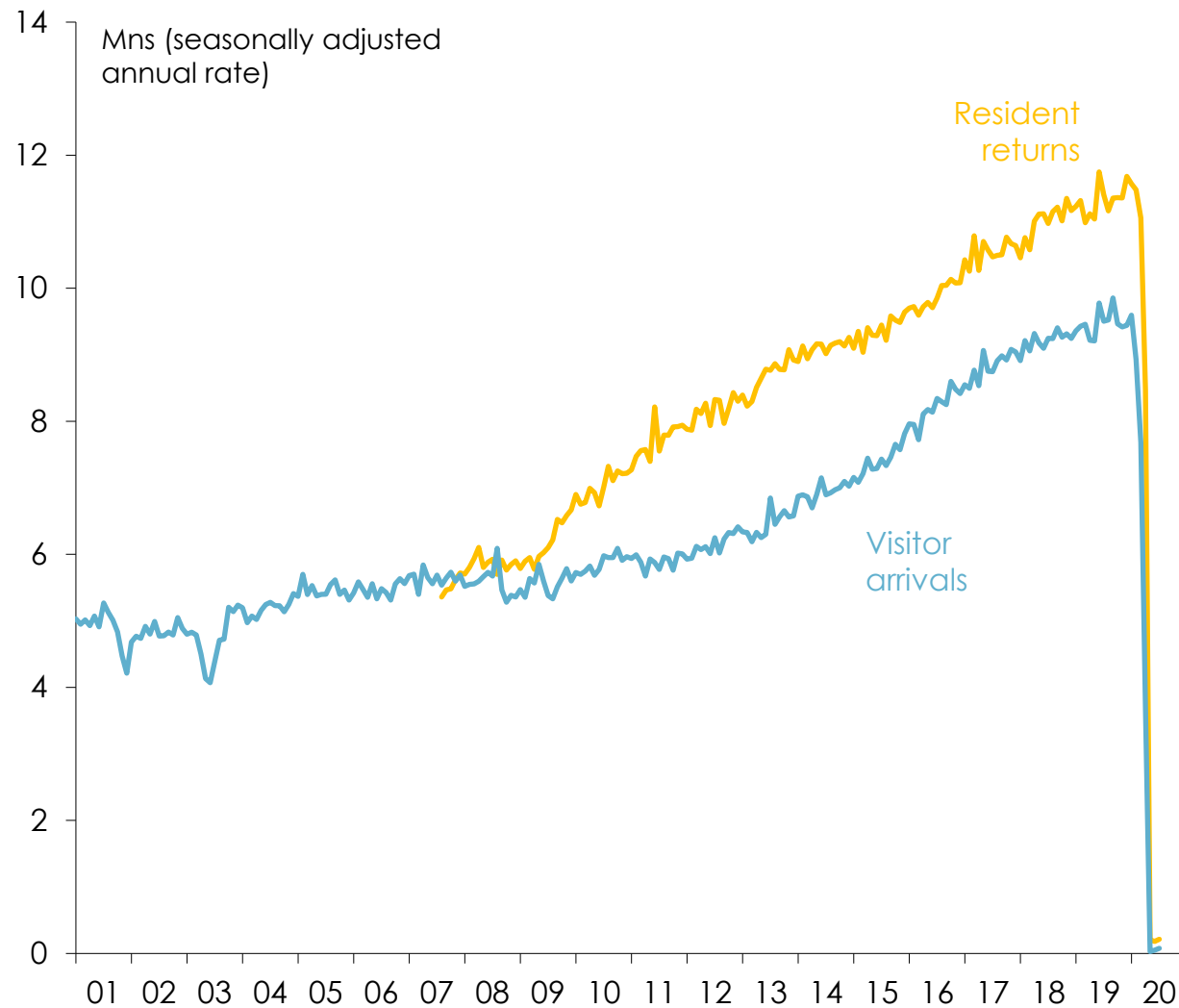
Tourism services trade balance



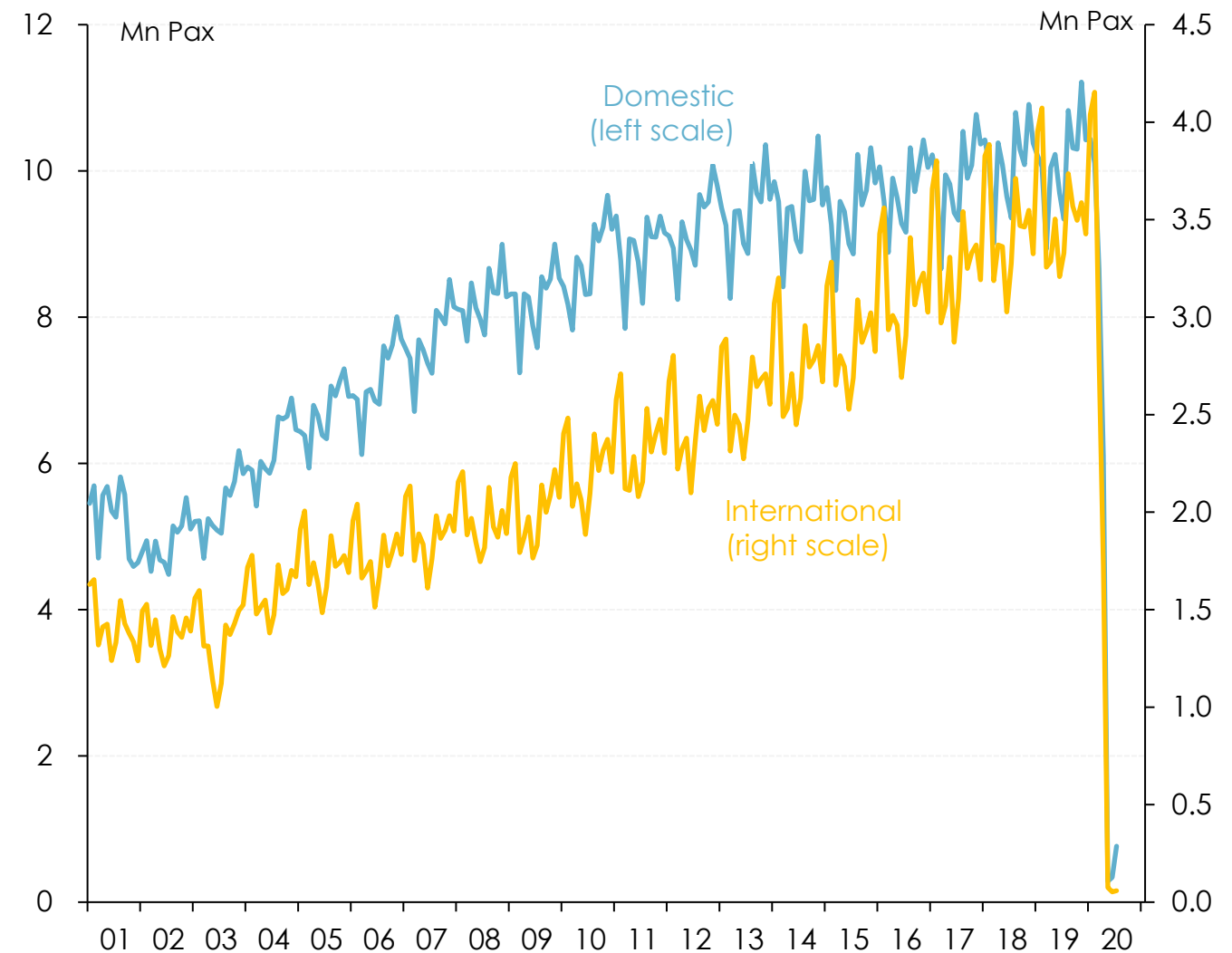
Source: ABS. Latest data are for June; data will be released on 3rd September.

Tourism and aviation have been severely impacted by the closure of international and most state borders

Short-term visitor arrivals and resident returns



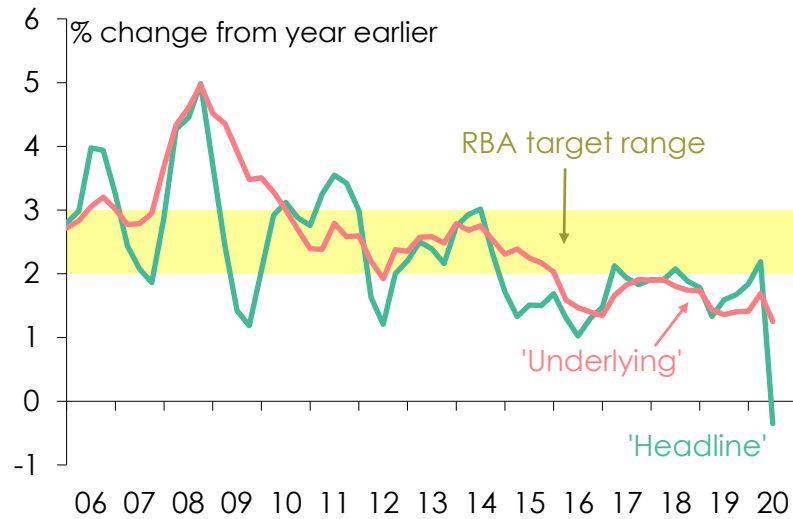
Airport passenger movements



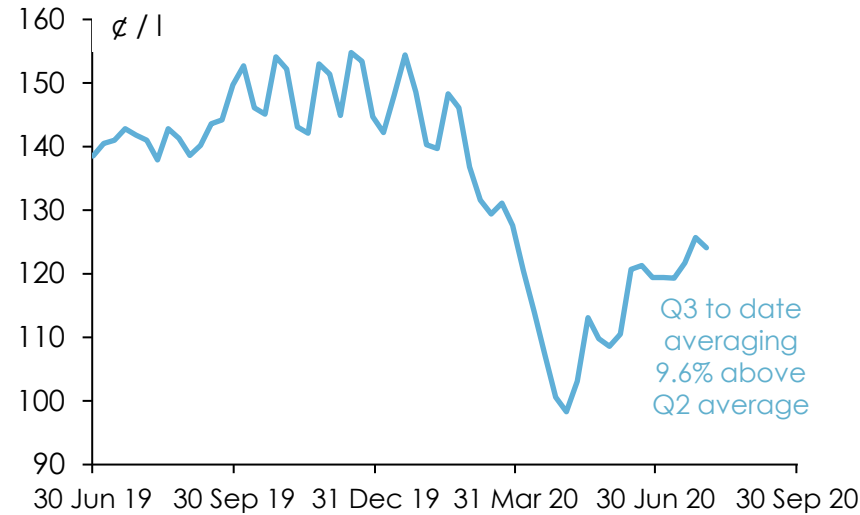
Note: The ABS has suspended publication of seasonally adjusted estimates of short-term visitor arrivals and resident returns, so published original estimates for April 2020 (and beyond) have been seasonally adjusted by Corinna using the same seasonal factors as for the corresponding month of 2019. Latest BITRE data on airport passenger movements are for May; June data have been extrapolated from data for Sydney Airport published by Sydney Airport Ltd.
Sources: ABS; Bureau of Industry, Transport and Resources Economics (BITRE); Sydney Airport Ltd; Corinna.

Inflation turned negative, temporarily, in Q2 and will remain below the RBA's target until at least the second half of 2021

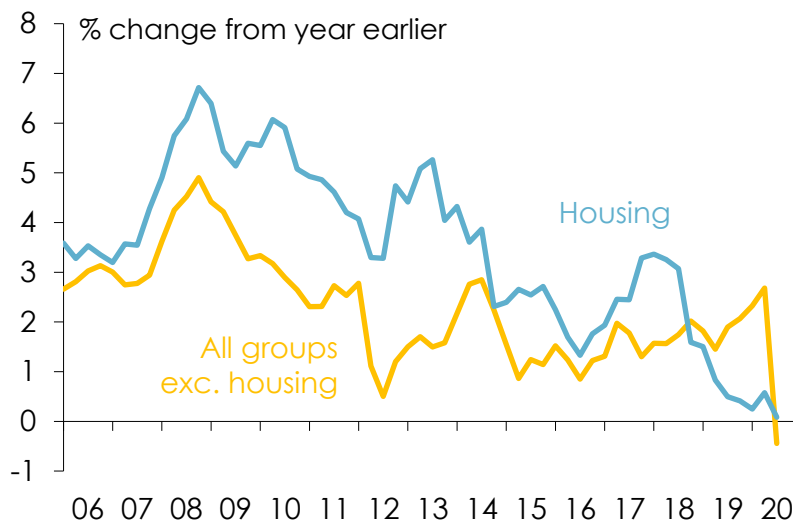
Consumer prices



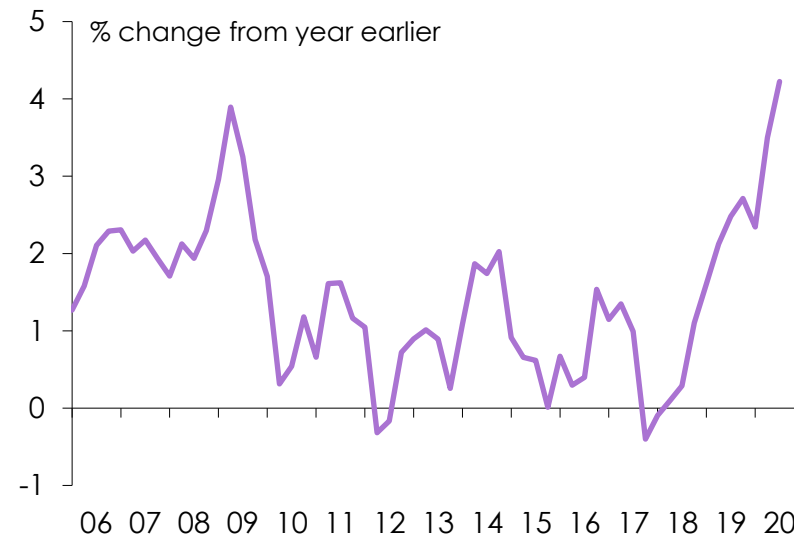
Retail petrol prices



Housing costs in the CPI



Retail sales implicit price deflator

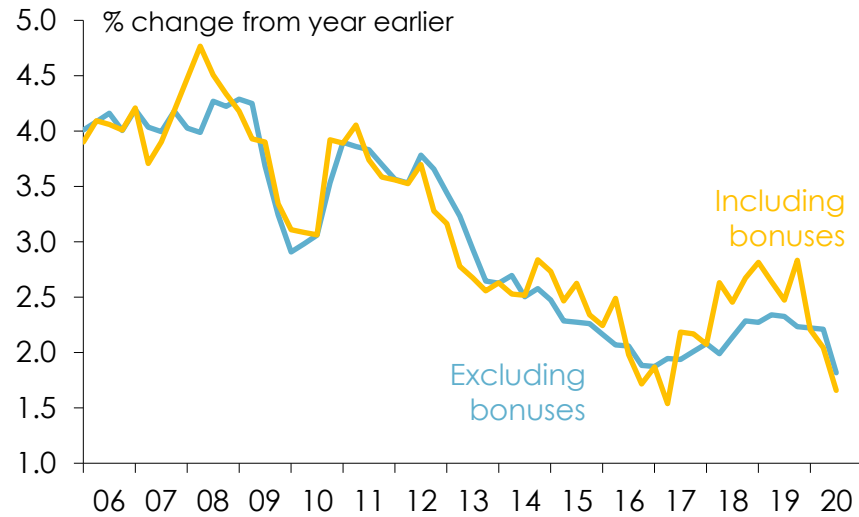


- ❑ The CPI fell (by 1.9%) in the June quarter, the largest quarterly decline since 1931 and only the 11th decline in 60 years
- ❑ The annual 'headline' inflation rate fell to -0.3%, the lowest since Q3 1997 (which was artificially induced by falling mortgage rates, which are no longer included in the CPI), or otherwise since Q3 1944
- ❑ The fall in the CPI in Q2 was largely due to the provision of free child care between 6th April and 28th June, which subtracted 1.1pc pts from the CPI; and a 19% fall in petrol prices, which subtracted 0.7 pc pts
 - both of these items will reverse in Q3
- ❑ 'Underlying' inflation was flat in Q2 and 1.3% from Q2 last year – it's now been below the RBA's target for more than four years
- ❑ In contrast to the CPI, the retail sales price deflator rose 1.2% in Q2 to be 4.2% higher than in Q2 2019 – the biggest annual increase since Q2 2001 – largely driven by a 6.7% increase in food prices

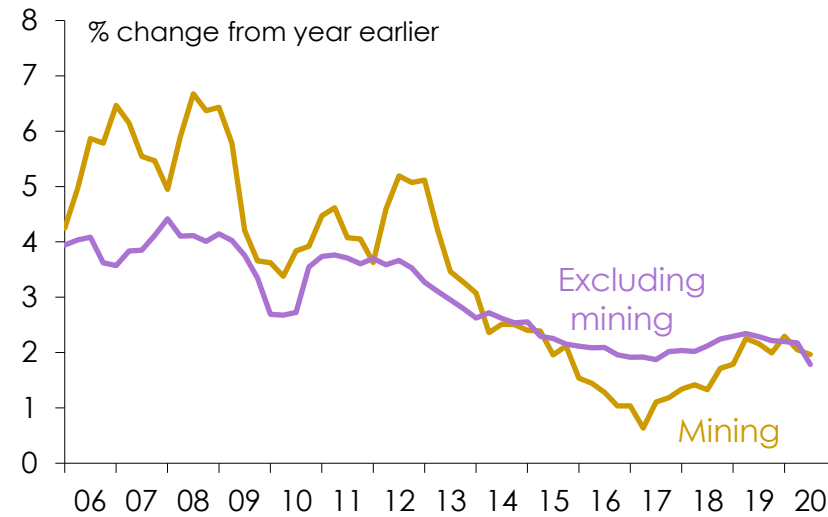
Note: 'Underlying' inflation is the average of the weighted median and trimmed mean CPIs. Wage price indices exclude bonuses. Sources: ABS; Australian Institute of Petroleum. The September quarter (Q3) CPI will be released on 28th October.

Wages growth over the year to the June quarter was the lowest for at least 23 years

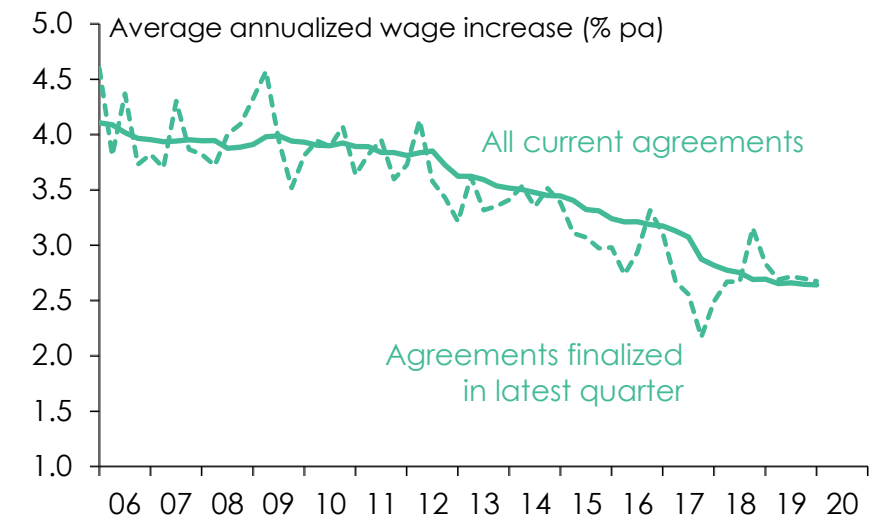
Wage price index – all sectors



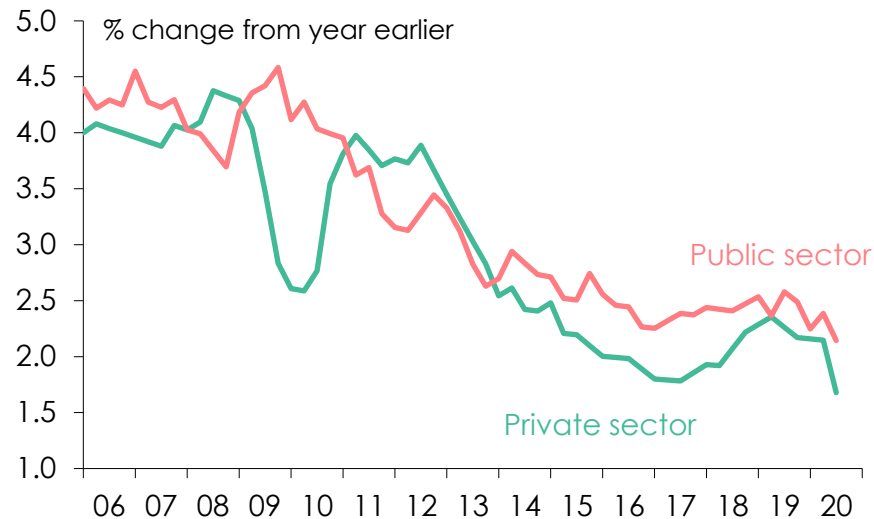
WPI by industry



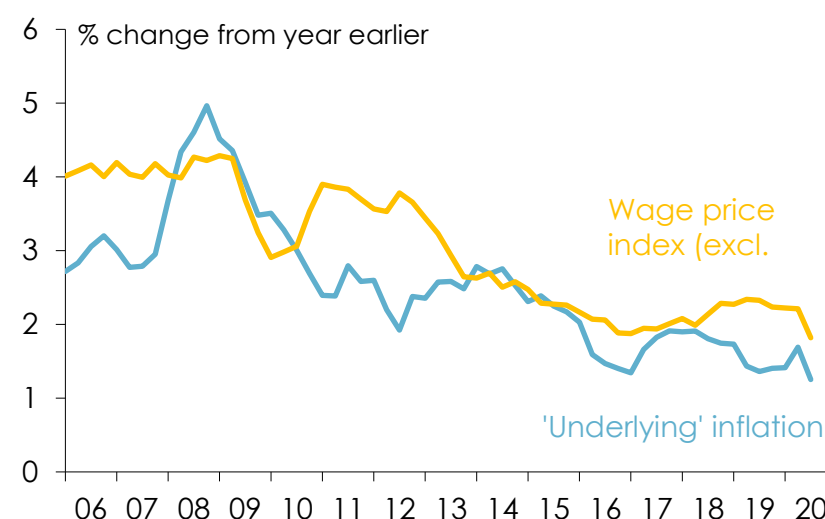
Enterprise bargaining agreements



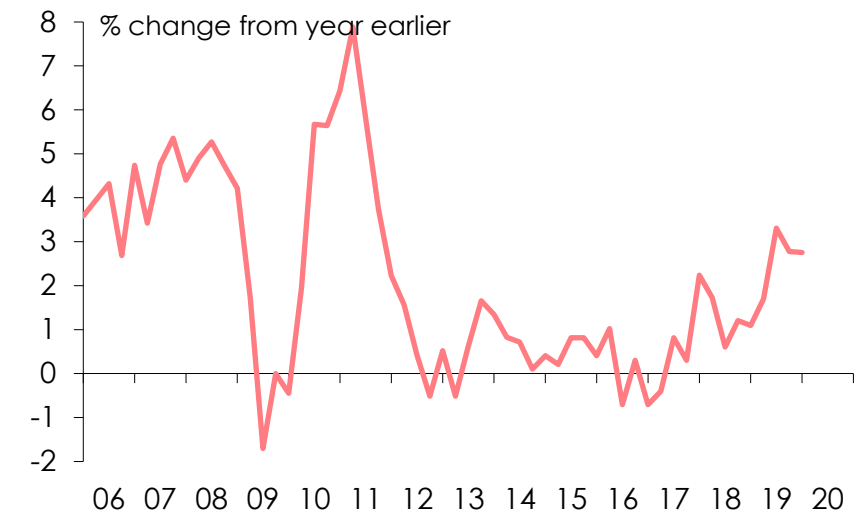
WPI – private vs public sectors



WPI and 'underlying' CPI inflation



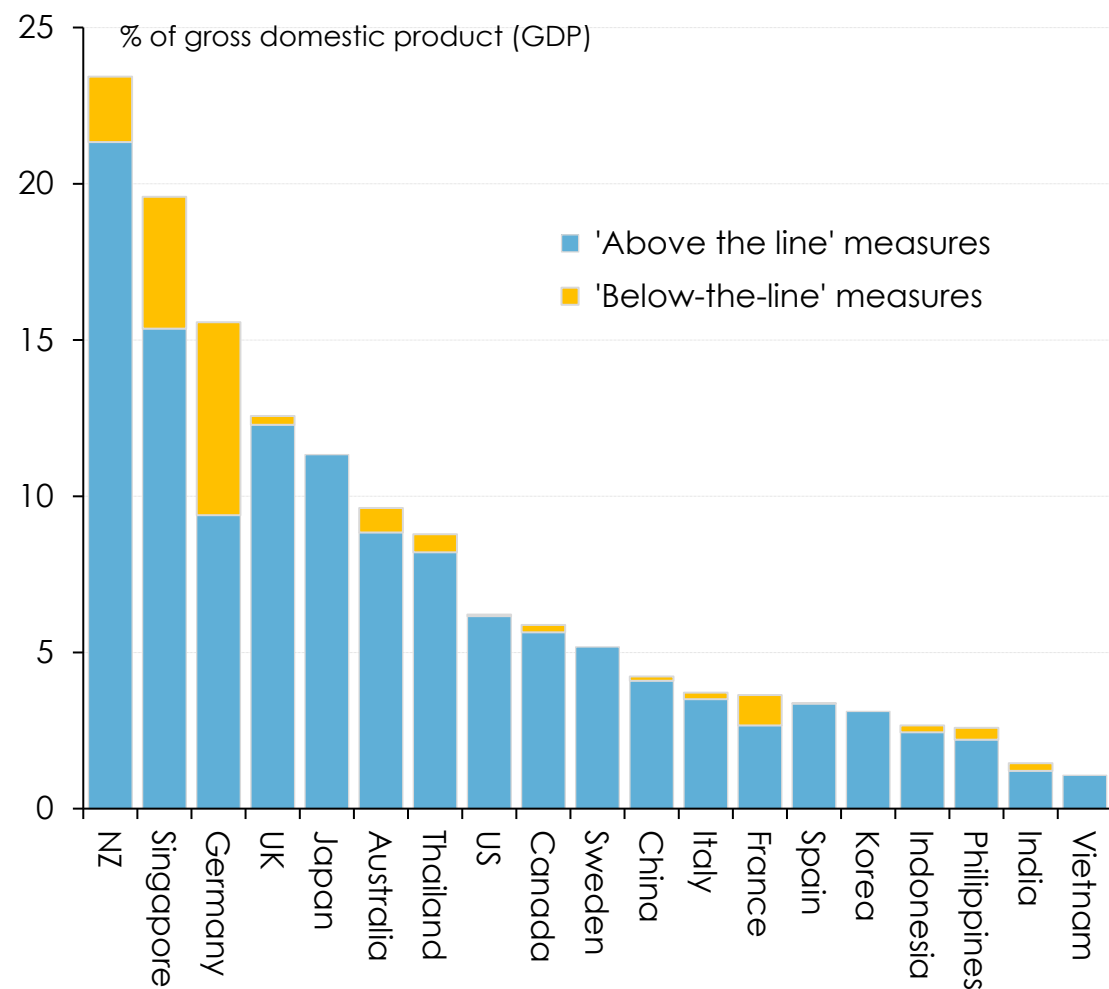
Unit labour costs



Note: Unit labour costs is compensation of employees (including fringe benefits and social insurance contributions) per hour worked divided by (real) gross value added per hour worked (ie, labour productivity) for the non-farm sector. Source: ABS; Attorney-General's Department. September quarter WPI data will be released on 18th November.

