

ECONOMIC IMPACT OF THE CORONAVIRUS PANDEMIC

PRESENTATION TO AN ECONOMIC SOCIETY WEBINAR

22ND JULY 2020

SAUL ESLAKE
CORINNA ECONOMIC ADVISORY PTY LTD

Agenda