The Australian Government's policy measures have been large by historical and international standards

Fiscal policy responses to Covid-19 – selected 'advanced' & Asia-Pacific economies

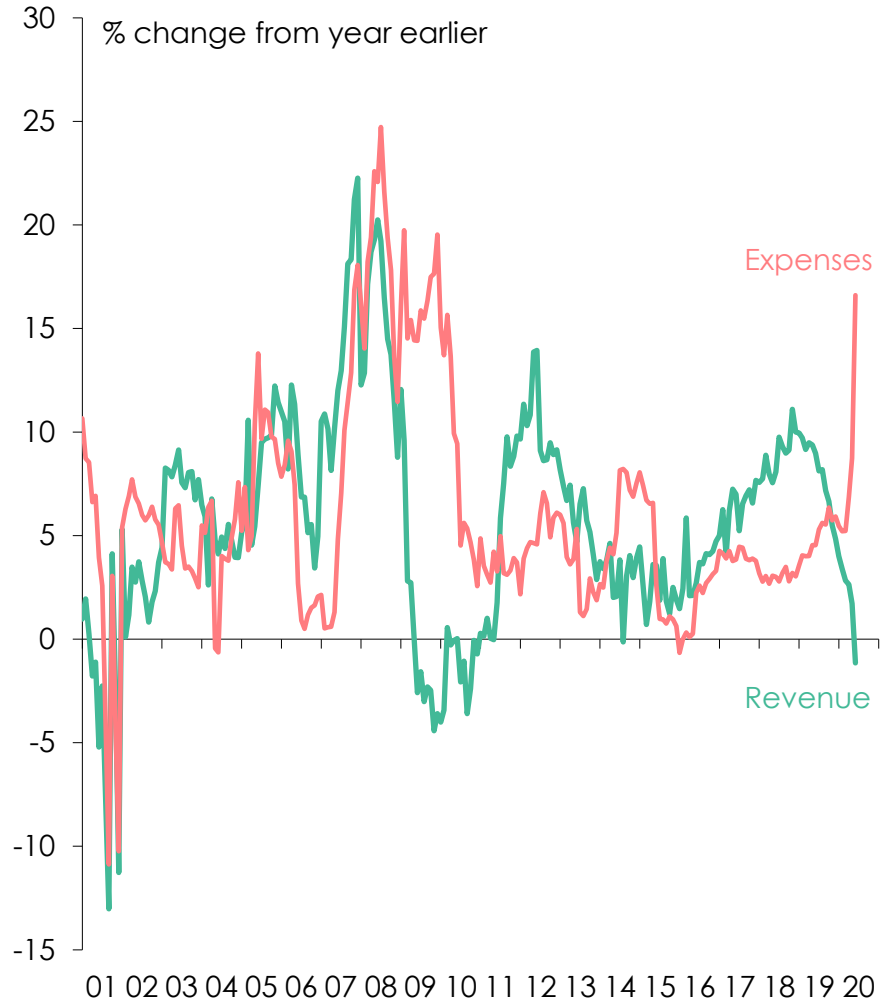


Note: 'Above the line' measures comprise additional or accelerated spending and deferred or foregone revenue. 'Below the line' measures comprise equity injections, loans, asset purchases and debt assumptions, but do not include loan guarantees or other contingent liabilities. Source: IMF, *Fiscal Monitor: Database of Country Fiscal Measures in Response to the COVID-19 Pandemic*, 24th June 2020.

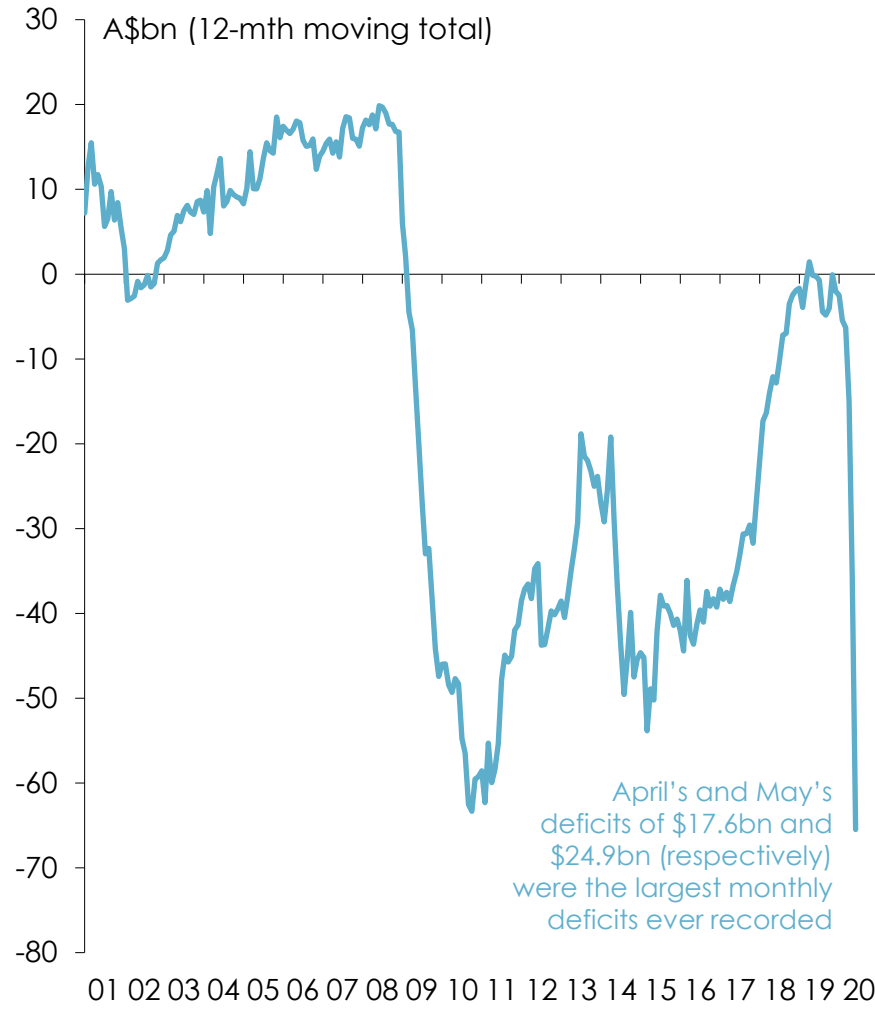
- ❑ Policy measures announced thus far by the Australian Government total \$192bn over FYs 2019-20 and 2020-21 or about 9% of one year's GDP – which is large by international standards (and double what was done during the GFC)
 - including an additional \$15bn for Jobkeeper announced this week in response to the 'lockdown' in Victoria
- ❑ Principal objectives of policy measures have been to –
 - maximize the 'survival prospects' of businesses affected by shutdowns or ongoing restrictions
 - minimize the impact of the shutdown on employment
 - provide additional income support to those who lose their jobs
 - strengthen the capacity of the health care system to cope with increased demand
- ❑ Policy measures have been designed to be 'simple' to administer, and to make greatest use of existing systems rather than having to create new mechanisms
 - which resulted in some anomalies initially (eg with the level of Jobkeeper payments to part-time workers) though most of these have now been corrected
- ❑ Policy measures also designed to be readily 'switched off' once the need for them has passed

The Australian Government's 'bottom line' has begun to deteriorate sharply, and ...

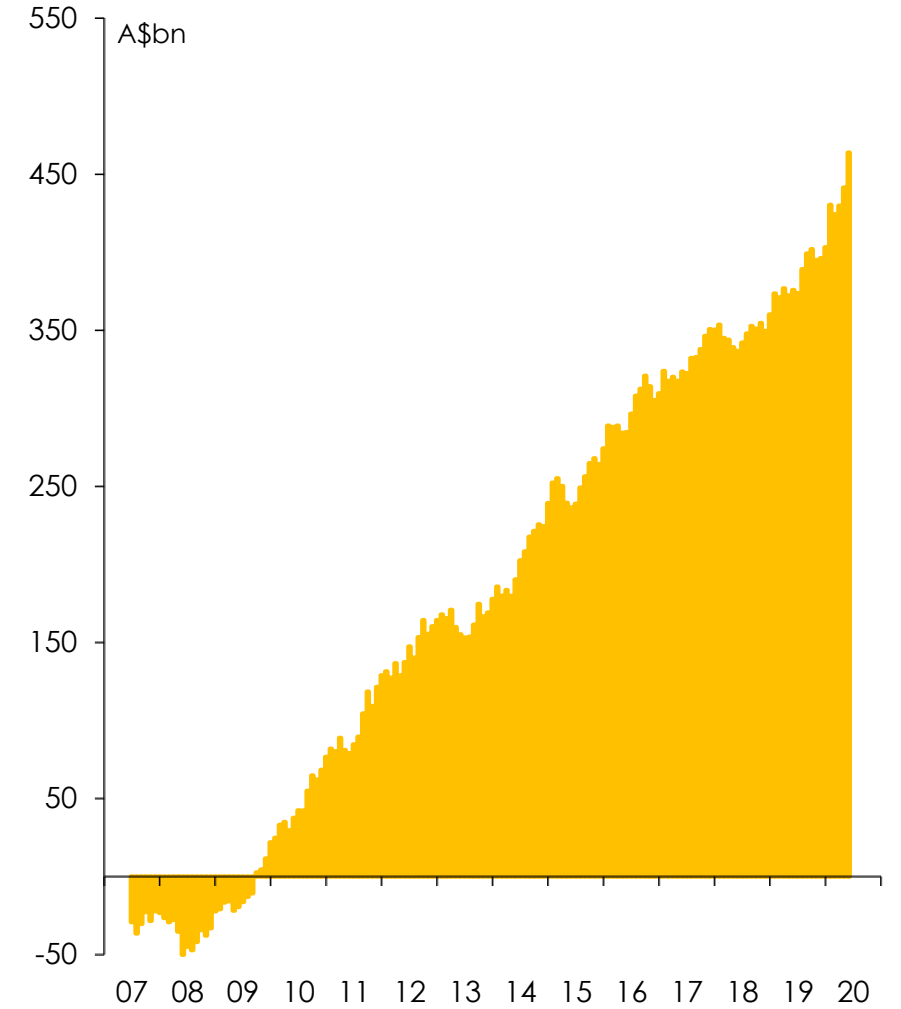
Australian Government revenue and expenses



Australian Government 'underlying' cash balance



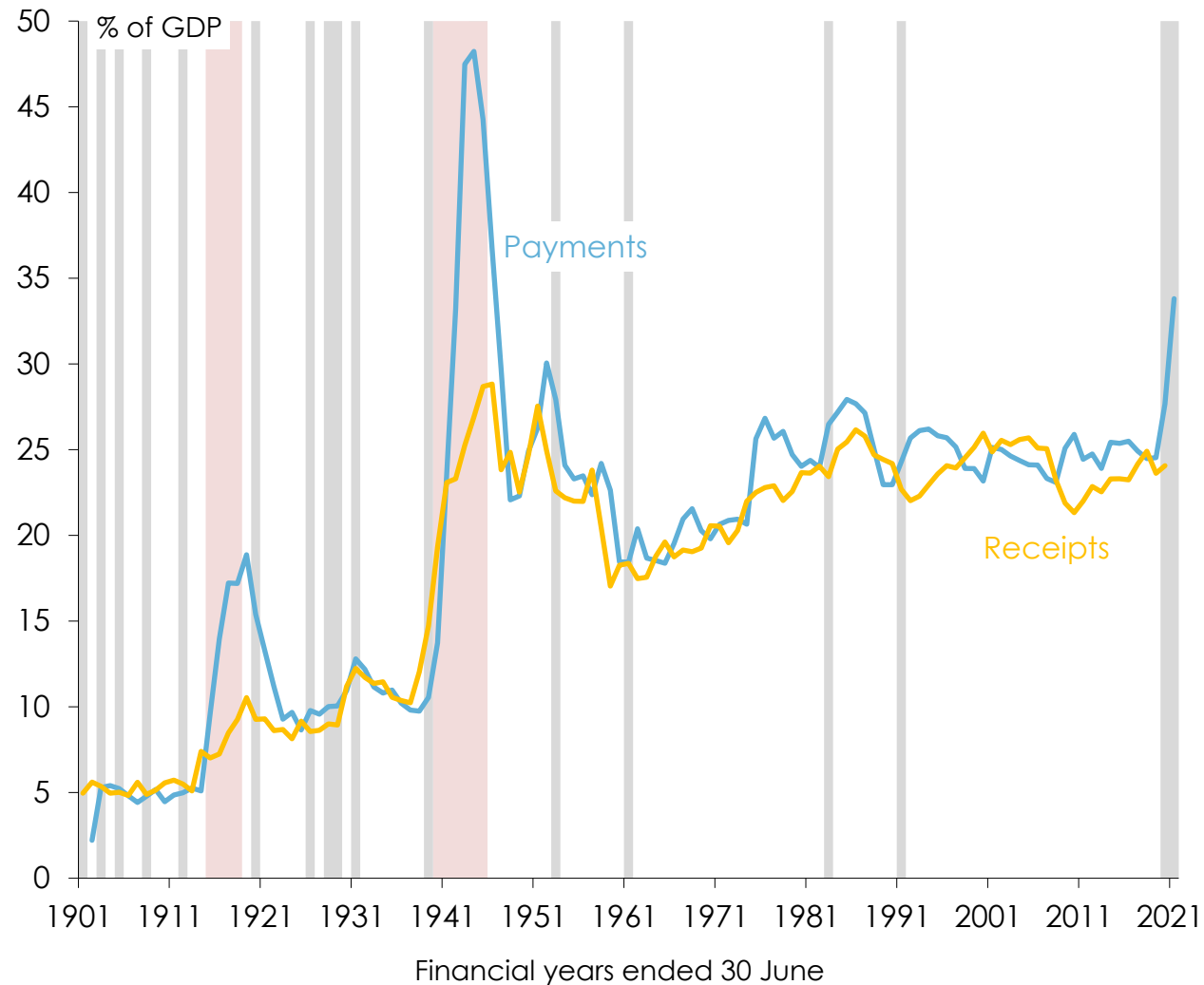
Australian Government net debt



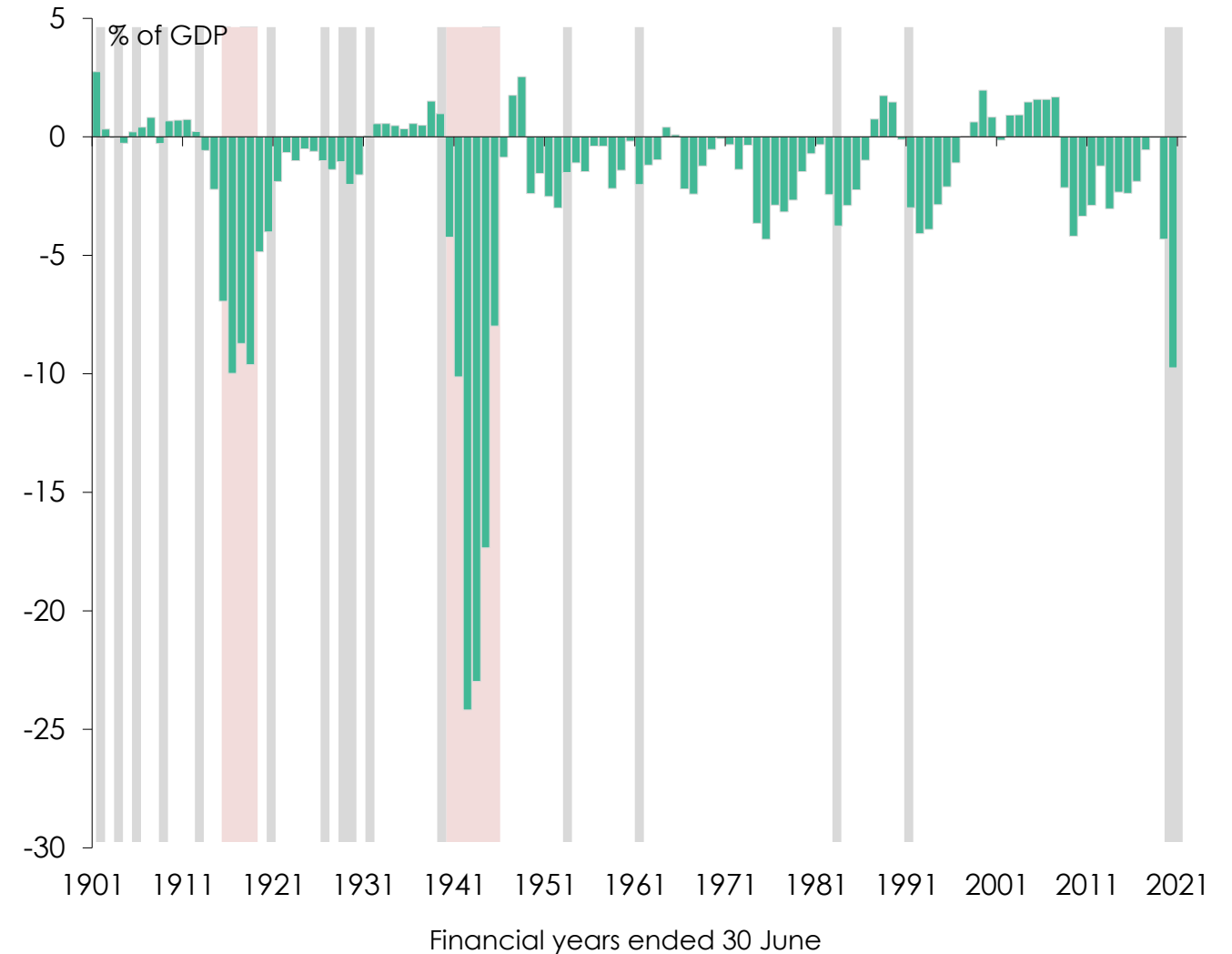
Note: Revenue and expenses are accrual accounting items. The 'underlying' cash balance is (cash) receipts minus payments, excluding transactions in financial assets for policy purposes and net earnings of the Future Fund. Net debt is total interest-bearing liabilities (government securities, deposits, loans and other borrowing) minus cash and deposits, advances paid, and (interest-bearing) loans, placements and investments. Source: Department of Finance.

... blew out to \$86bn in 2019-20, and is forecast to widen to \$185bn (9.7% of GDP) in 2020-21, the largest deficit as a pc of GDP since WW II

Australian Government receipts and payments



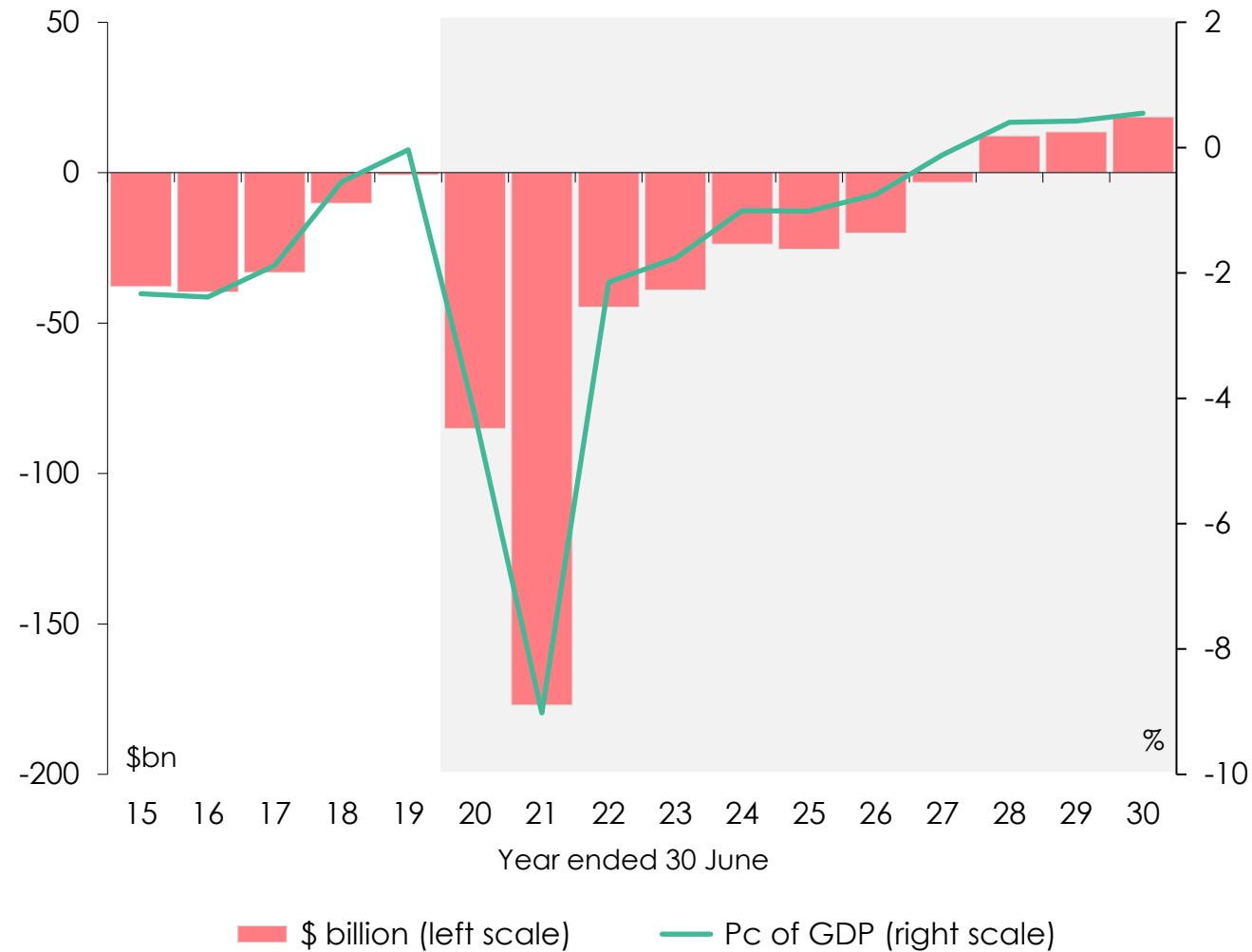
Australian Government budget deficit or surplus



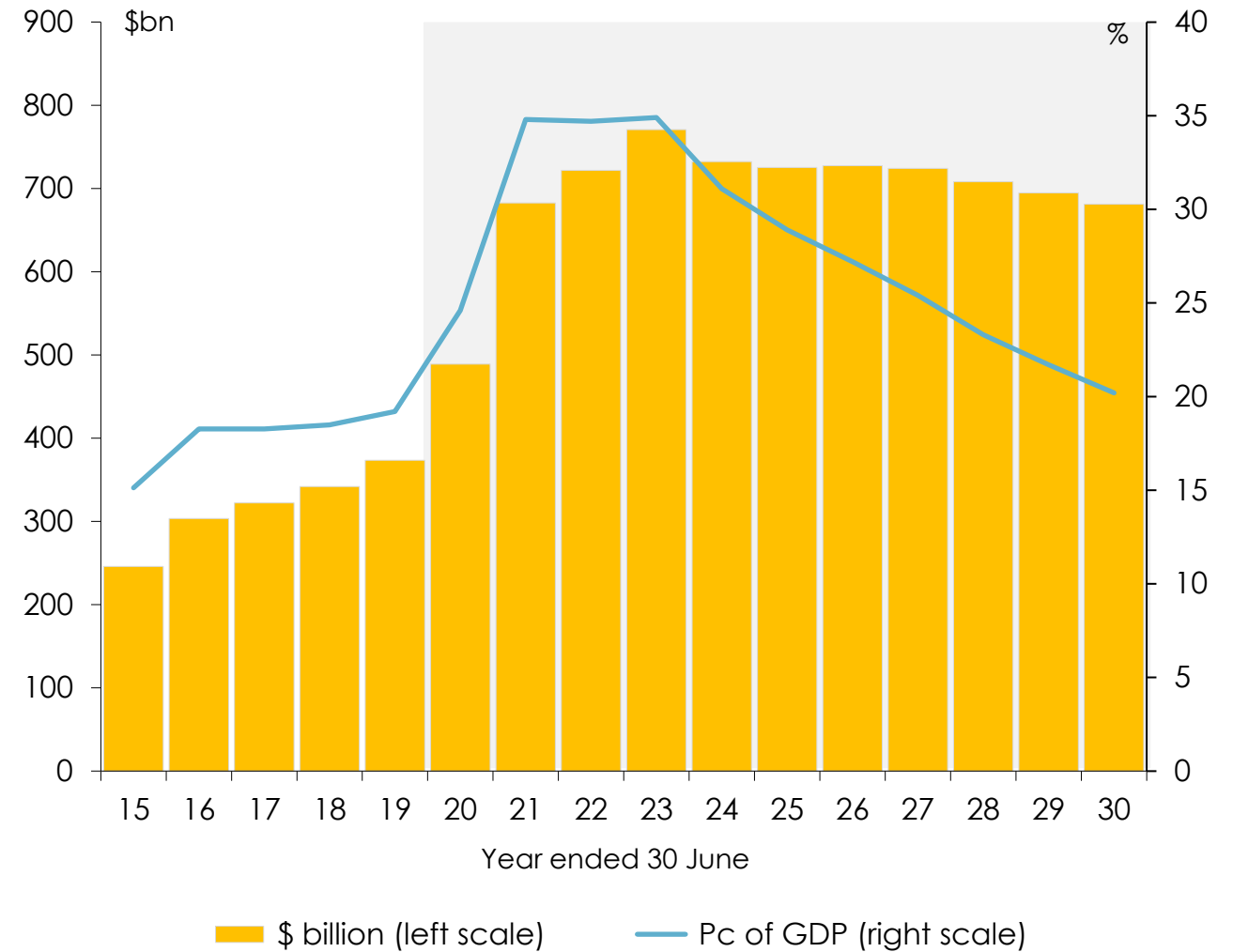
Note: Payments and the budget surplus or deficit are 'underlying' (that is, exclude 'net investments in financial assets for policy purposes') after 1989-90, when state governments became responsible for issuing their own debt, and 'headline' before that. Areas shaded in grey are fiscal years in which real GDP contracted; areas shaded in pink are World Wars I and II. Sources: Global Financial Data; Australian Government, 2019-20 Mid-Year Economic and Fiscal Outlook (December 2019) and Economic and Fiscal Update (July 2020).

Based on PBO projections, the budget looks set to remain in deficit until 2027-28, with net debt peaking at \$771bn (35% of GDP) in 2023

'Underlying' cash balance projections to 2029-30



Net debt projections to 2029-30

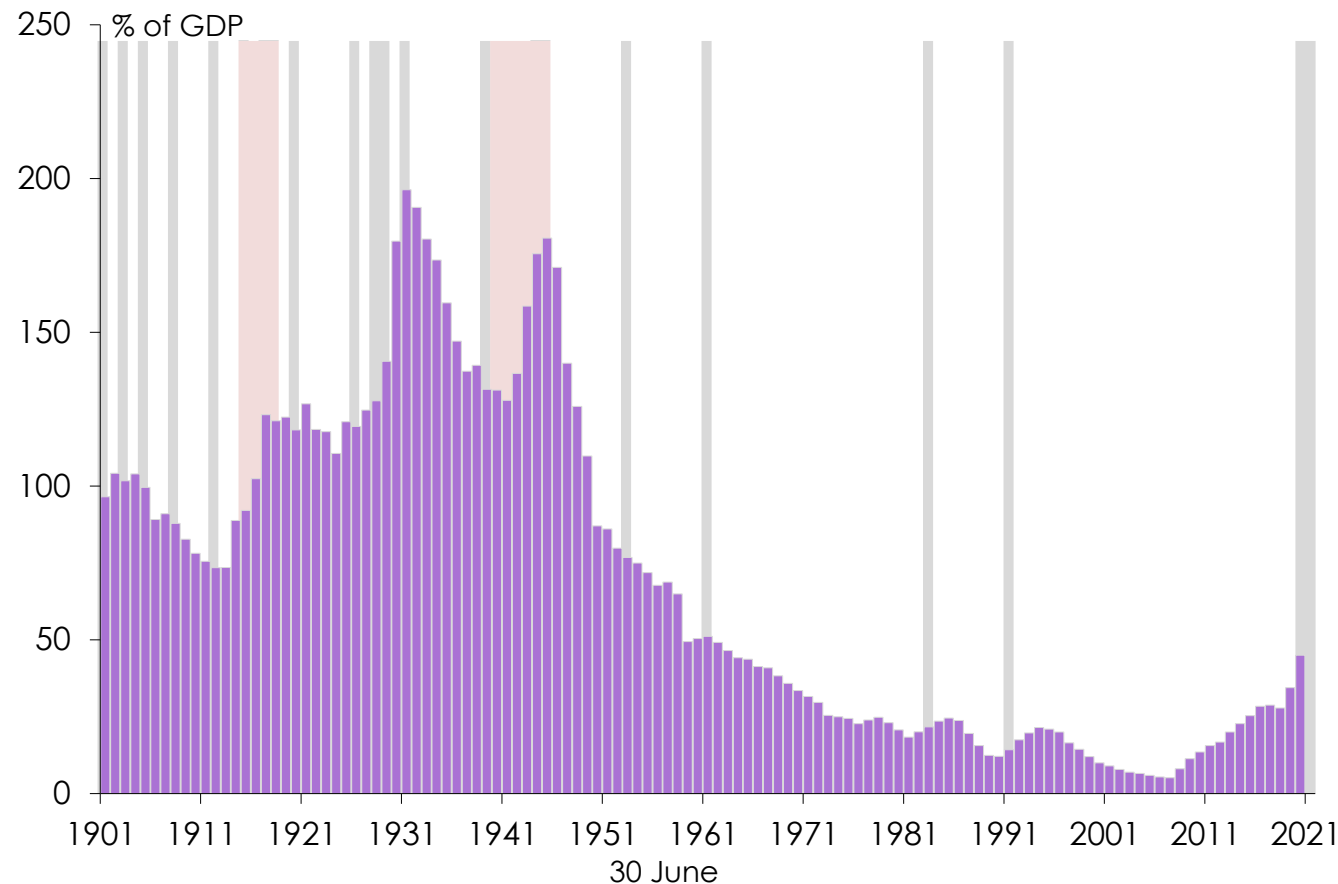


Note: Shaded area denote estimates (for 2019-20) or projections. Estimates and projections expressed in dollars have been inferred by Corinna from the PBO's baseline projections expressed as a pc of GDP, PBO projections of real GDP (starting with RBA SoMP forecasts) and Corinna estimates of the GDP deflator. PBO projections only allow for the impact of Covid-19 and measures taken in response to it (including, in particular, the impact of border closures on forecasts for immigration and hence population growth), and not for any other developments which may affect long-term economic or fiscal projections (in either direction).

Sources: Parliamentary Budget Office (PBO), *Updated medium-term fiscal scenarios: impact of COVID-19 pandemic and response*, Canberra, 21st August; Corinna.

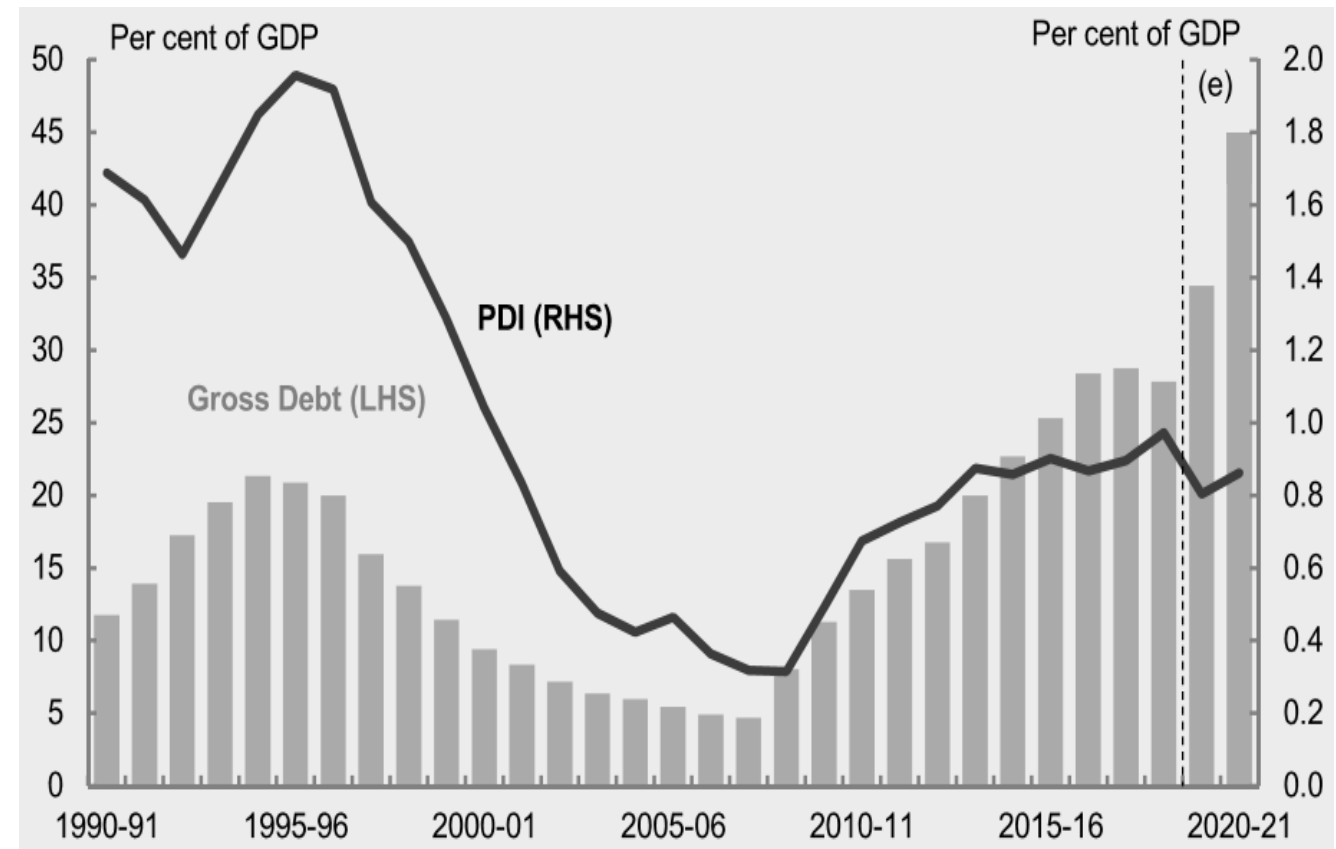
However there's no need for undue alarm at the level of debt which will be incurred by the Australian Government

Australian Government gross public debt



- ❑ Australian governments have coped with much higher levels of gross debt (as a pc of GDP) in the past than are in prospect over the next decade

Gross public debt and public debt interest payments

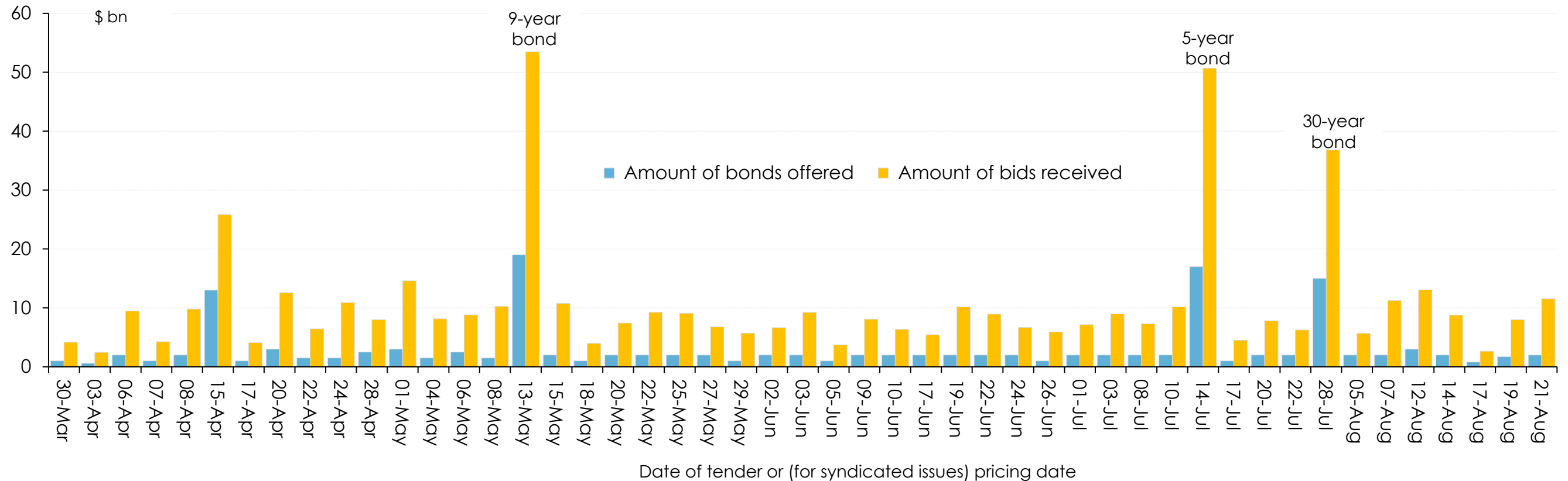


- ❑ Thanks to much lower interest rates, the Government will actually be spending less on interest payments, as a pc of GDP, in 2020-21 than in any of 2013-14 through 2018-19

Note: Areas shaded in grey are fiscal years in which real GDP contracted; areas shaded in pink are World Wars I and II. Sources: Global Financial Data; Australian Government, *Mid-Year Economic and Fiscal Outlook (MYEFO)*, December 2019, and *Economic and Fiscal Update*, June 2020; International Monetary Fund, *Fiscal Monitor*, April 2020.

The Australian Government continues to have absolutely no difficulty financing its significantly higher deficits

Australian government bond issuance since March 2020

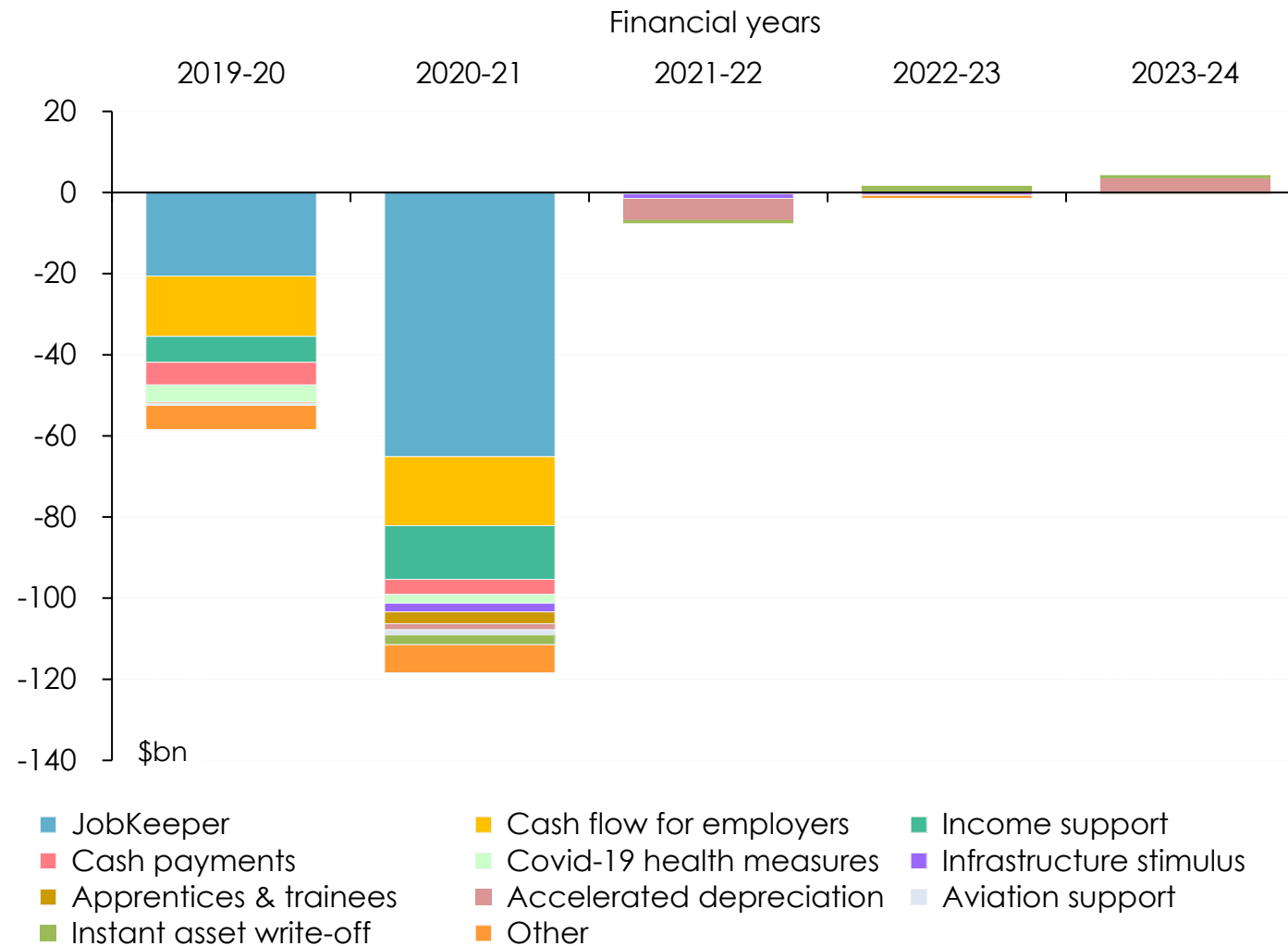


- ❑ Since 30th March, the Australian Office of Financial Management (which conducts the Government’s borrowing programs) has issued \$145.1bn of Treasury bonds
- ❑ Based on the volume of bids received at bond tenders or for syndicated issues, the AOFM could have borrowed \$518bn (more than 3½ times as much as it accepted) – with the highest yields on unsuccessful bids averaging 3bp above the highest accepted yields

Source: Australian Office of Financial Management data hub.

The Government has provided a massive fiscal stimulus during the June and September quarters, but this is set to wind back in Q4 and beyond

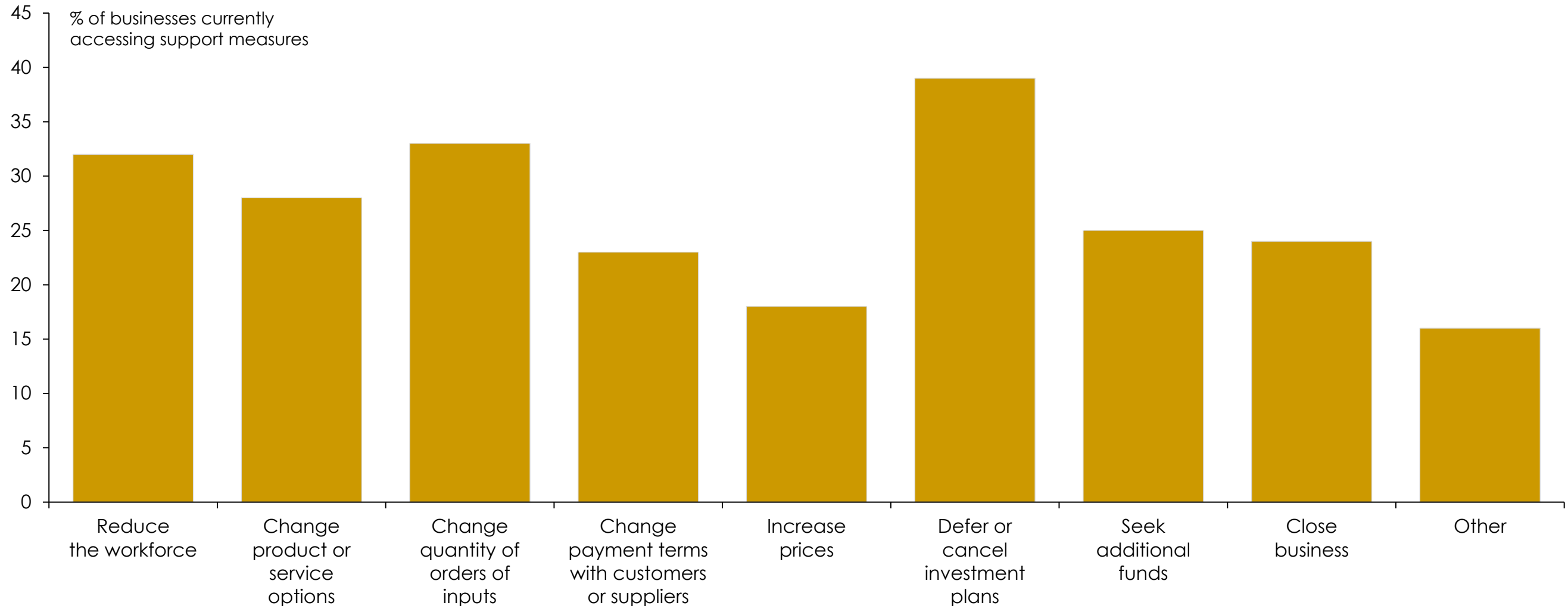
Impact of 'policy decisions' taken since last December on the Australian Government's 'underlying' cash balance



- ❑ 'Policy decisions' taken since last December's Mid-Year Economic & Fiscal Outlook (MYEFO) represent a discretionary fiscal stimulus equivalent to 2.9% of GDP in 2019-20 and 6.3% of GDP in 2020-21
- ❑ Treasury estimates that this fiscal support boosted by real GDP (relative to what it would have been otherwise) by $\frac{3}{4}\%$ in 2019-20, and will boost it by around $4\frac{1}{4}\%$ in 2020-21
 - and that this support prevented the loss of around 700,000 jobs, lowering the peak unemployment rate by around 5 pc points
- ❑ Last month's decisions to extend 'JobKeeper', and the elevated level of 'JobSeeker' payments (albeit at lower levels) beyond end-September until the end of March have lowered the 'fiscal cliff' that was looming at the end of September
 - nonetheless, as things currently stand there will still be a significant tightening of fiscal policy at the end of this and the next two quarters
- ❑ **The Government will need to (and probably will) provide more fiscal stimulus in the (delayed) Budget to be presented on 6th October (see slide 96)**

Withdrawal of government supports for business may have significant consequences for employment – unless the economy is much improved

Actions that businesses currently accessing support measures expect to take when support measures are no longer available, July 2020



Source: ABS Business Indicators, Business Impacts of COVID-19, July 2020 (based on survey conducted between 15th and 23rd July).

The Treasurer has foreshadowed ‘bringing forward’ personal income tax cuts scheduled for 2022 and 2024 as a form of fiscal stimulus

Legislated personal income tax cuts

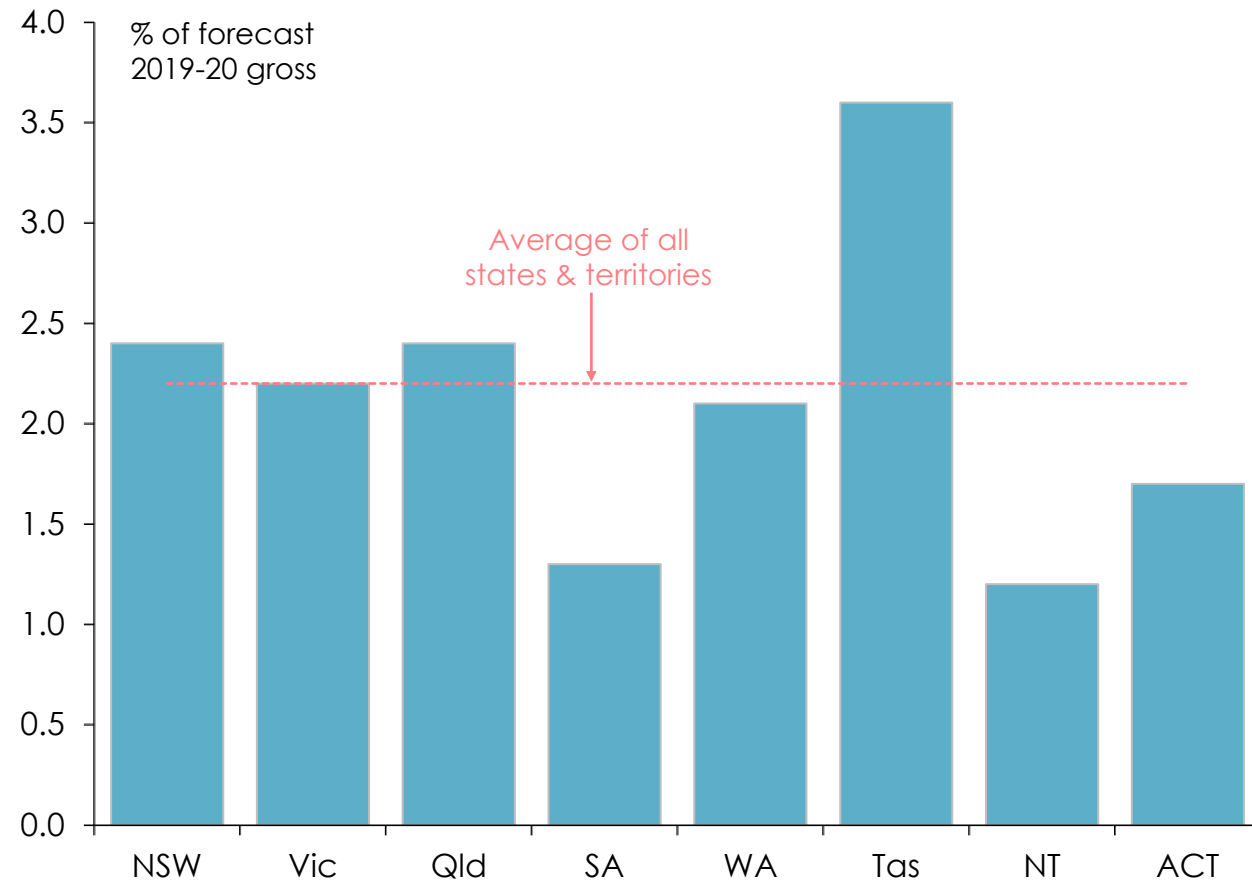
| Rates from 2017-18 to 2023-24 | New thresholds from 2018-19 to 2021-22 | New thresholds from 2022-23 to 2023-24 |
|--------------------------------|--|--|
| Nil | Up to \$18,200 pa | Up to \$18,200 pa |
| 19 % | \$18,201 - \$37,000 | \$18,201 - \$45,000 |
| 32.5 % | \$37,001 - \$90,000 | \$45,001 - \$120,000 |
| 37 % | \$90,001 - \$180,000 | \$120,001 - \$180,000 |
| 45 % | Above \$180,000 | Above \$180,000 |
| Low & middle income tax offset | Up to \$1,080 | - |
| Low income tax offset | Up to \$445 | Up to \$700 |
| Rates from 2024-25 | New thresholds from 2024-25 | |
| Nil | Up to \$18,200 pa | |
| 19 % | \$18,201 – \$45,000 pa | |
| 30 % | \$45,001 – \$200,000 pa | |
| 45 % | Above \$200,000 pa | |
| Low income tax offset | Up to \$700 | |

- ❑ In July the Government announced extensions to its ‘JobKeeper’ (wage subsidy) and ‘JobSeeker’ (income support) schemes
 - ‘JobKeeper’ will be extended from 28th September to 28th March 2021, but fortnightly payments will step down from \$1500 to \$1200 (or \$750 for people working < 20 hrs per week before 1st March 2020) from 28th September, and then to \$1,000 (\$650 for part-time workers) from 4th January
 - the ‘Coronavirus Supplement’ paid to JobSeeker recipients (and some others) will be extended beyond 27th September until 31st December, but at a lower fortnightly rate of \$300 (cf. \$550 currently) – although recipients will be allowed to earn \$300/fortnight (cf. \$200 currently)
- ❑ Treasurer Josh Frydenberg has foreshadowed bringing forward the personal income tax cuts currently legislated to come into effect on 1st July 2022, as a way to ‘boost aggregate demand, boost consumption [and] put more money in people’s pockets’
- ❑ These were estimated to ‘cost’ \$4½bn (in revenue foregone) in FY2022-23 and (together with the further cuts legislated to take effect from the beginning of FY2023-2024) \$143bn over the ten years to 2029-30
 - bringing forward these tax cuts would likely provide a lift to demand and activity – but, inevitably, at least some of the boost in after-tax incomes would be saved and/or used to pay down debt (as happened with the enhanced tax refunds paid out in the Sep quarter of last year – slide 51)
 - whereas the same dollar amount spent (eg) on infrastructure, or on cash handouts to low-income earners who don’t pay tax, would boost demand by a larger amount

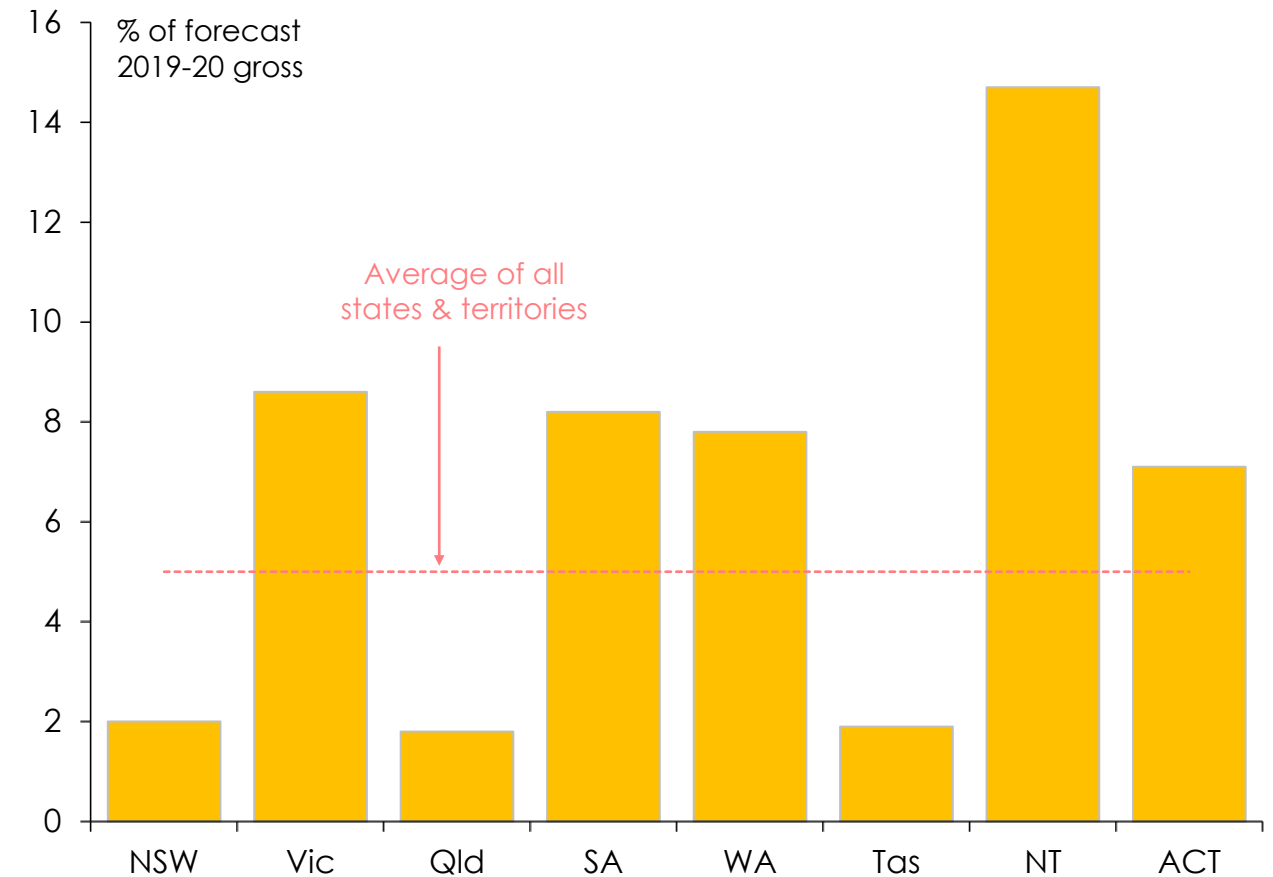
Source: Australian Government, 2019-20 Budget Paper No. 1, *Budget Strategy and Outlook*, April 2019.

There's been considerable difference in the size of state and territory governments' fiscal responses to Covid-19

State & territory Covid-19 support and response measures as a pc of gross state product



State & territory general government net debt as at 30 June 2020

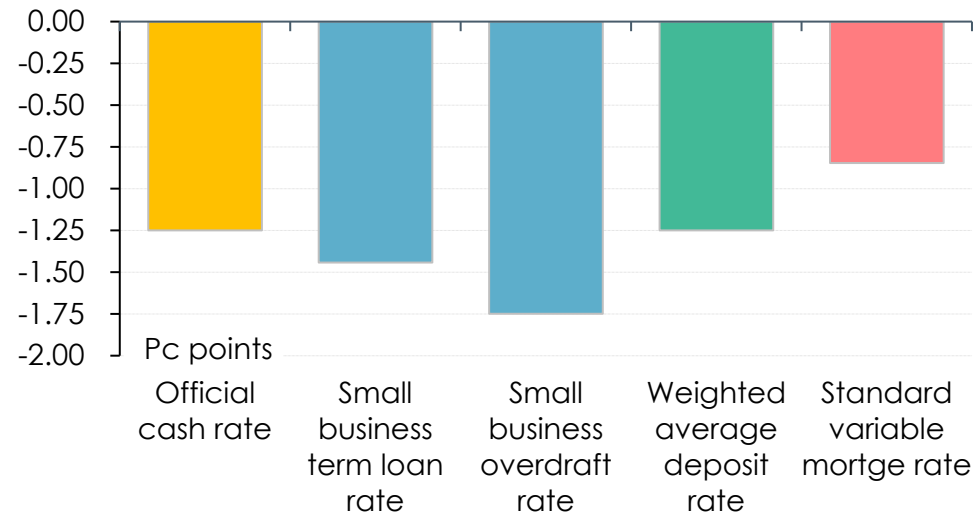


❑ This week RBA Governor Phillip Lowe advised state and territory governments to spend an additional \$40bn (2% of GDP) on infrastructure investment – an amount which S&P Global Ratings said state and territory balance sheets had “plenty of room to accommodate”

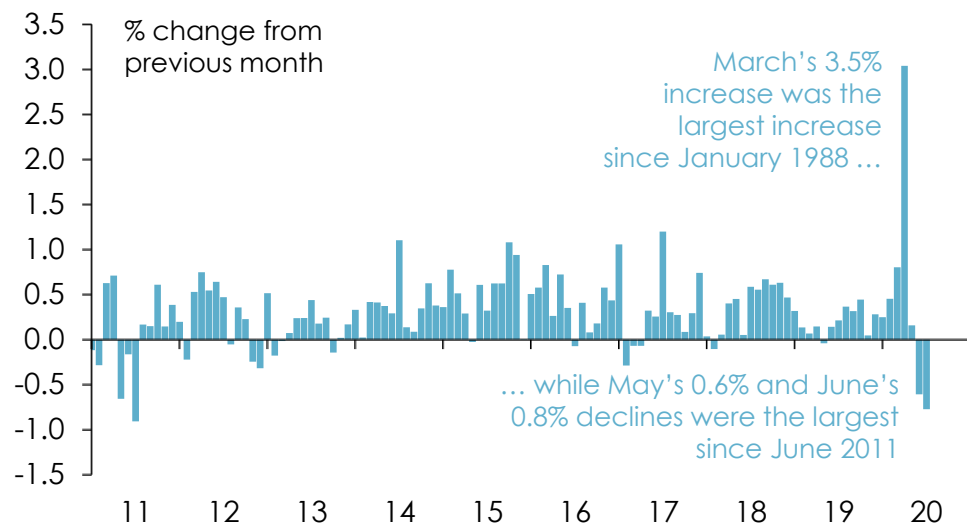
Sources: Commonwealth Treasury, 6th August 2020; Australian Financial Review, 14th August 2020; The Australian, 22nd August 2020.

For now at least, banks are 'part of the solution', not 'part of the problem'

Changes in interest rates since June 2019



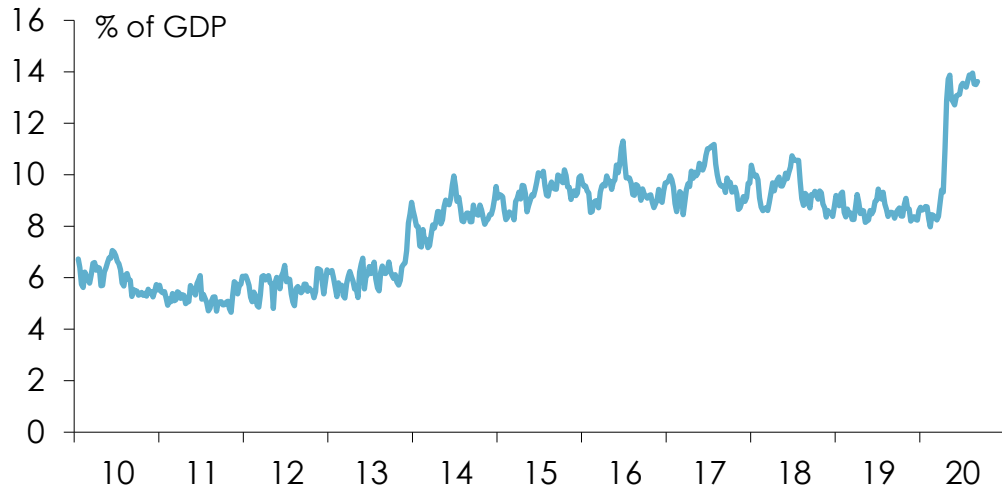
Business credit outstanding



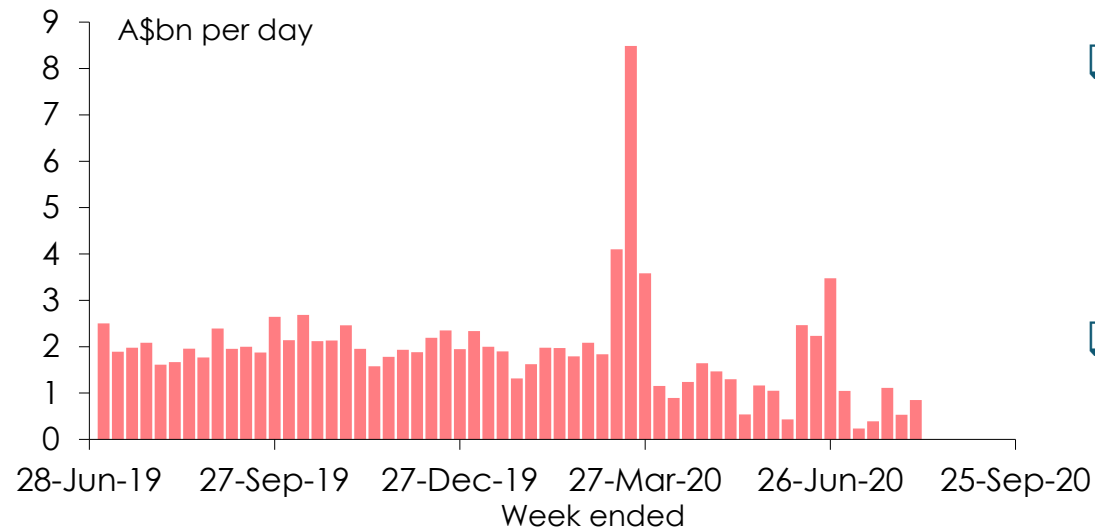
- ❑ Banks have cut interest rates on small business loans by more than the official cash rate since June last year (when the RBA started cutting rates again)
- ❑ Banks have extended 'repayment holidays' to business and home mortgage borrowers who request it (about 12% of mortgages and 20% of SME loans)
 - although it is important to note that under these arrangements interest payments are deferred and capitalized, not foregone
- ❑ These 'repayment holidays' are due to expire at end-September, but banks have announced that they would be extended for up to four months for those customers who were still experiencing difficulties but have good prospects of eventually repaying
- ❑ Westpac announced this week it would not pay an interim dividend, while ANZ cut its interim dividend by 70%, following earlier dividend cuts by the other two major banks, NAB & CBA
- ❑ At end-2019, the Australian banking system had a Common Equity Tier 1 capital ratio of 11.3% of risk-weighted assets - well above the 10.5% required for major banks since 2017
 - APRA will allow banks CET1 ratios to drop below the 2017 requirements during the Covid-19 period provided they remain above other minimum prudential capital requirements

With official interest rates as low as they can go, the RBA has implemented a range of 'quantitative' monetary policy measures

Reserve Bank assets as a pc of GDP



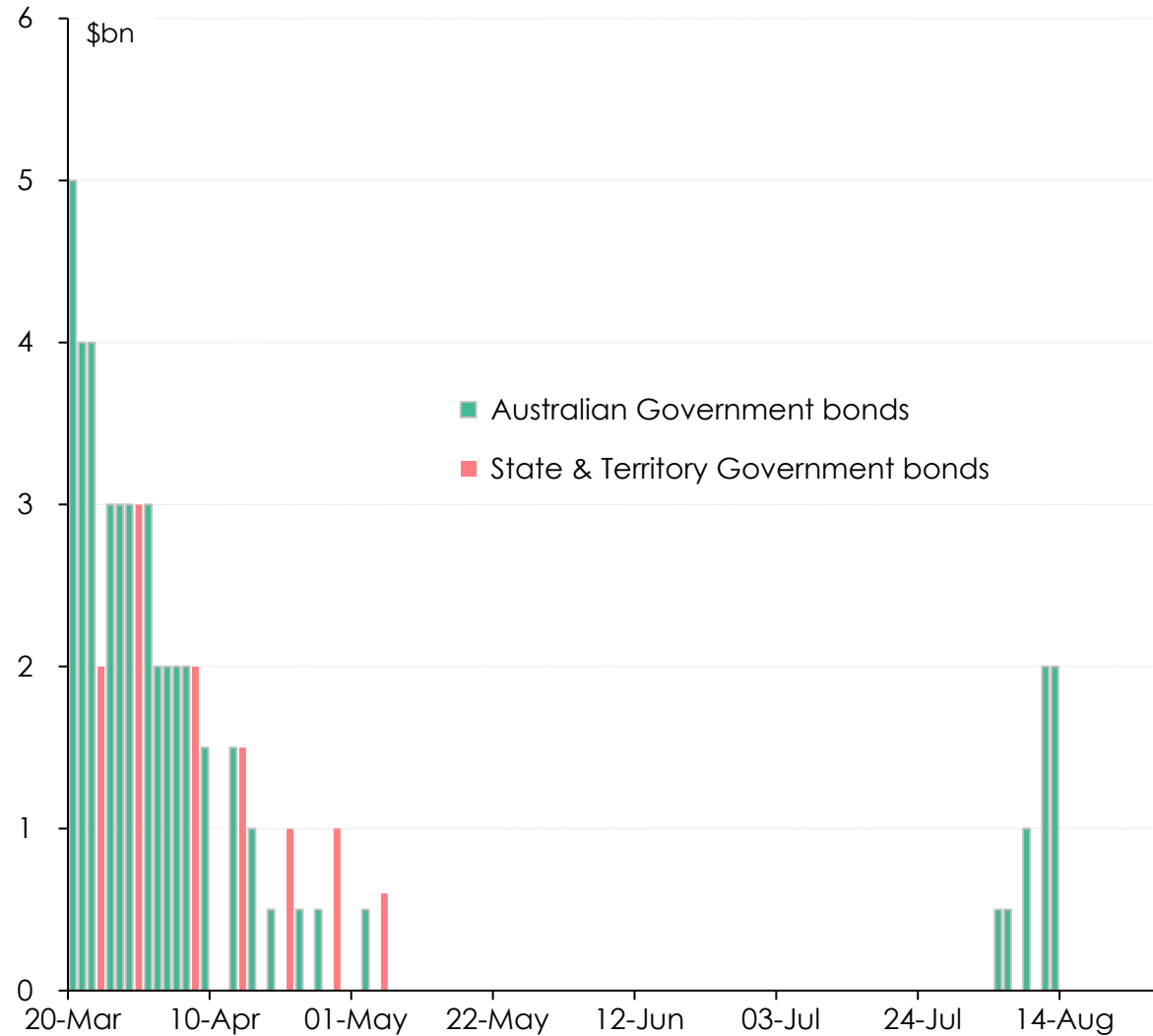
Reserve Bank daily repo transactions



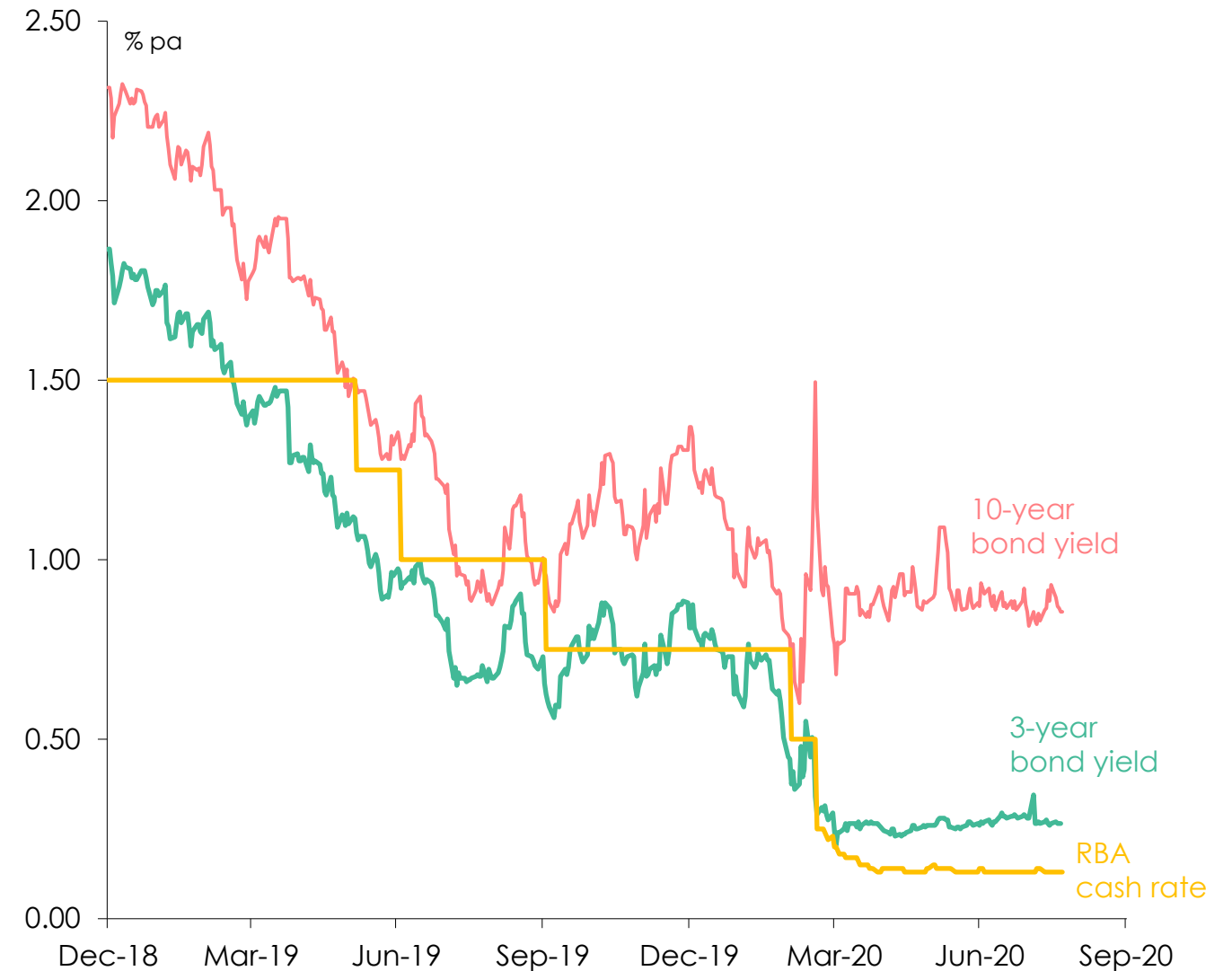
- ❑ **The RBA has kept its cash rate target at 0.25% since March, but has allowed the actual rate to drift down to 0.13%**
 - the RBA has committed to keeping it at this level 'until progress is made towards full employment' and 'it is confident inflation will be sustainably within the 2-3% target band' – which the RBA Governor last week said was likely to be at least three years away (see slide 102)
 - the RBA has again re-iterated that it has 'no appetite' for negative rates, or for 'monetary financing of deficits' (see slide 102)
- ❑ **The RBA restated its commitment to keeping 3-year yields at 0.25%**
 - The RBA was absent from the bond market this week, after buying \$5bn of bonds last week and \$bn the week before (the first purchases since May)
 - RBA assets are now equivalent to 14.1% of GDP (cf. BoC 23³/₄%, US Fed 36%, BoE 44%, ECB 55%, BoJ 131% - see slide 26) and RBNZ 18¹/₂%
- ❑ **RBA provided additional liquidity through 'open market operations' to prevent disruption of credit markets in March**
 - RBA repo transactions averaged \$1 bn a day since the beginning of April (except for the last two three weeks of the 2019-20 financial year), down from peak of almost \$8¹/₂ bn a day in 3rd week of March
- ❑ **'Term Funding Facility' to provide up to \$155 bn at 0.25% pa to lending institutions for increased lending, especially to businesses with annual turnover of less than \$50 mn**
 - to date \$38 bn has been provided through this facility (including \$6.2bn this week, the second largest weekly total since it was established)
 - the RBA expects larger drawings as existing bank funding 'rolls off'

The RBA was absent from the bond market this week, having purchased \$6bn over the preceding two weeks to get the 3-year yield back to 0.25%

RBA open market bond purchases



Interest rates

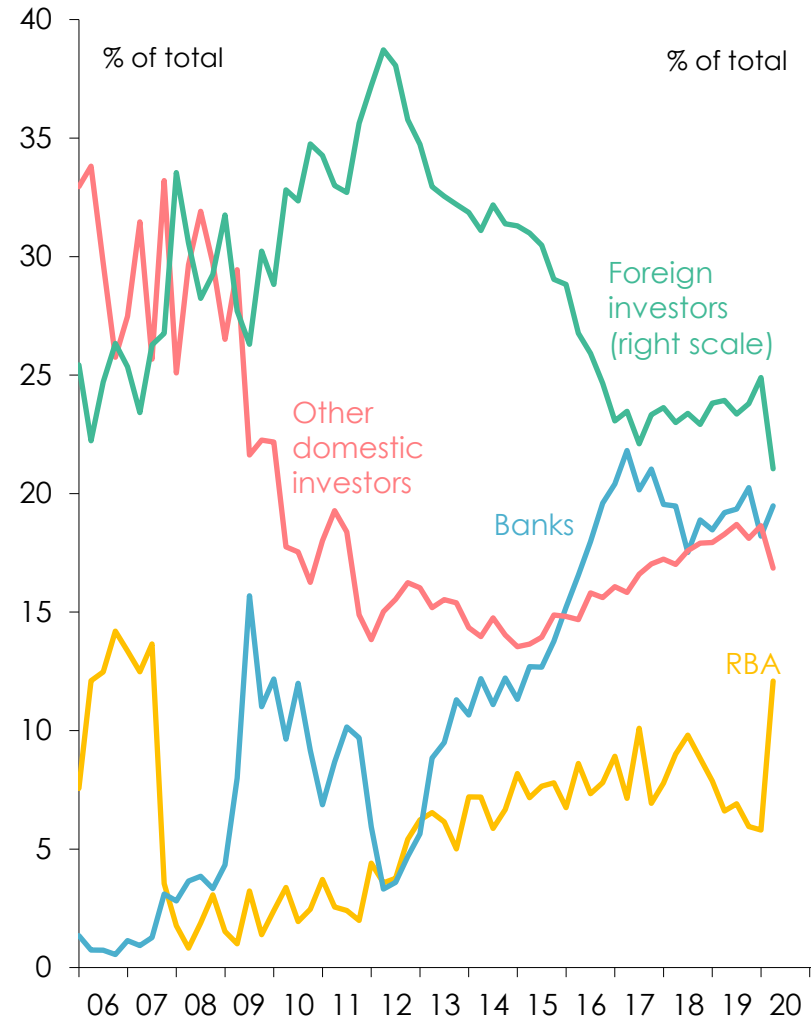


Note: RBA bond purchases during the week ended 14th August were inadvertently omitted from this chart last week.

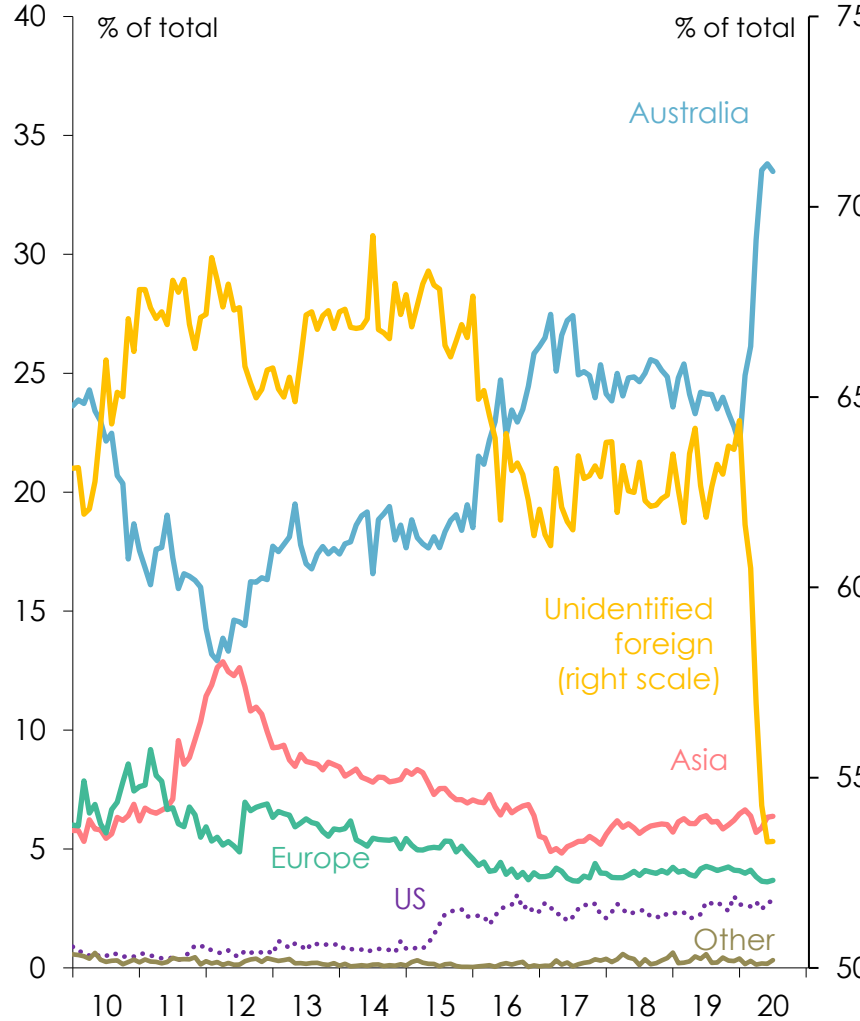
Source: Reserve Bank of Australia. Data up to 21st August.

The RBA in effect more than absorbed the increase in Commonwealth and State debt, and sales by foreign investors, during the March quarter

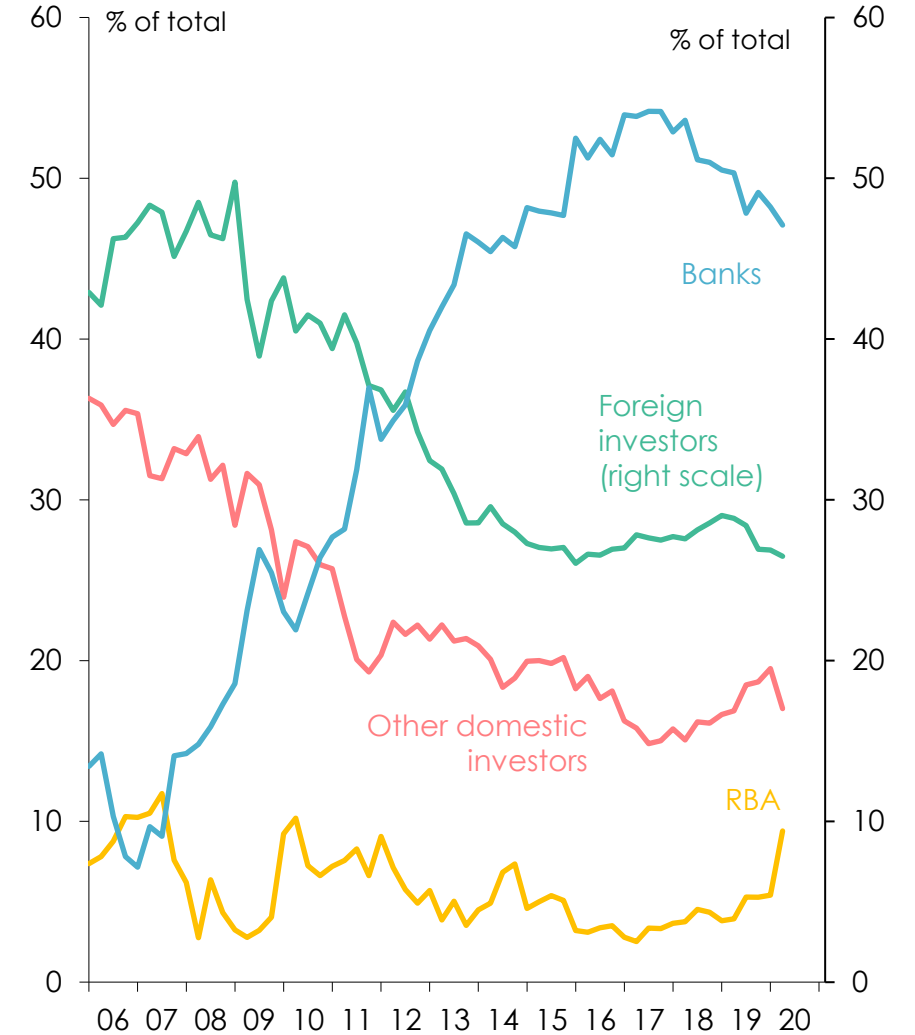
Holder of Australian Government bonds



Nationality of Australian Government bond holders



Holder of State and Territory Government bonds



Sources: ABS (Finance & Wealth Accounts); Australian Office of Financial Management. June quarter data will be released on 24th September.

The RBA Governor last week again ruled out negative rates and ‘monetary financing’ of deficits, but left the door ajar to other options if needed

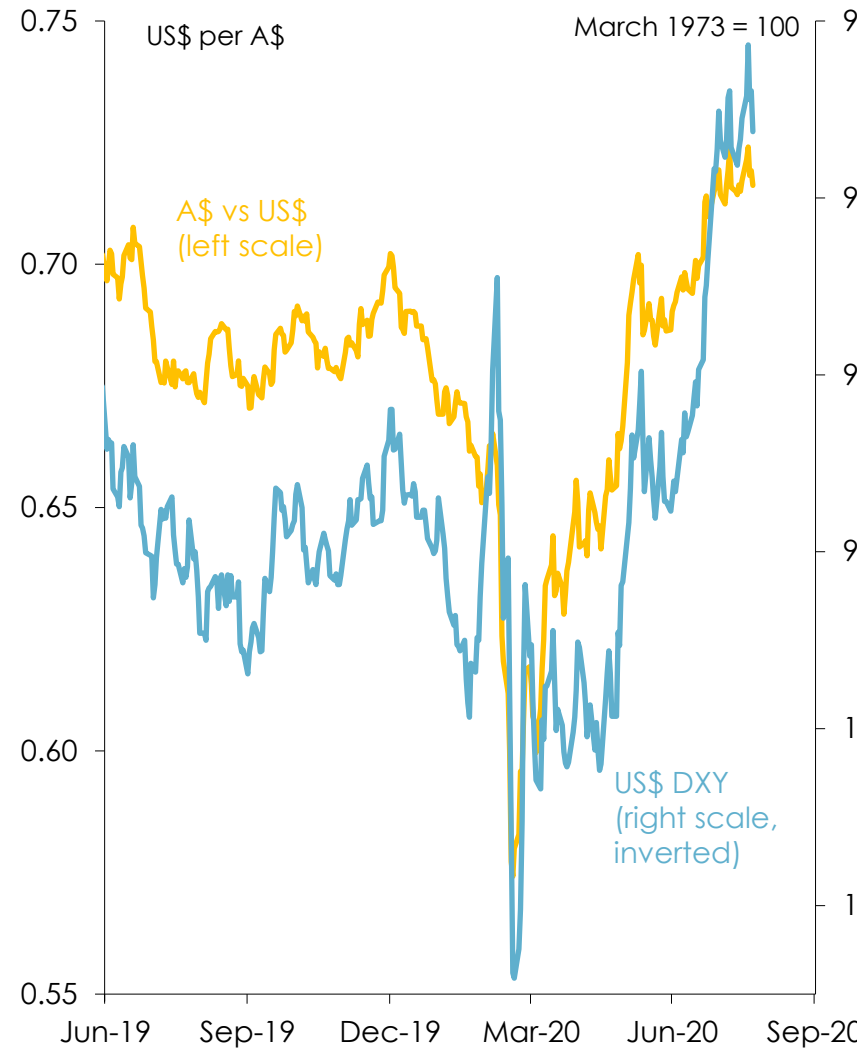
- ❑ Speaking to the Parliamentary Economics Committee on 14th August RBA Governor Lowe again characterized negative interest rates as “extraordinary unlikely”, monetary financing of budget deficits (aka ‘modern monetary theory’) as “not on the agenda in Australia”, and FX market intervention to drive the A\$ down as something the RBA is “not prepared to [do] ... unless the currency is misaligned, and I don’t think it is”
- ❑ The Governor indicated that, on the basis of its current outlook (see slide 57) it is likely to be at least three years before the RBA’s stipulated conditions for raising the cash rate will be met
- ❑ The Governor defended the RBA’s adoption of a BoJ-style approach to QE – targeting the 3-year yield at 0.25% pa as opposed to a fixed program of bond purchases – saying this was “a more direct way of achieving ... low funding costs” and that it “reinforces the [RBA’s] forward guidance regarding the cash rate”
 - however the Governor didn’t rule out “a separate bond buying program”, or “tweaks” to the RBA’s Term Funding Facility, if doing so were likely to “get traction” in a future environment where “people ... want to invest and expand”
- ❑ The Governor re-iterated that the “expected increase in public debt” resulting from the blow-out in budget deficits is “entirely manageable and ... affordable”
 - and moreover that borrowing “today to help people, keep them in jobs and boost public investment at a time when private investment is very weak” was “the right thing to do”
- ❑ The RBA’s approach to the use of monetary policy in current circumstance is increasingly different from that of the RBNZ, whose Governor last week again flagged the possibility of negative interest rates, coupled with a ‘Funding for Lending Program’ to enable banks to lend to their customers at negative rates, and direct FX market intervention to push the NZ\$ lower (see slide 117)
 - The RBNZ last week also announced an expansion (in size) and extension (in time) of its ECB-style bond-buying program (which is already three times as large, as a pc of GDP, as the RBA’s)

Higher iron ore prices and a stronger US\$ cancelled each other out this week leaving the A\$ trading around US71½c

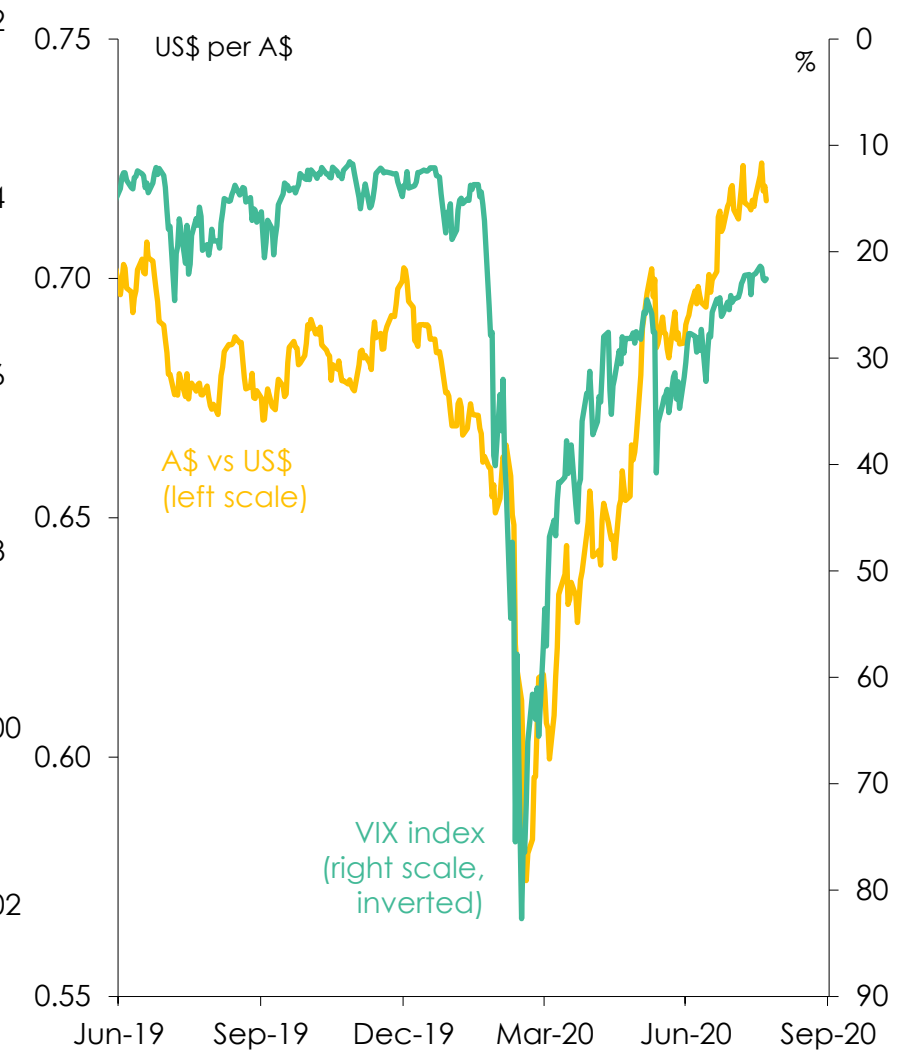
A\$-US\$ and spot iron ore prices



A\$-US\$ and US\$ trade-weighted index



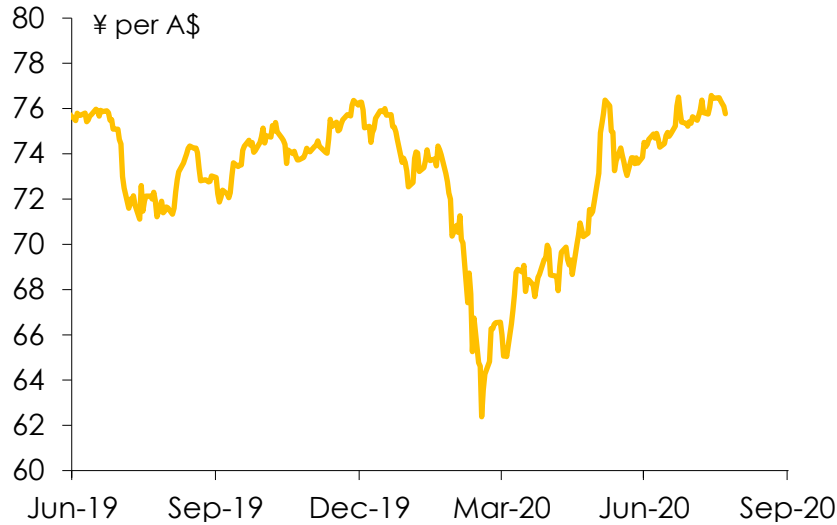
A\$-US\$ and US equity market volatility



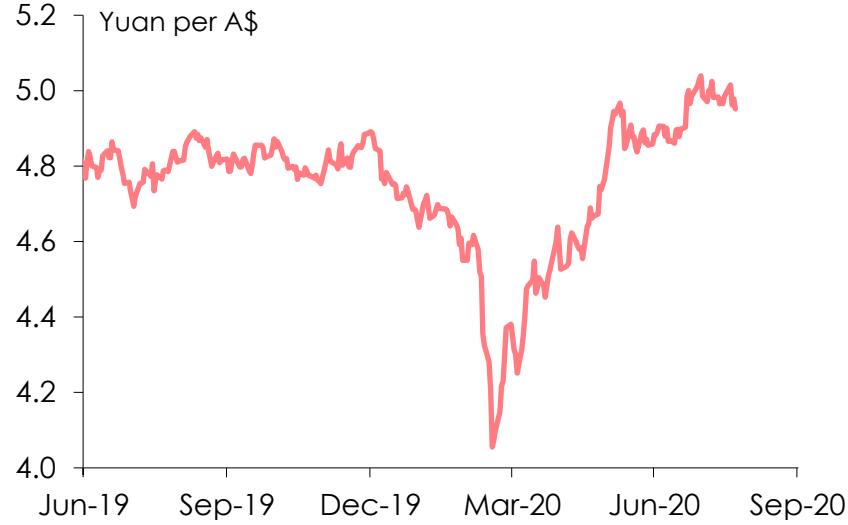
Note: The VIX index is a measure of the implied volatility of S&P500 options and is widely interpreted as an indicator of investor risk appetite or aversion. For an explanation of the factors underpinning the strength in the iron ore price see slide 83. Source: Refinitiv Datastream. Data up to 21st August.

The A\$ fell against the Japanese yen and Chinese yuan this week and also reversed a bit of last week's strong gains vs the NZ\$

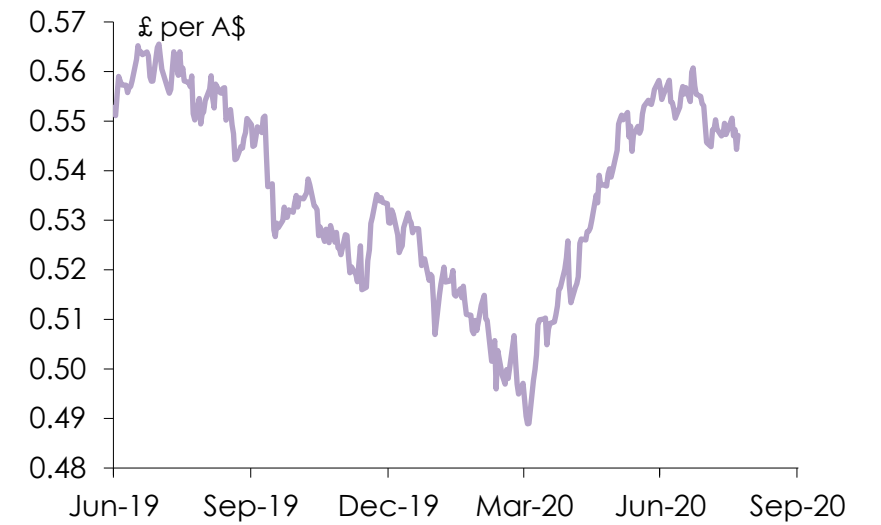
A\$ vs Japanese yen



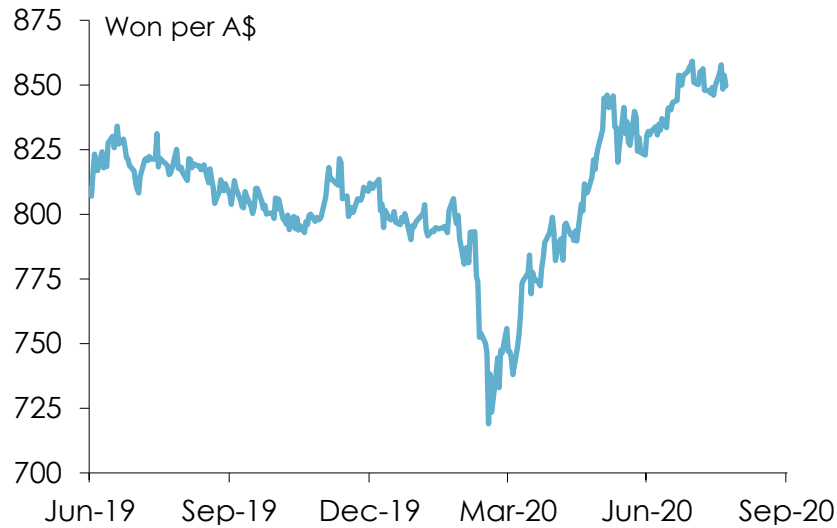
A\$ vs Chinese yuan



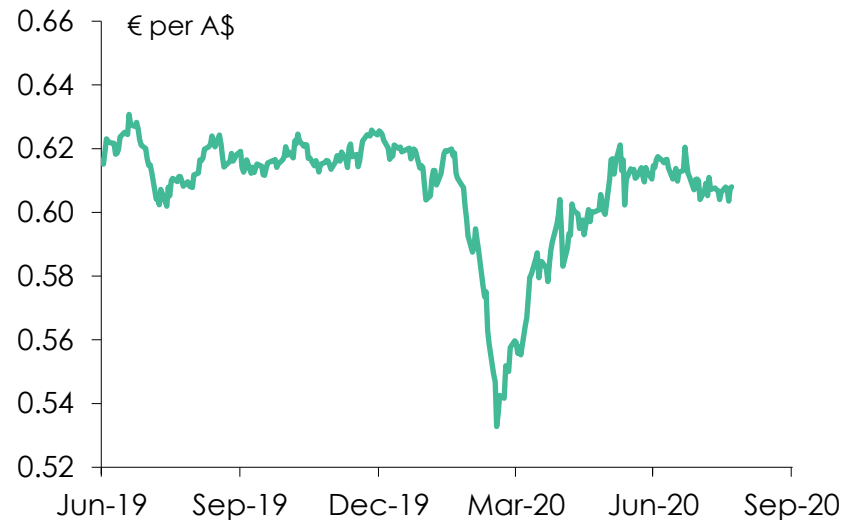
A\$ vs British pound



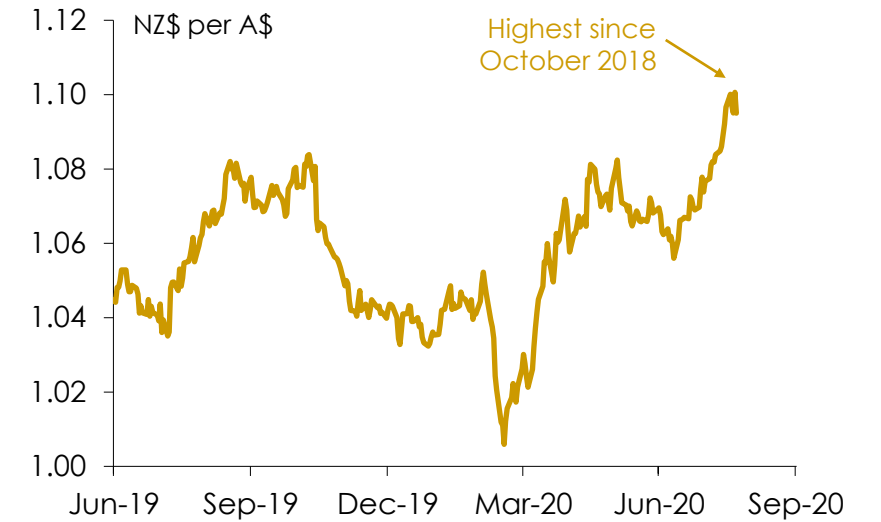
A\$ vs Korean won



A\$ vs Euro



A\$ vs NZ\$



Source: Refinitiv Datastream. Data up to 21st August.

The factors which helped us achieve almost 30 years of continuous economic growth may not be so helpful in the post-Covid environment

Australia's record-breaking run of almost 30 years without two or more consecutive quarters of negative real GDP growth owed a lot to four factors -

❑ Population growth

- Australia's population grew at an average annual rate of 1.5% pa over the 19 years to 2019, compared with 0.6% pa for all 'advanced' economies
- net immigration accounted for 58% of this growth – ie, in the absence of immigration Australia's population would have grown by only 0.7% per annum, on average, and would have aged more rapidly

❑ Our unusual (for an 'advanced' economy) economic relationship with China

- China's rapid economic growth, industrialization and urbanization significantly boosted both the volumes and prices of many of our commodity exports, under-wrote the post-GFC mining investment boom, pushed down the prices of many of the things which we import, and contributed significantly to the growth of our tourism and education sectors
- By contrast, China's rapid economic growth undermined the competitiveness of manufacturing industries which account for a much larger share of most other 'advanced' economies, put downward pressure on the prices of their exports and put upward pressure on the prices of commodities which they import

❑ The 'housing boom'

- Australia's 'housing boom' started earlier (mid-1990s) and ended later (2017, rather than 2007-08) than in most other 'advanced' economies (some – such as Japan, Italy and France – didn't have a housing boom at all)
- the two-way interaction between rising house prices and rising household debt underwrote stronger growth in household consumption spending, for longer, than would have occurred otherwise

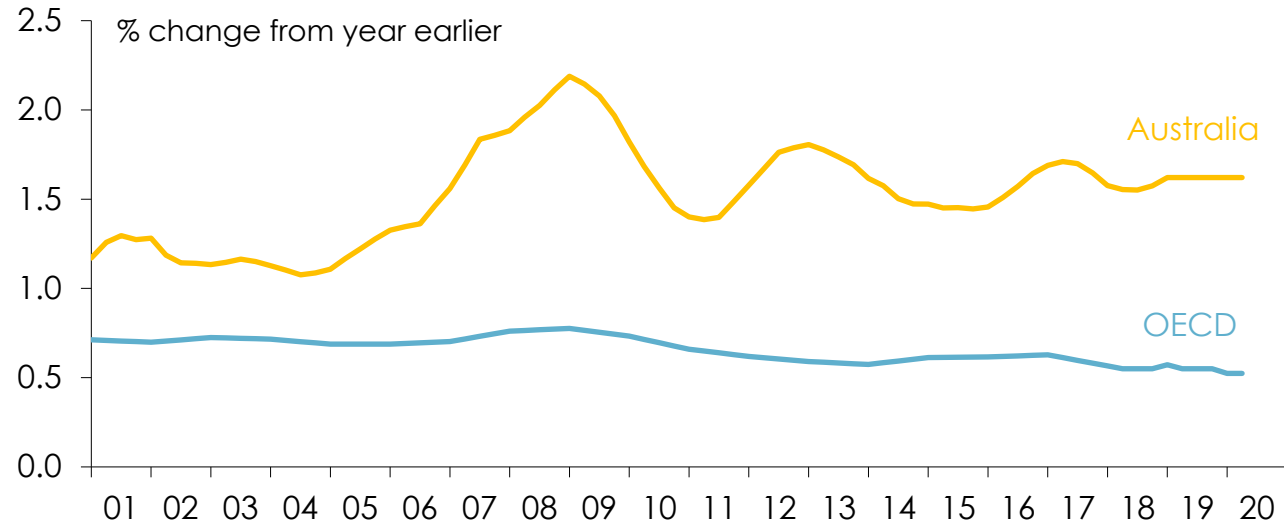
❑ (Mostly) good macro-economic policy – especially by comparison with other 'advanced' economies

- although we haven't done nearly as well as we once did on the micro-economic front (especially with regard to productivity)

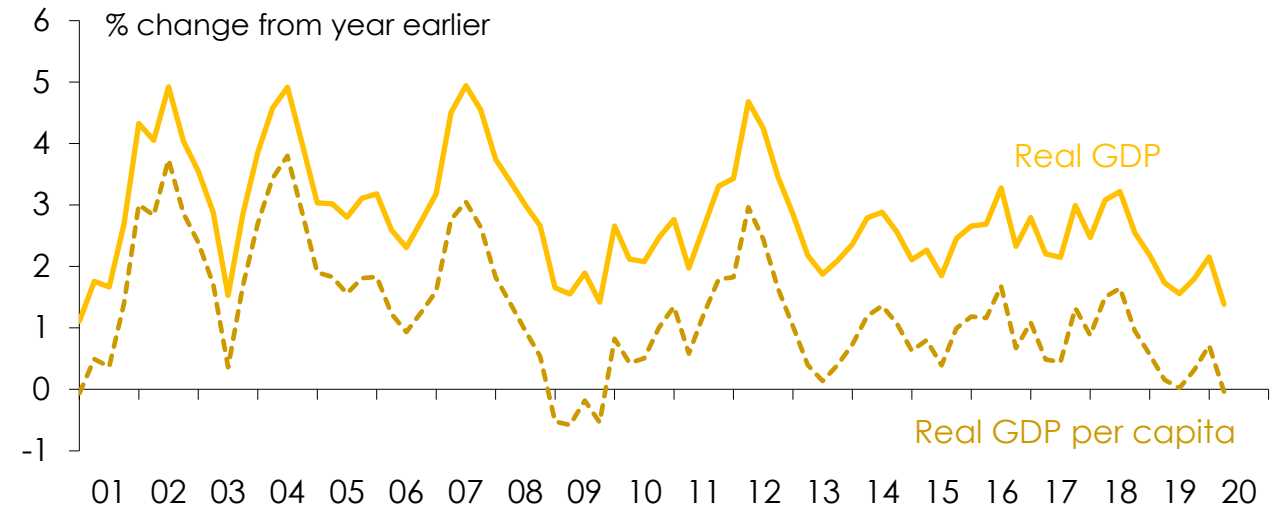
The first three of these are likely to be of less assistance from now on

Australia's above-average economic growth over the past 20 years owes a lot to above-average population growth: that's about to change

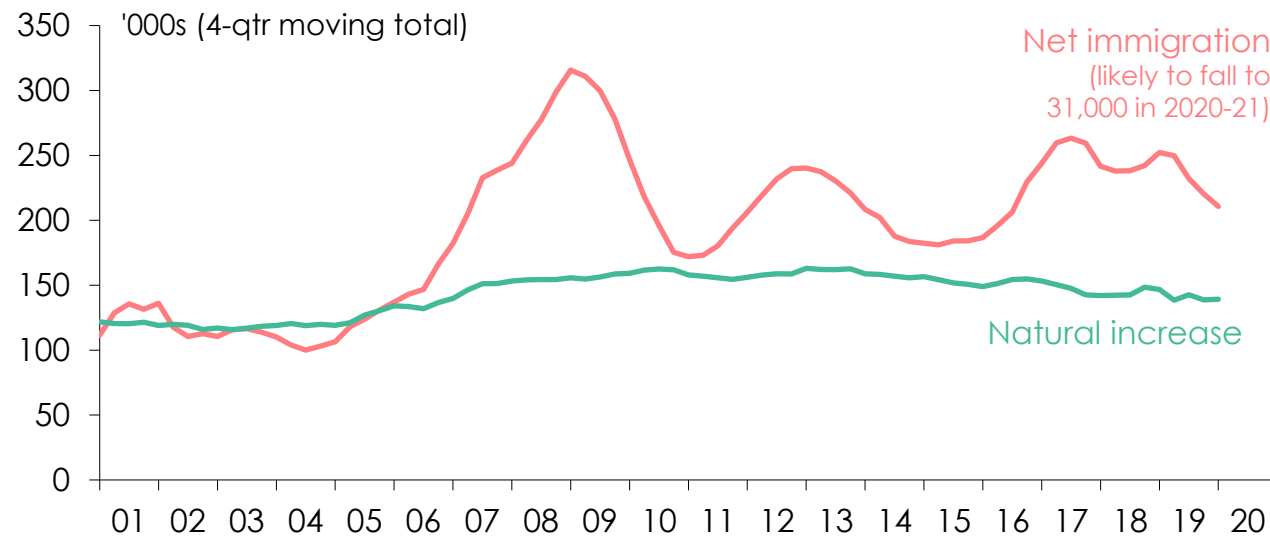
Australia and OECD population growth



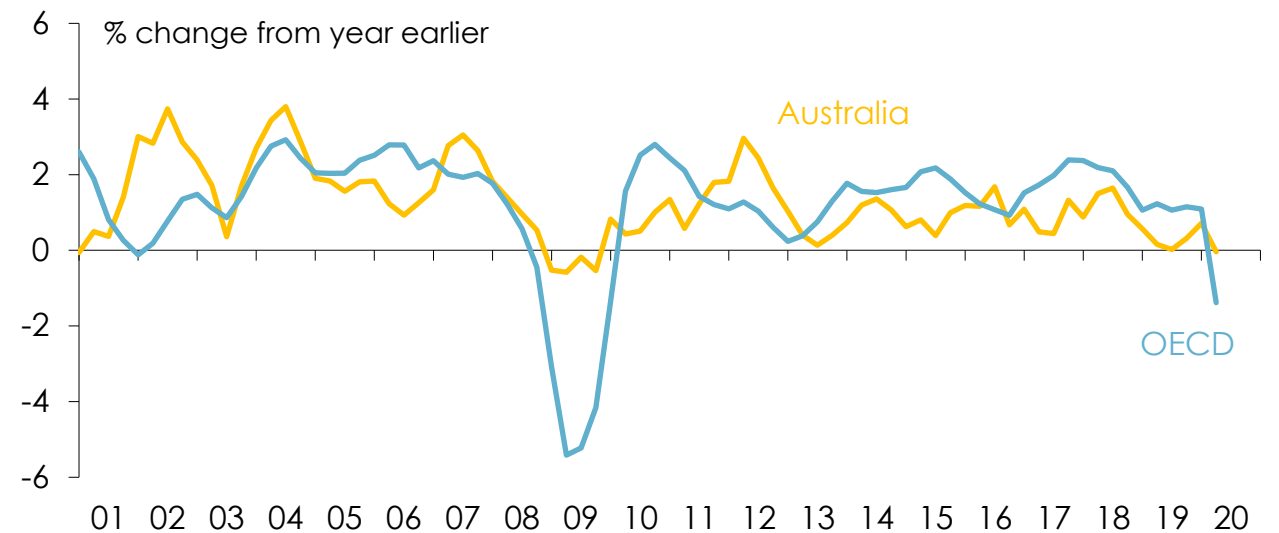
Australian GDP and per capita GDP growth



Sources of Australia's population growth



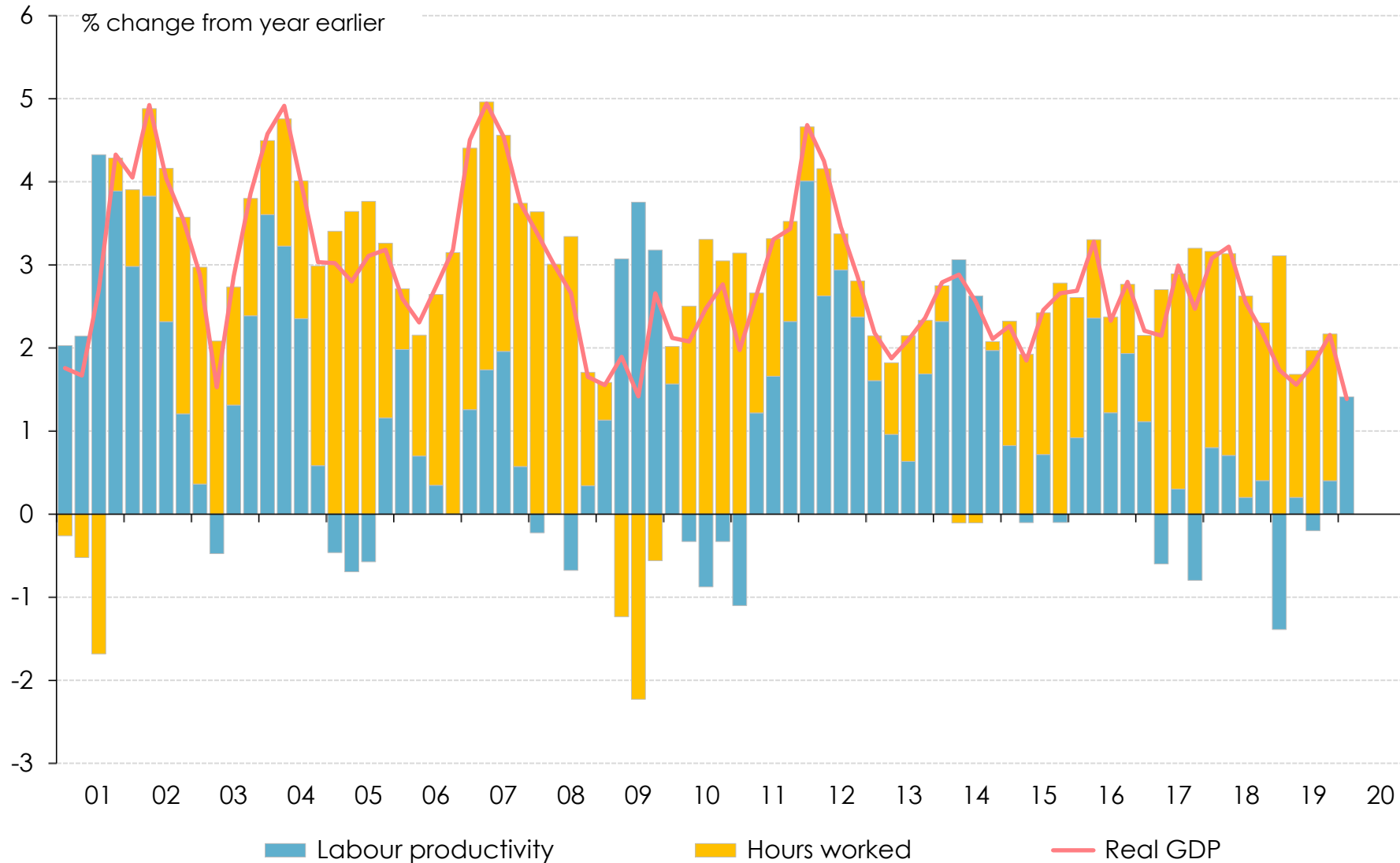
Australia and OECD per capita real GDP growth



Sources: ABS; OECD.

Australia has come to rely much more heavily on increased labour input to drive economic growth in recent years – we can't keep doing that

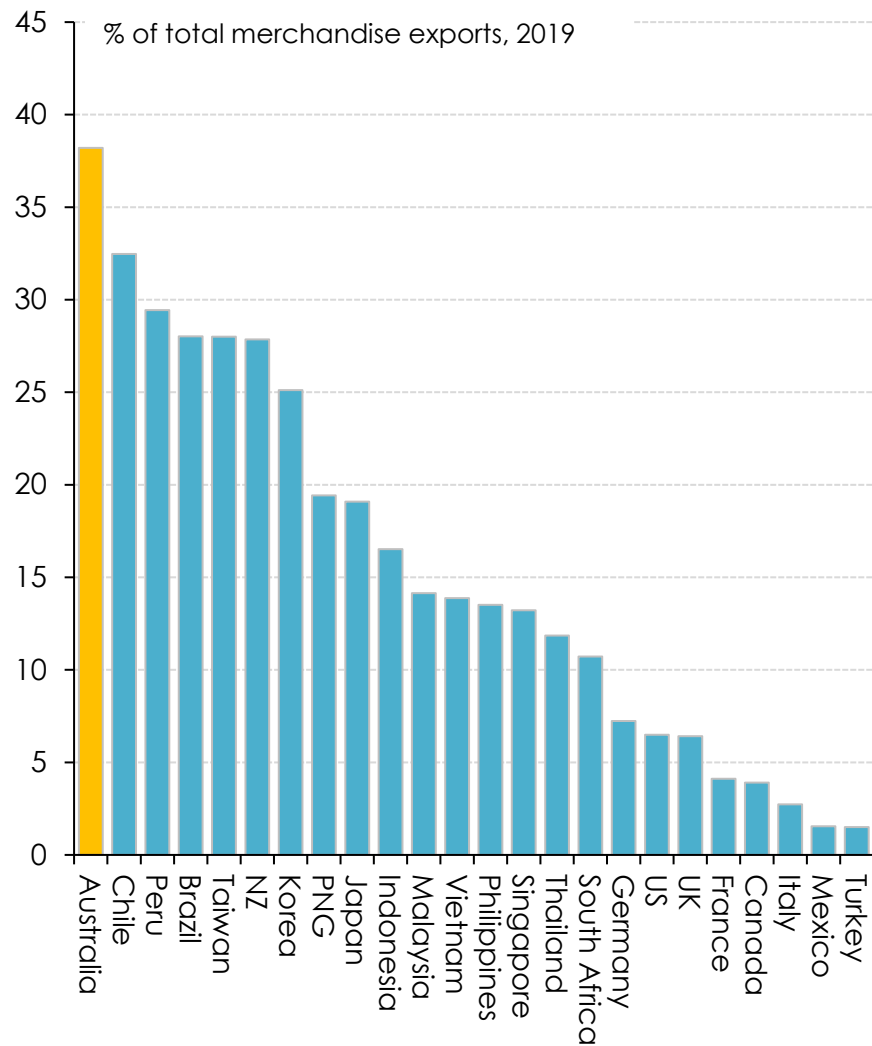
Labour input and labour productivity contributions to Australian real GDP growth



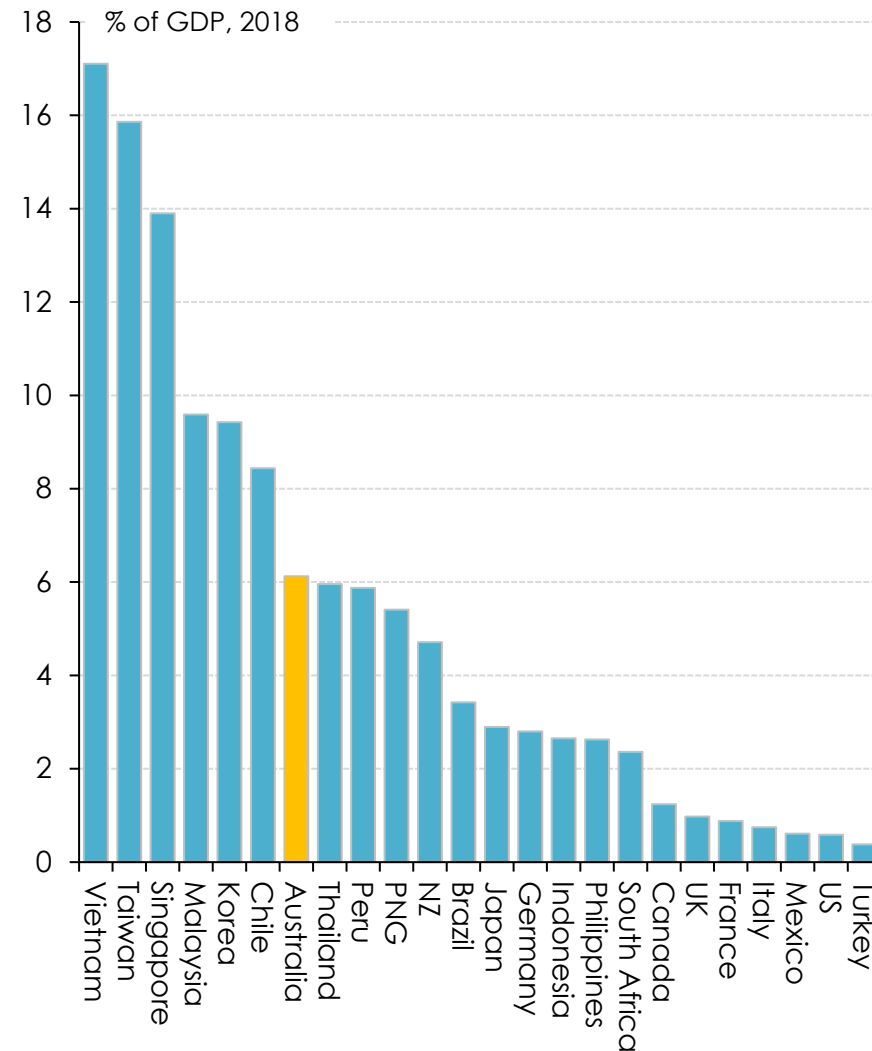
- ❑ Over the past five years, 72% of Australia's real GDP growth has come from increased labour input, and only 28% from labour productivity growth
- ❑ By contrast, between the end of the early 1990s recession and the onset of the global financial crisis, 46% of Australia's real GDP growth came from increased labour input and 54% from productivity growth

Australia has benefited enormously from its economic relationship with China over the past 25 years, but will that continue to be the case?

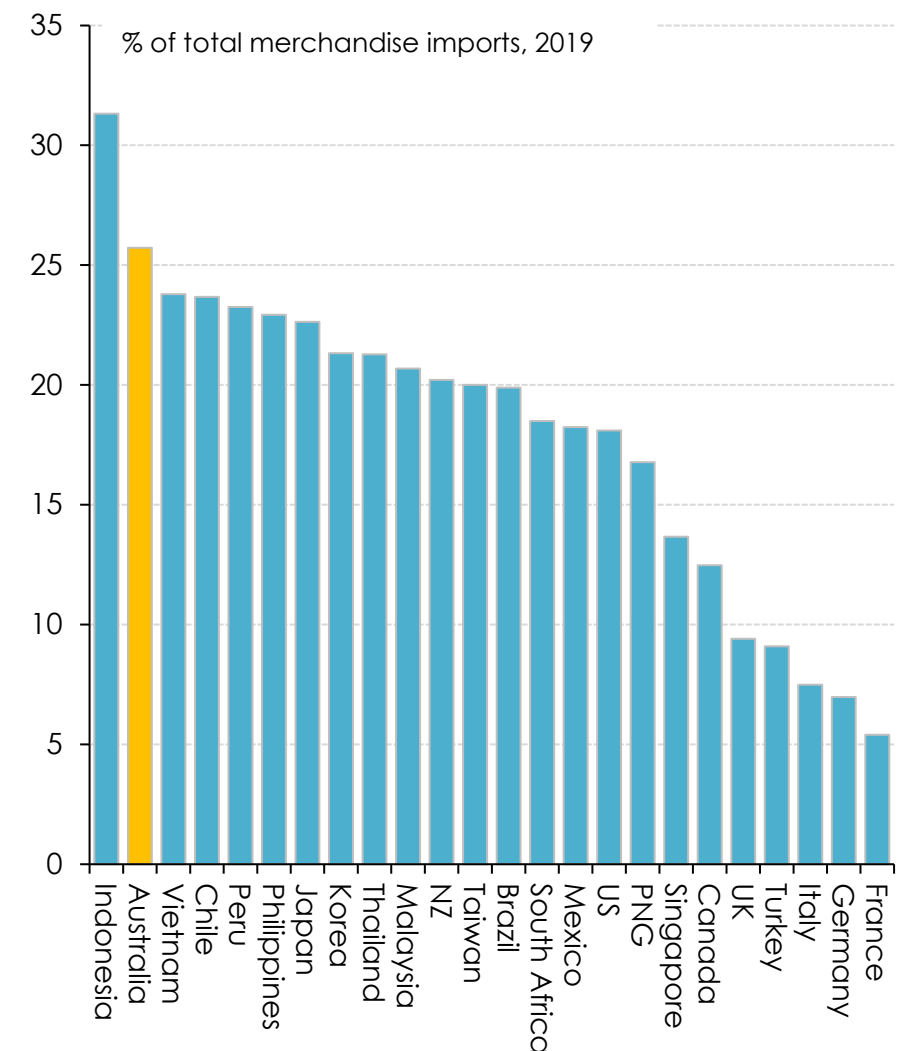
Merchandise exports to China as a pc of total



Merchandise exports to China as a pc of GDP



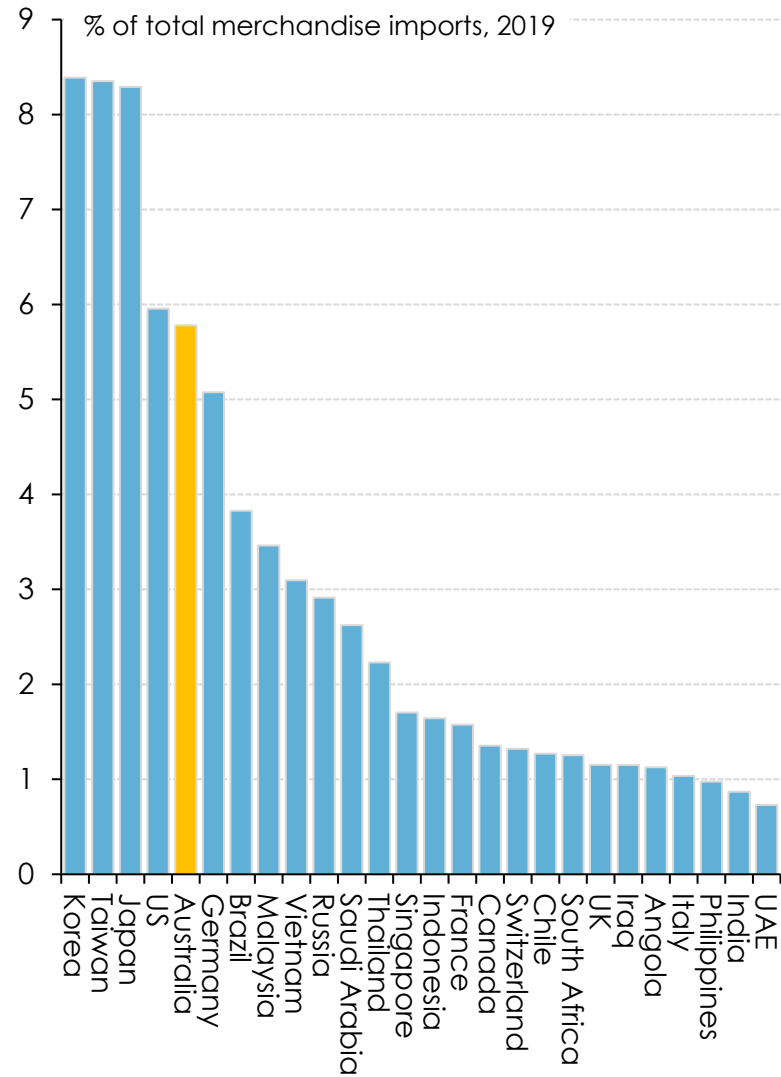
Merchandise imports from China as a pc of total



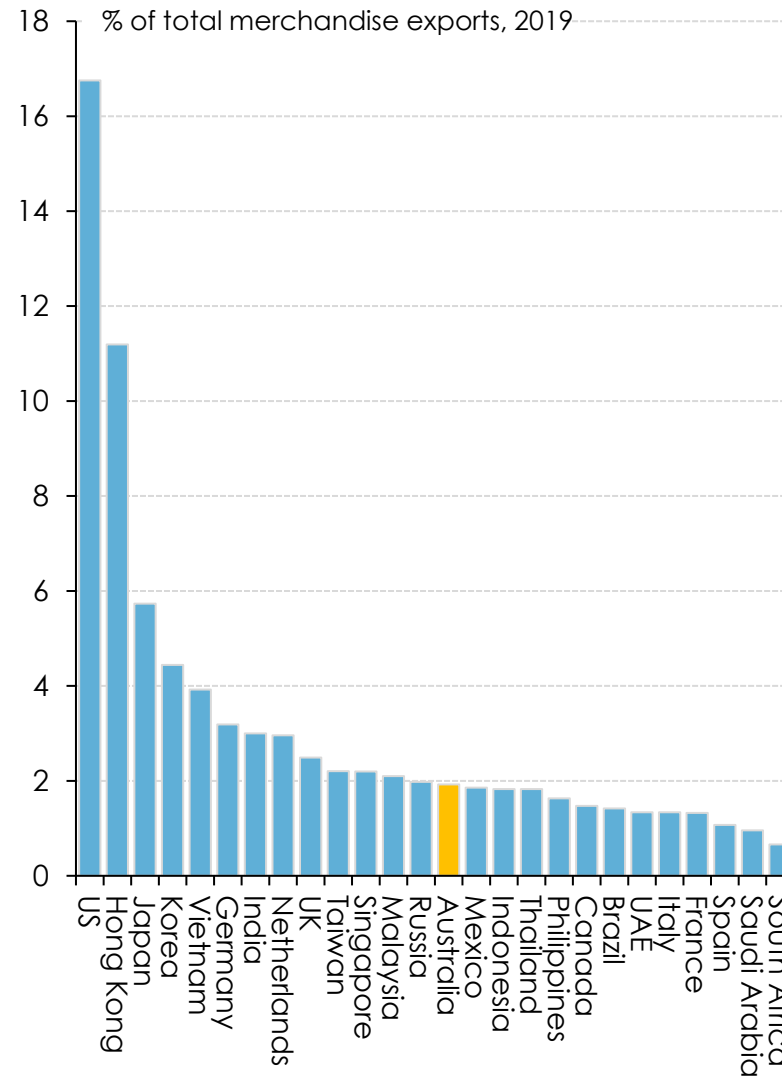
Sources: IMF, Direction of Trade Statistics; Taiwan Ministry of Economic Affairs, Bureau of Foreign Trade.

Australia is China's 5th biggest source of imports (of goods), 14th biggest export market, and has the 2nd-largest bilateral trade surplus with China

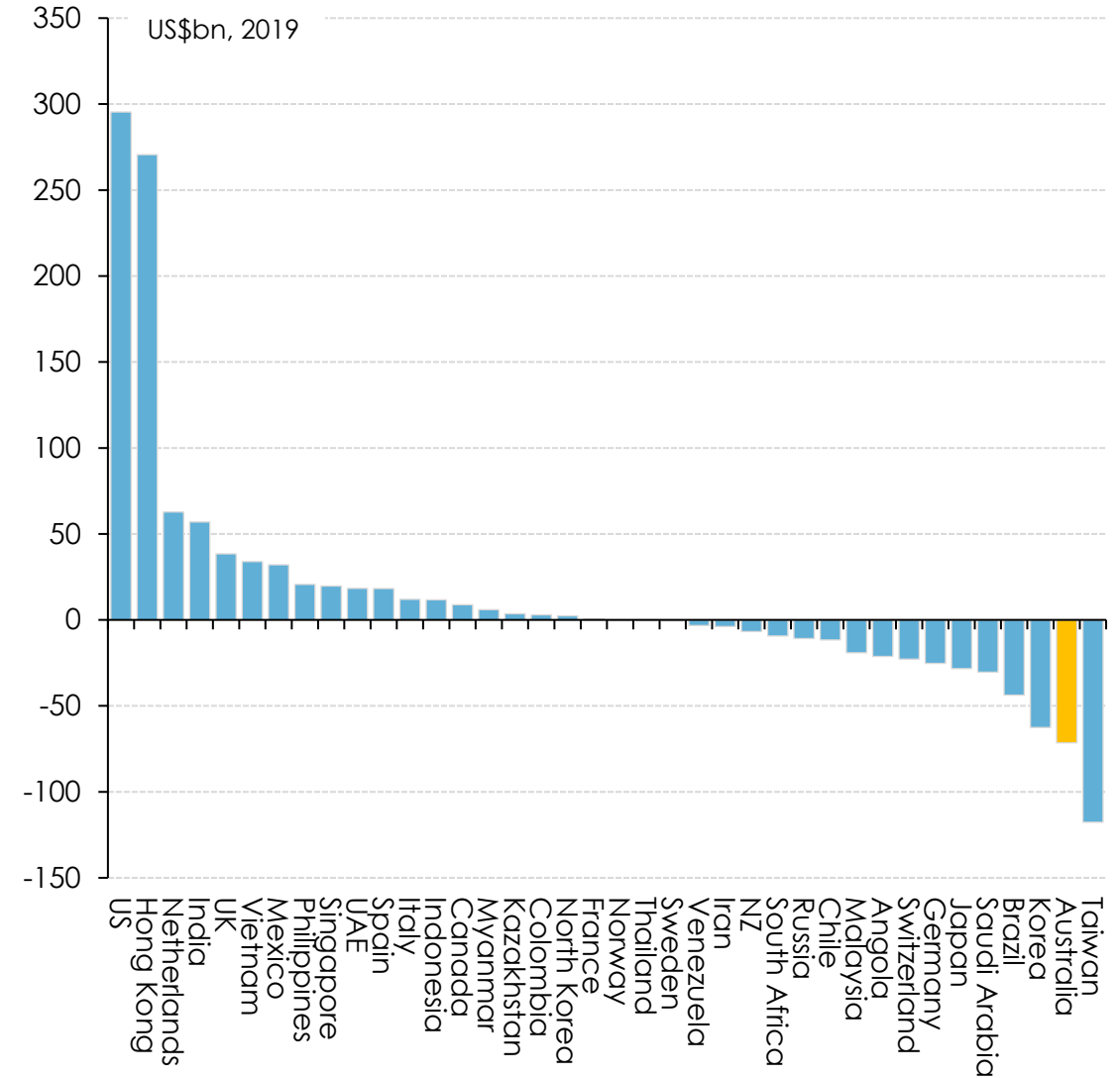
China's sources of imports



China's export destinations



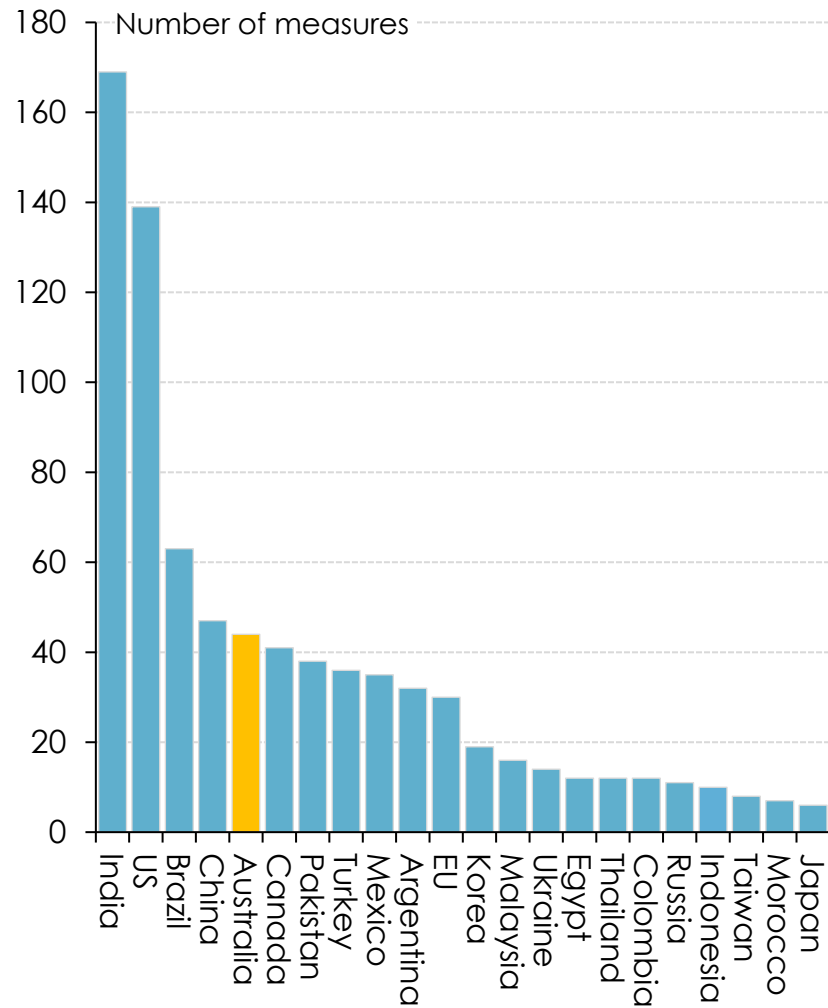
China's bilateral merchandise trade balances



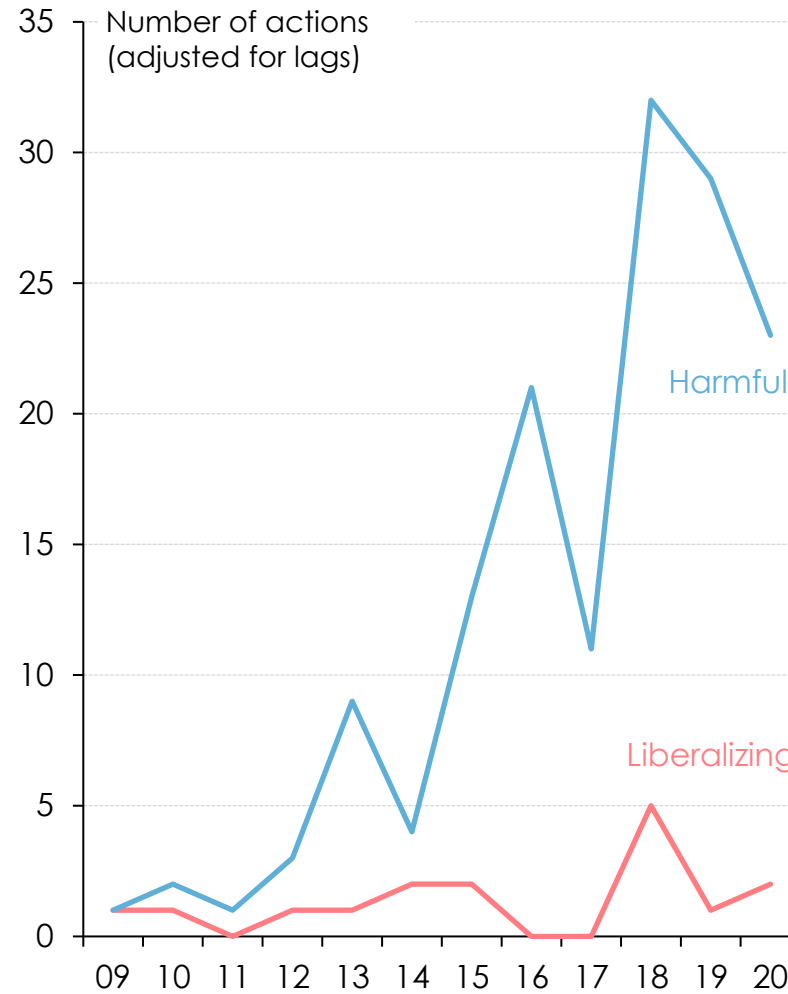
Source: International Monetary Fund, *Direction of Trade Statistics*.

China's threats against Australian exports of barley, beef, wine, coal, tourism and education aren't justified, but we aren't 'Snow White' either

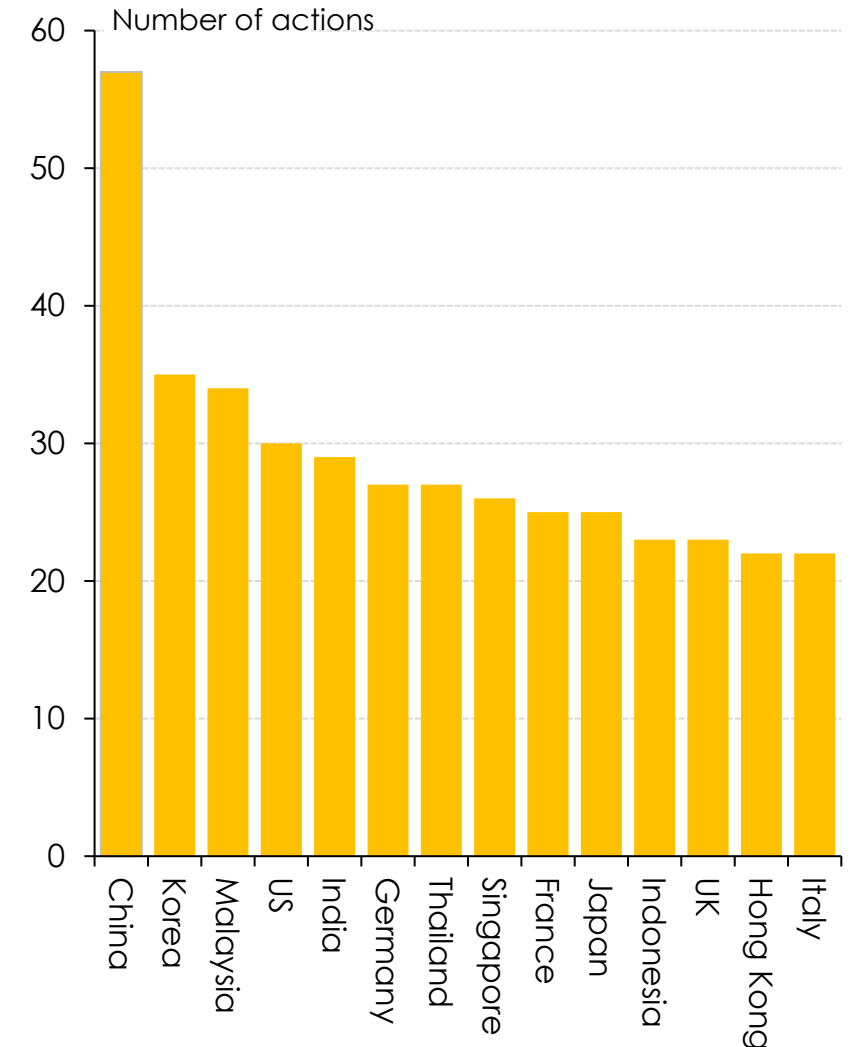
Number of anti-dumping measures imposed, 2015-19



Australian trade policy measures since 2009

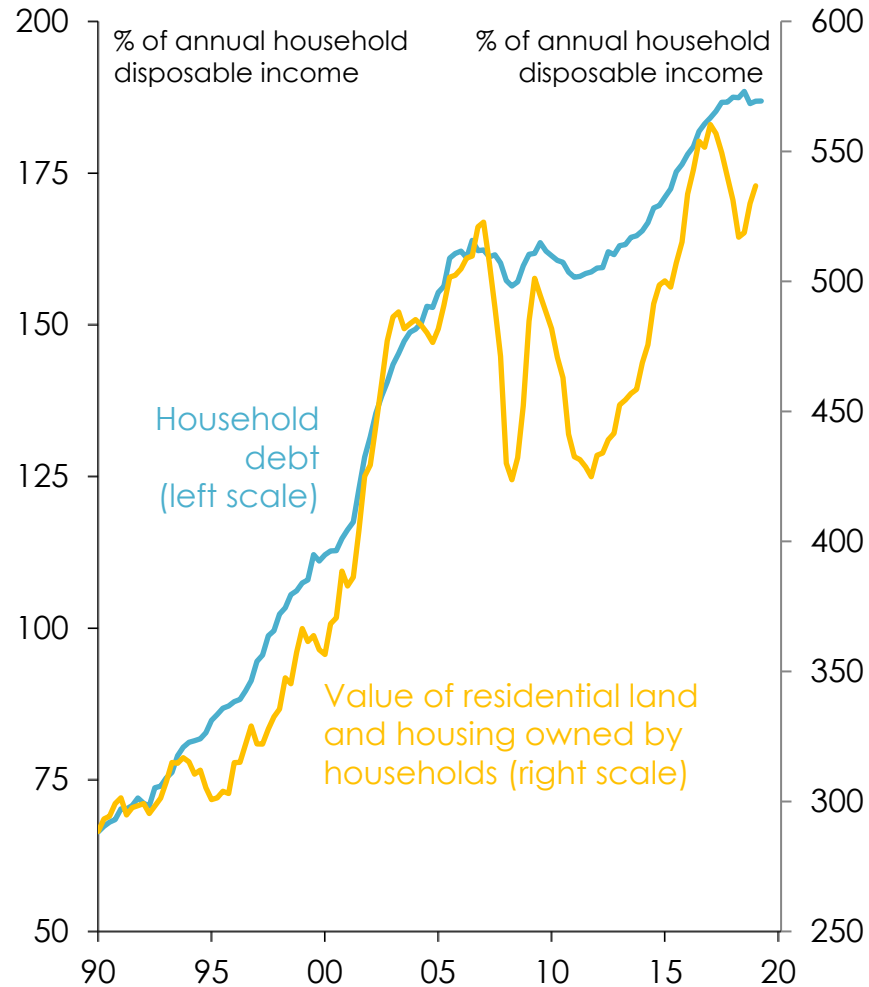


Countries adversely affected by 'harmful' Australian trade actions

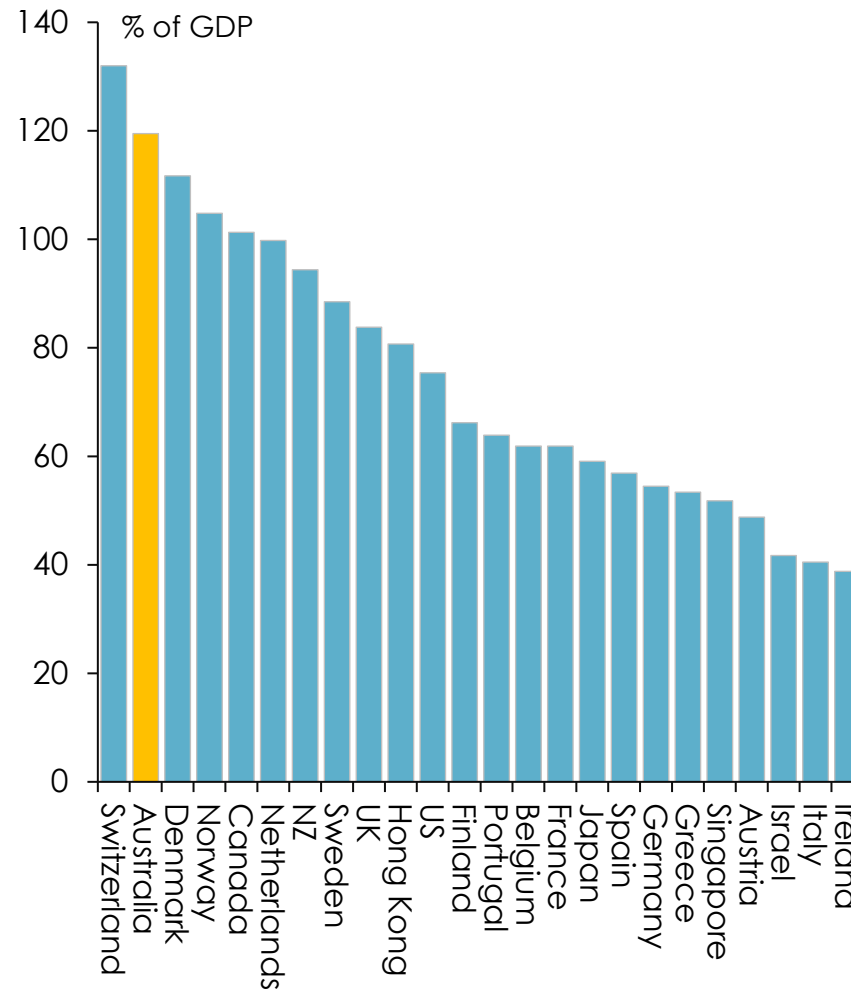


Rising property prices and household debt are unlikely to underpin Australian economic growth as they have done for most of the past 30 years

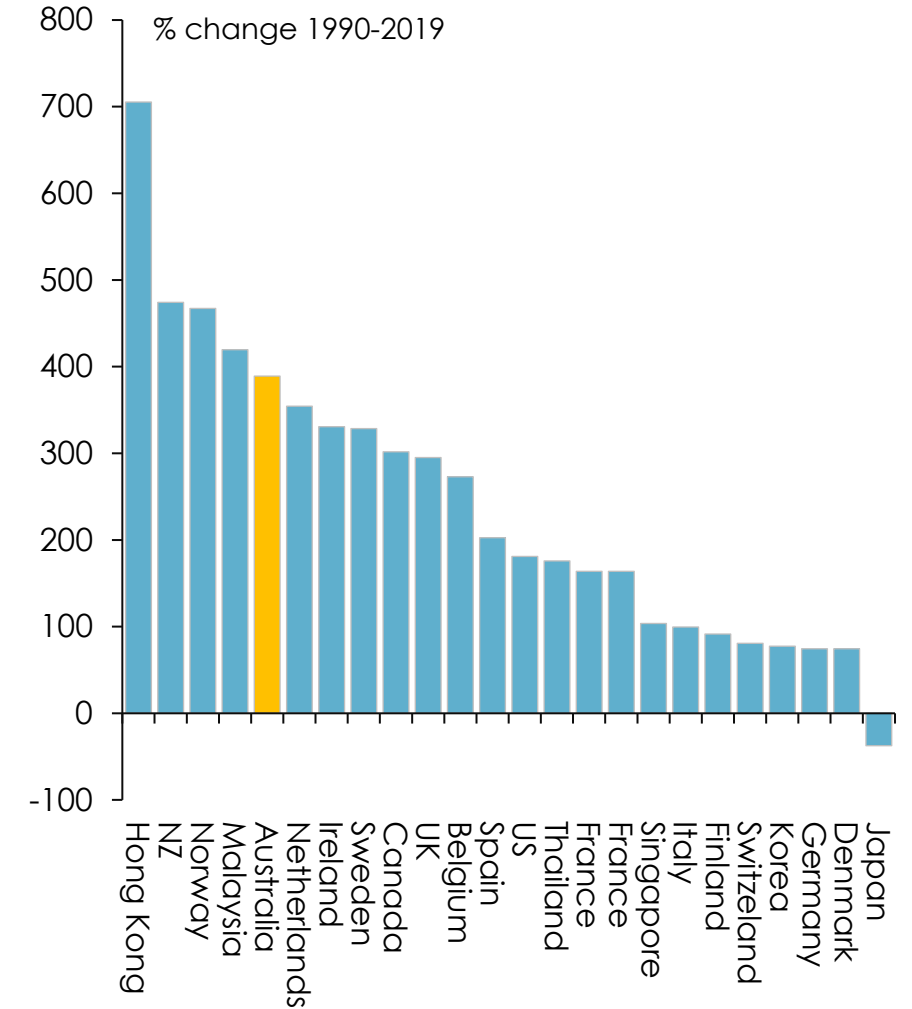
Australian housing wealth and household debt



Household debt as a pc of GDP, December 2019



Increase in residential property prices, 1990-2019

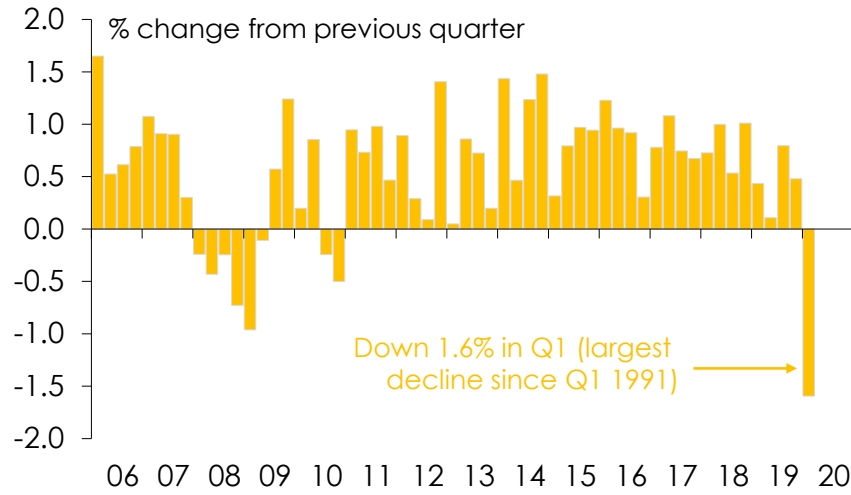


Note: Singapore property price increase is from March quarter 1999. Sources: ABS; Bank for International Settlements.

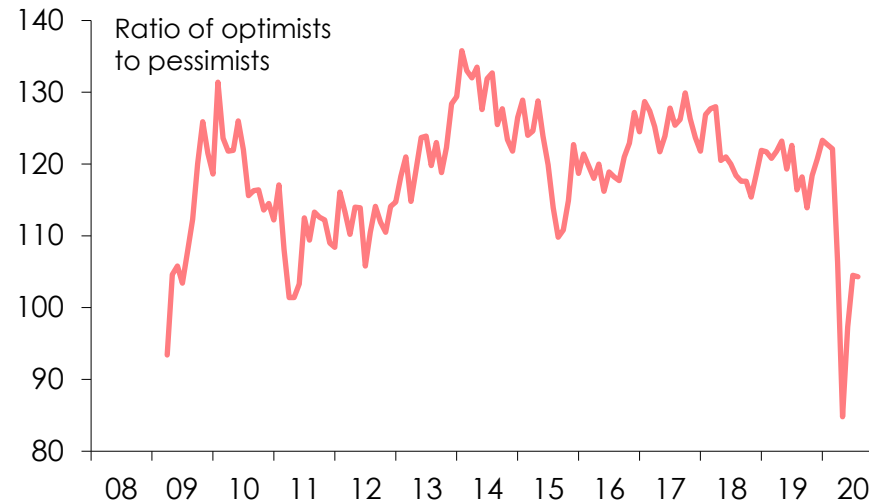
New Zealand

New Zealand has thus far had a sharper economic contraction than Australia – although it has done (and will do) more by way of fiscal policy

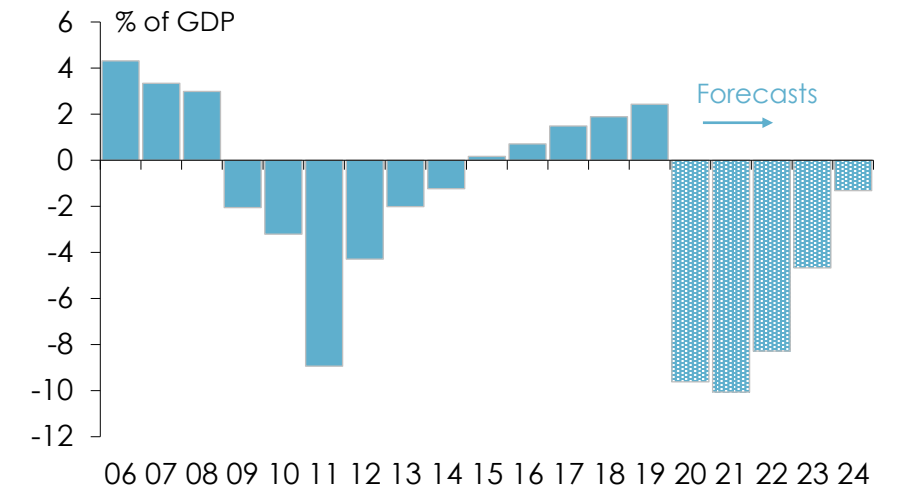
Real GDP



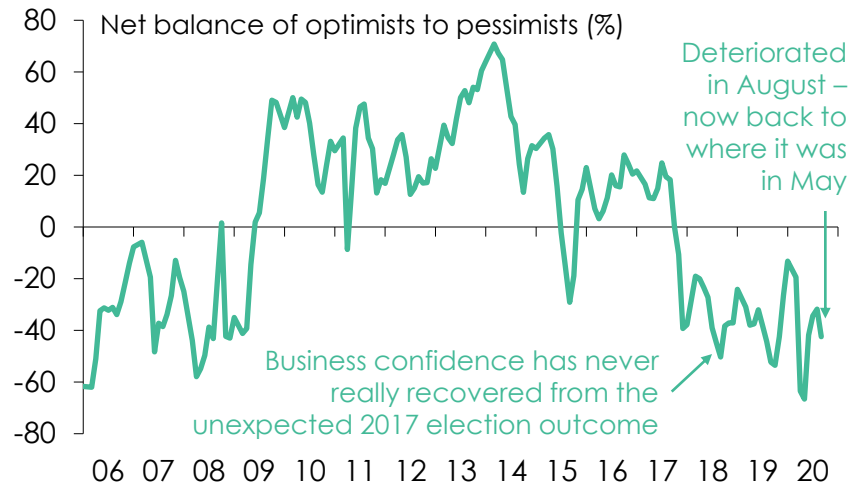
Consumer confidence



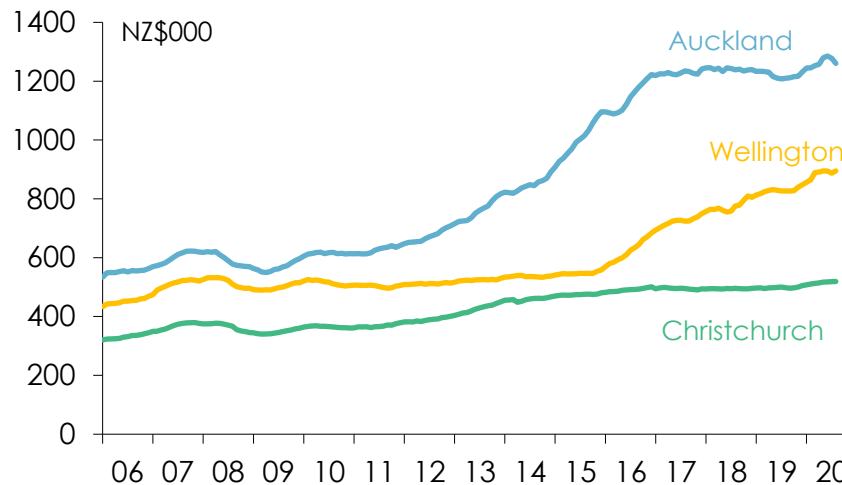
NZ government budget balance



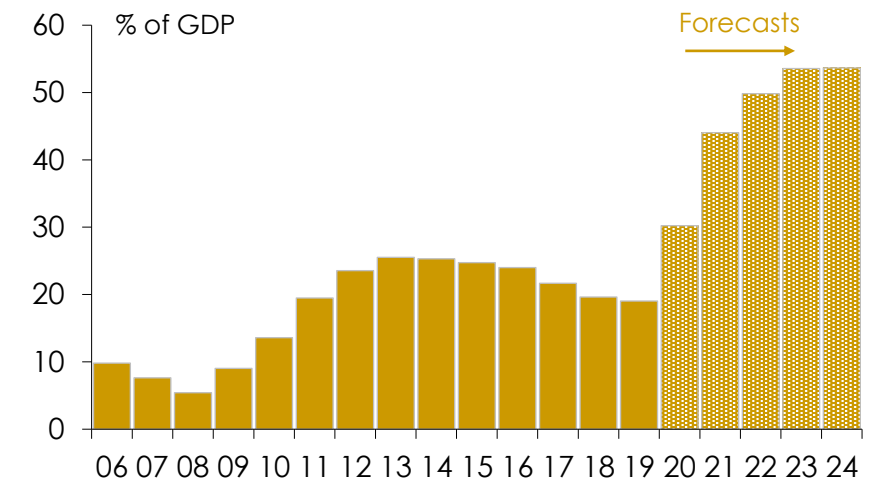
Business confidence



Residential property prices



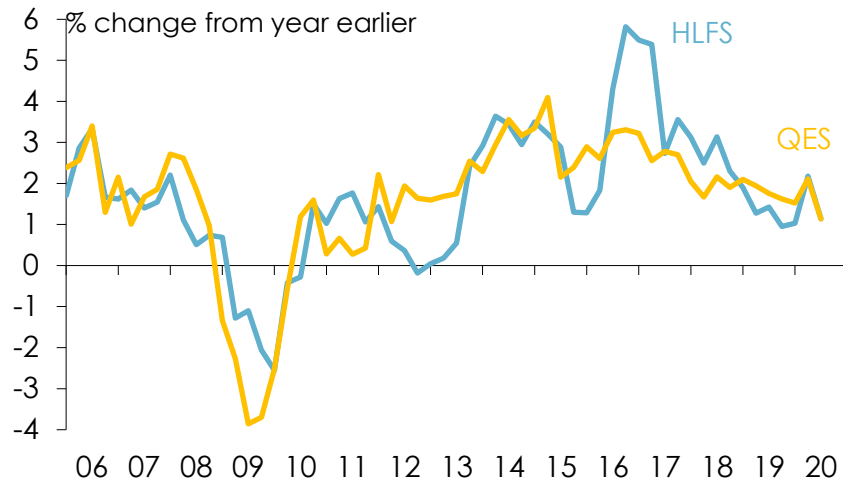
NZ 'core Crown debt'



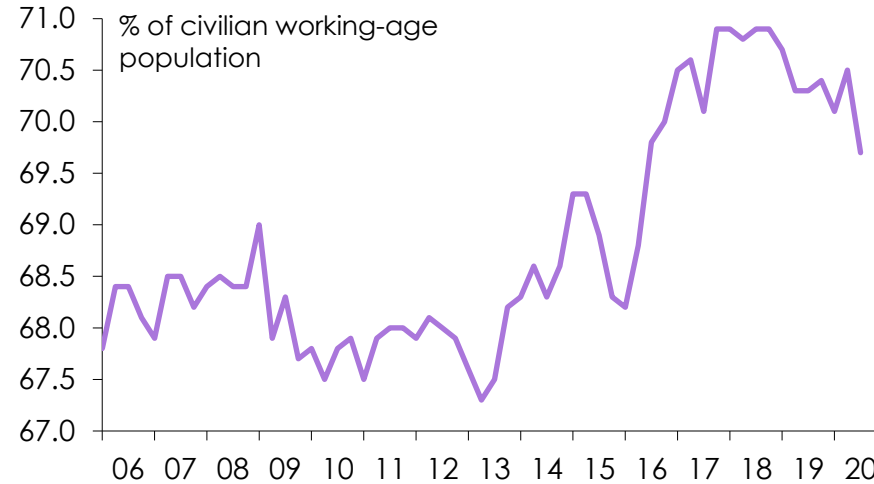
Note: New Zealand uses GDP(P) as its preferred measure of GDP. Unemployment rates are quarterly. The measure of the NZ Government budget balance is 'OBEGAL', operating balance excluding gains and losses (an accrual accounting measure). Net 'core Crown debt' excludes assets of the NZ Super Fund, student loans and other advances, and financial assets held for public policy purposes. Fiscal data (the two right-hand charts) are for fiscal years ended 30th June. Sources: Statistics NZ; ANZ-Roy Morgan; ANZ Bank; Quotable Value NZ; NZ Treasury *Budget Economic and Fiscal Update 2020*. Q2 GDP estimates will be released on 17th September.

New Zealand's wage subsidy scheme appears to have prevented a large rise in unemployment, although hours worked have fallen sharply

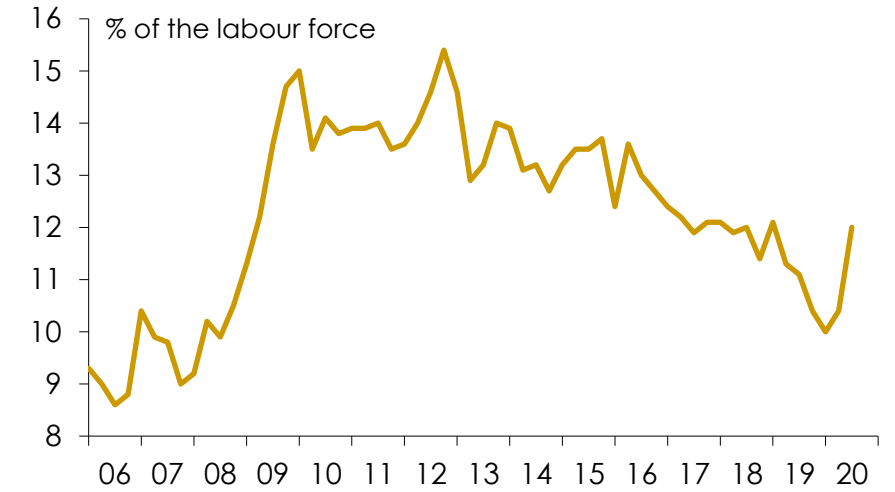
Employment



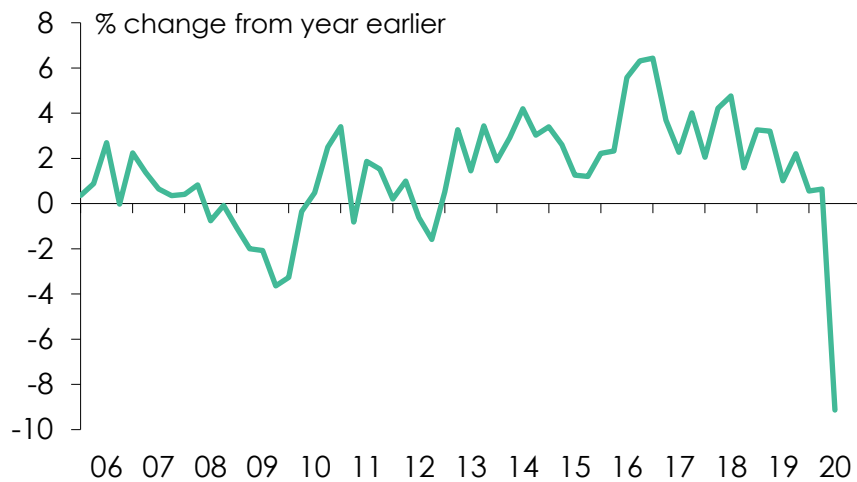
Labour force participation rate



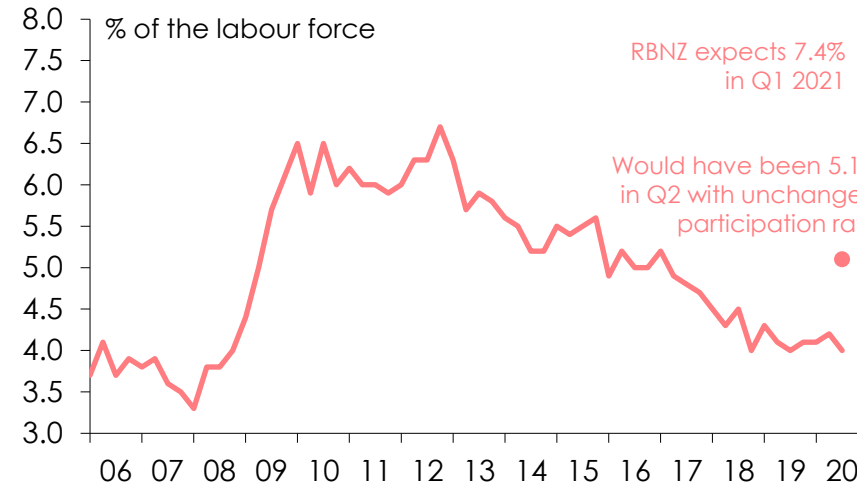
Labour force under-utilization rate



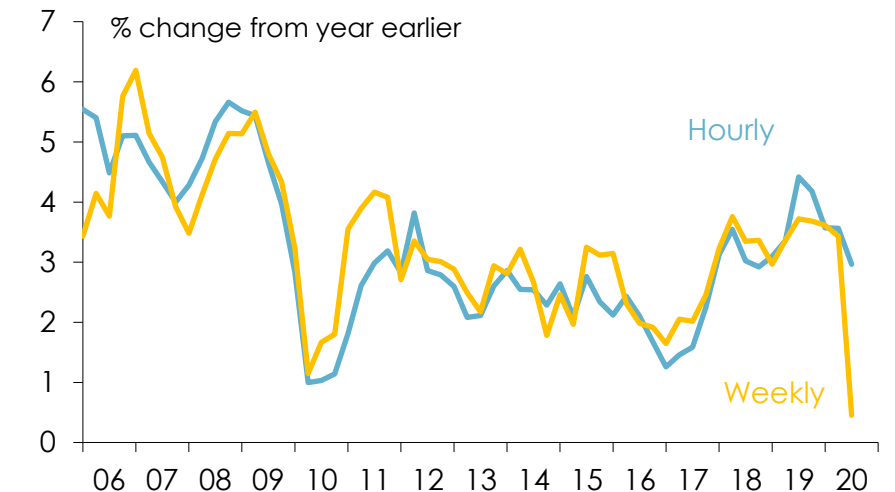
Hours worked



Unemployment rate



Average weekly earnings

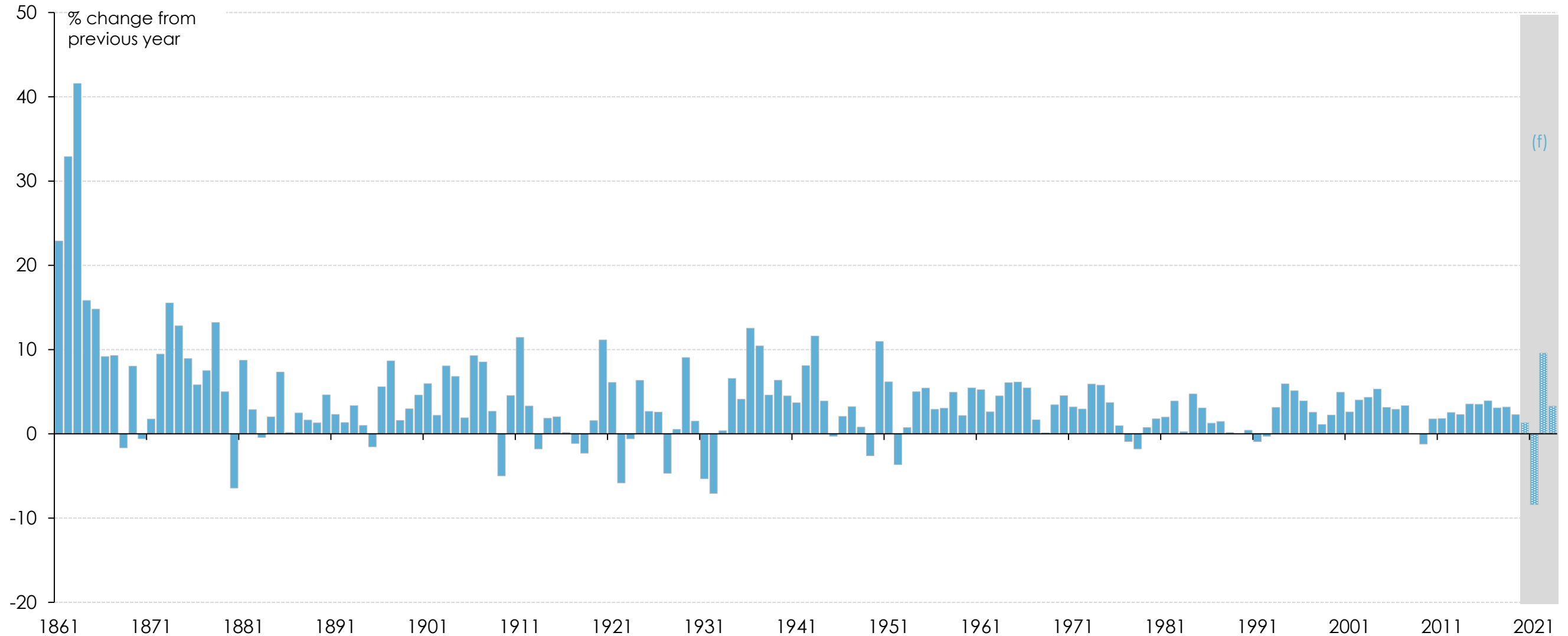


Note: New Zealand labour force data are only published quarterly. There are two 'headline' series on employment – the household labour force survey (HLFS) which counts the number of people in employment during the quarter; and the quarterly employment survey (QES), which counts the number of 'filled jobs' at 'economically significant enterprises' in the 'reference week' in the middle of the quarter, excluding the self-employed and those working in agriculture and fishing. The labour force under-utilization rate measures those who are unemployed plus those who are employed part-time but working fewer hours than they are able and willing to work.

Source: Statistics NZ. September quarter data will be released on 4th November.

The Reserve Bank of New Zealand is expecting the fall in real GDP in the year ended March 2021 to be the biggest in recorded NZ history

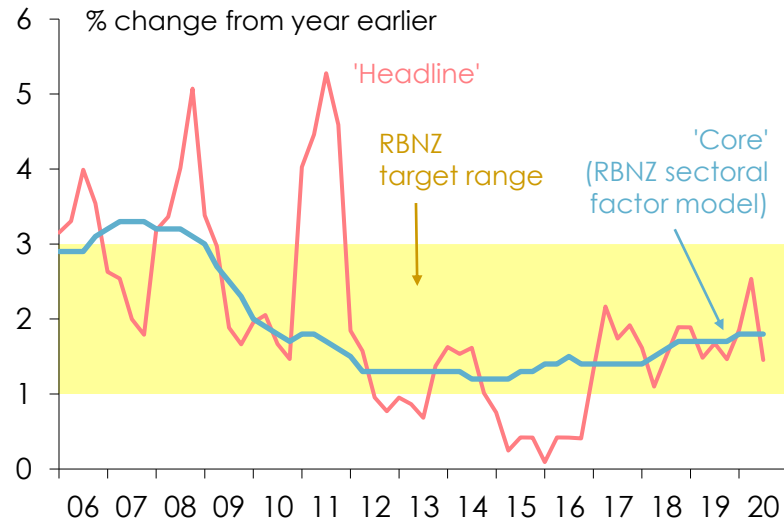
Annual growth in New Zealand real GDP, 1861-2023



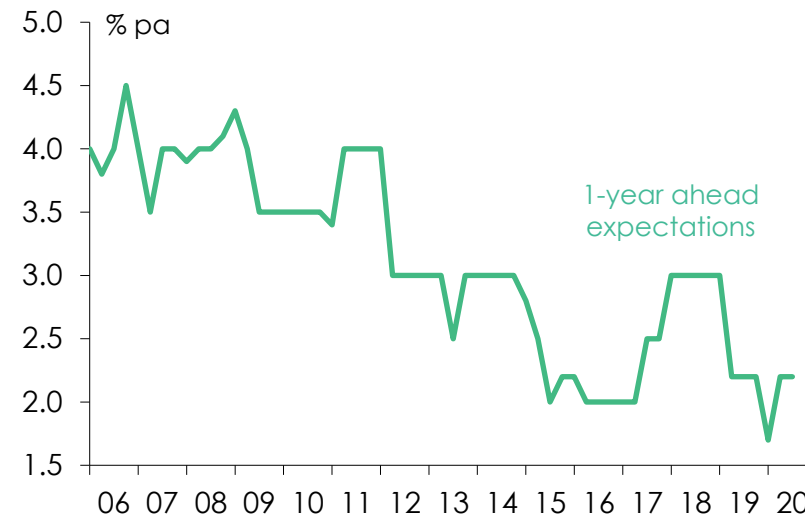
Note: Forecasts are for years ended 31 March. Source: RBNZ, Monetary Policy Statement, May 2020.

Inflation remained comfortably in the RBNZ's target band in the June quarter

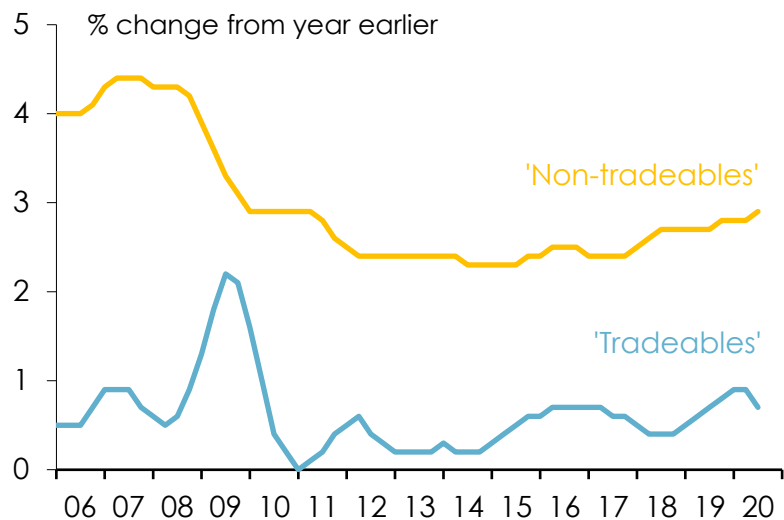
Consumer prices



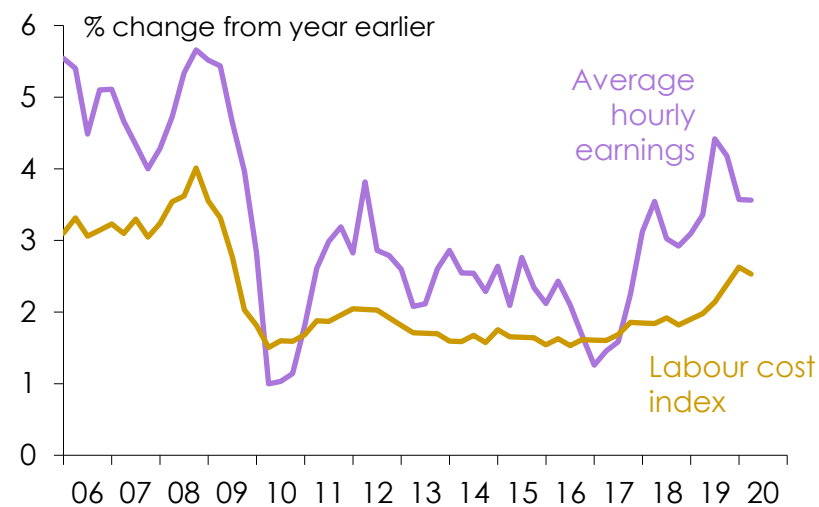
Household inflation expectations



Components of 'core' inflation



Labour costs

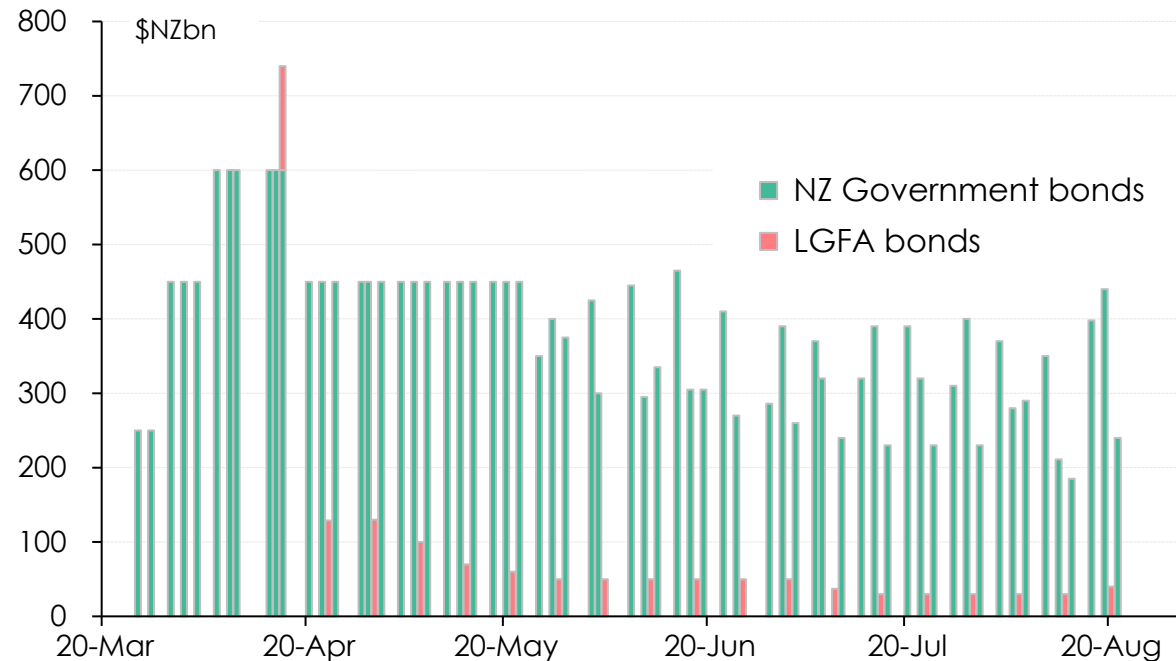


- ❑ The CPI fell 0.5% in the June quarter, reflecting a 12% fall in petrol prices, partly offset by a 16% increase in food prices and SNZ's inability to capture fully the effect of freeze on residential rents between 26th March and 25th September
- ❑ The June quarter result cut the annual 'headline' inflation rate to 1.5%, from the 8-year high of 2.5% recorded in the March quarter (which resulted from large increases in rents, food and cigarette & tobacco prices)
- ❑ The annual 'core' inflation rate remained unchanged at 1.8%, with a further slight acceleration in 'core' non-tradeables inflation (to its highest level in 9 years) offset by an easing in 'core' tradeables inflation
- ❑ Inflation expectations remain low, and pressures from labour costs are likely to abate given the weakening in the labour market since March

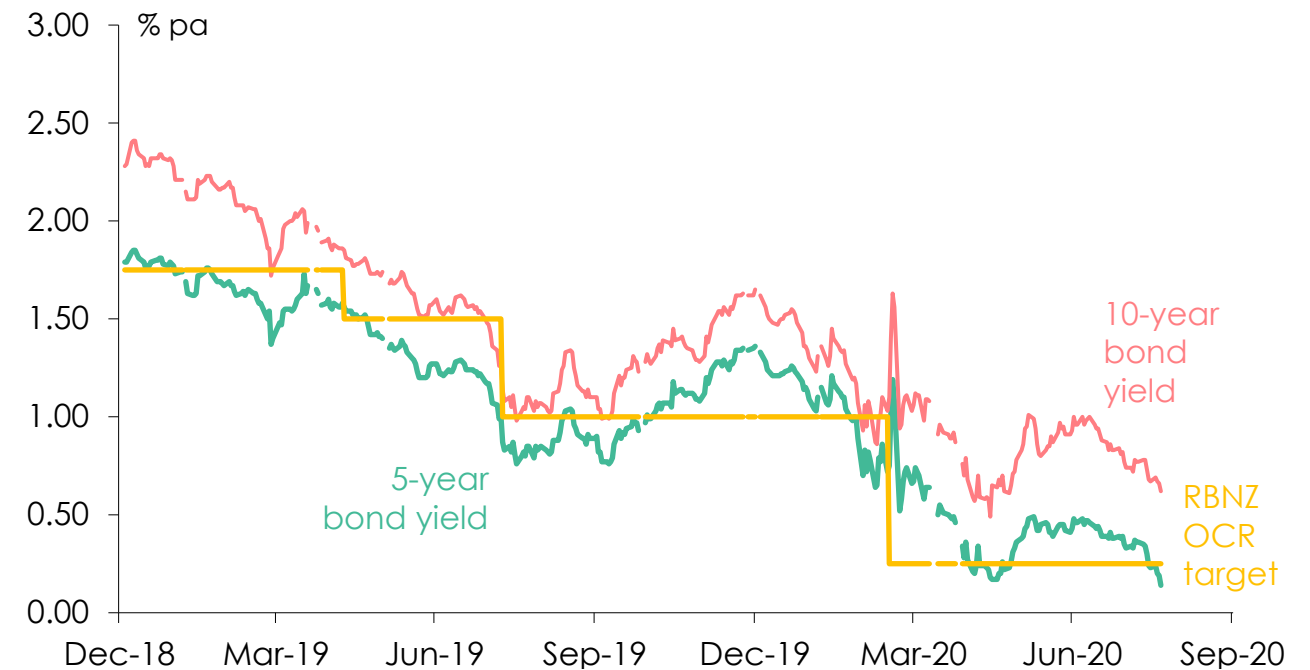
Sources: Statistics NZ; Reserve Bank of New Zealand. September quarter CPU will be released on 23rd October.

The RBNZ this week expanded its 'QE' program, floated the possibility of negative rates (again), as well as a 'funding for lending' program

RBNZ open market bond purchases



New Zealand interest rates

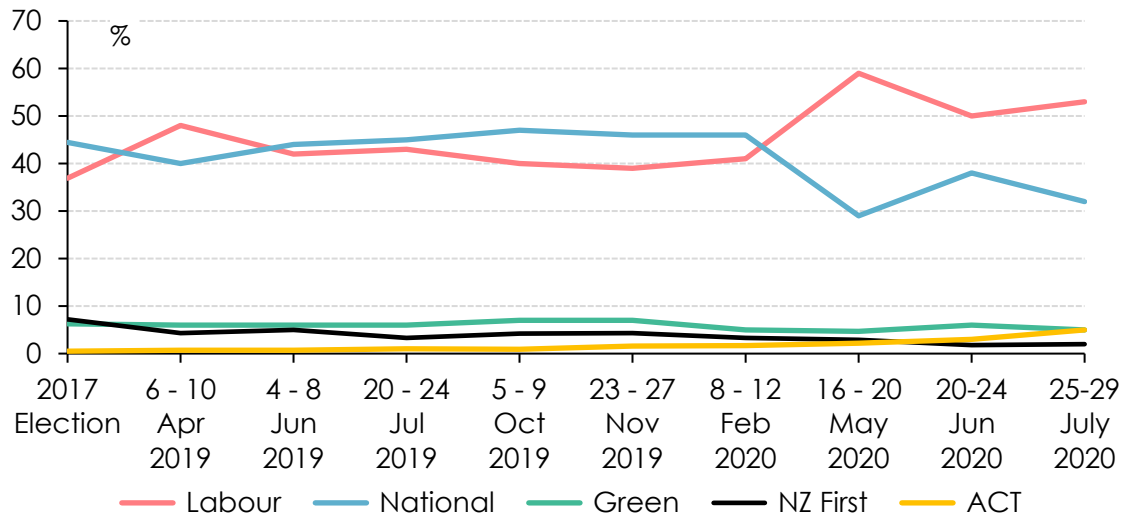


- ❑ RBNZ has adopted an ECB-style QE, establishing a Large Scale Asset Program initially set at \$NZ33bn (10½% of GDP), increased to \$60bn (19% of GDP) in May, and last week to \$100bn (32% of GDP) by June 2022
- ❑ This week the RBNZ bought NZ\$1.1bn of bonds, the most since the week ended 19th June, and bringing its total purchases since 25th March to \$NZ25.8bn (8.3% of GDP)
- ❑ At last week's RBNZ Monetary Policy Committee meeting the RBNZ again floated the possibility of a negative OCR target, possibly backed by a 'Funding for Lending Program' to make funds available to banks at close to the OCR (on the understanding that they in turn lent to their customers at negative rates), as well as outright purchases of foreign assets in pursuit of a lower NZ\$

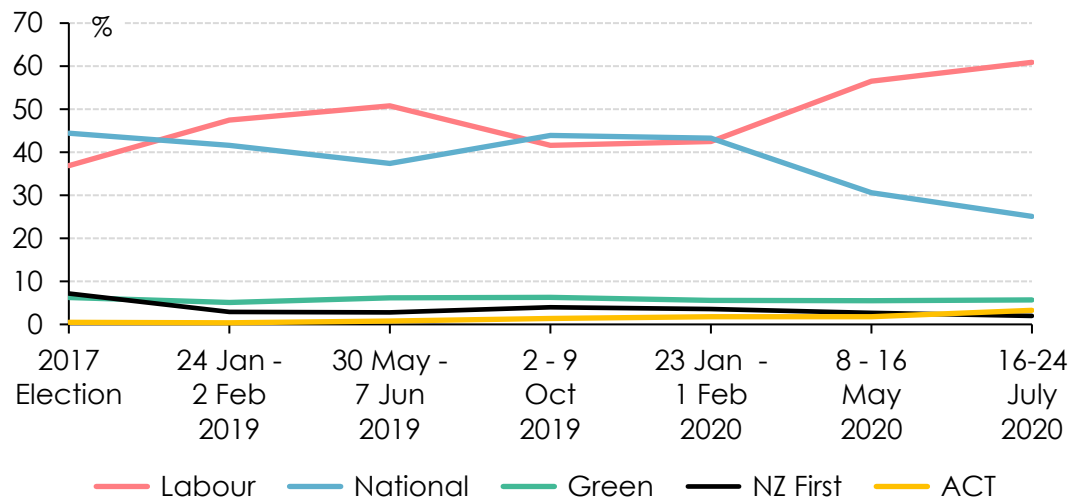
Note: LGFA = Local Government Financing Authority. Source: Reserve Bank of New Zealand. Data up to 21st August.

NZ's election has been deferred by four weeks, until 17th October, because of the Covid-19 outbreak and lockdown in Auckland

Colmar-Brunton 1-News poll



Reid Research – TV3 poll



- New Zealand uses a ‘mixed member proportional’ (MMP) system to determine the composition of its 120-seat Parliament
 - 71 members are elected from constituencies (of which 7 are reserved for Māori) on a ‘first past the post’ basis (as used in Britain)
 - the other 49 are chosen from party lists such that each party has the same share of seats in the Parliament as its share of the national vote, provided it has won at least 5% of the national vote or one constituency seat (similar to the system used for the German Bundestag)
 - each elector has two votes, one for his or her constituency and one for a party list
- At the 2017 election, the then incumbent centre-right National Party won 56 seats with 44.6% of the vote, but Labour which won 46 seats with 36.9% of the vote was able to form government in coalition with the conservative-populist NZ First (9 seats with 7.2% of the vote) and the Greens (8 seats with 6.3% of the vote)
- For the second time this year, National changed leaders, installing Judith Collins (known to her colleagues as ‘Crusher’ Collins) after the resignation of Todd Muller for ‘health reasons’
- The most recent poll, by Colmar Brunton, if repeated at the election would give Labour 67 seats (up 20), more than enough to govern in their own right, and National 41 (down 15)
 - The Greens would get 6 seats (down 2), the ACT 6 (up 5), and NZ First would lose all its seats (including that of Deputy PM Winston Peters)

Note: ‘ACT’ is the Association of Consumers and Taxpayers, a libertarian party which currently holds one constituency seat in the NZ Parliament. Sources: NZ Electoral Commission; Colmar Brunton; Reid Research.

Some possible longer-term consequences

Some other possible longer-term consequences of the pandemic

- ❑ **An accelerated retreat from ‘globalization’**
 - prompted by mistrust of international supply chains and desire for greater self-sufficiency in ‘essential’ products
 - greater government control over movement of people and capital across international borders likely to persist
- ❑ **Greater expectations of government**
 - having done things previously considered ‘unthinkable’ during this downturn, governments may be expected to do more during future downturns
 - there may as a result be heightened demand for hitherto unprecedented government intervention to address other issues (for example climate change)
- ❑ **A reduced role for (conventional) monetary policy in managing economic cycles**
 - implying a greater role for fiscal policy (or, alternatively, bigger and perhaps more frequent cycles)
 - and as Treasury Secretary Stephen Kennedy pointed out this week, “it is highly likely that fiscal multipliers are larger when interest rates are near zero and expected to remain there for the foreseeable future”
- ❑ **Changes in ways of working**
 - at least some employers and employees are likely to maintain the option of (or preference for) ‘working from home’
 - possible implications for demand for commercial office space
- ❑ **Diminished use of mass transit (see slide 73)**
- ❑ **Accelerated decline in the use of cash for transactions (see slide 77)**
- ❑ **Re-think of relationships with China (see slides 108-110)**
 - especially challenging for Australia given our unusual (for an ‘advanced’ economy) economic relationship with China
- ❑ **Erosion of respect for US leadership and competence**
 - unless Trump loses the November election (see slide 46) and Biden can reverse the damage done to perceptions of US credibility, competence and commitment

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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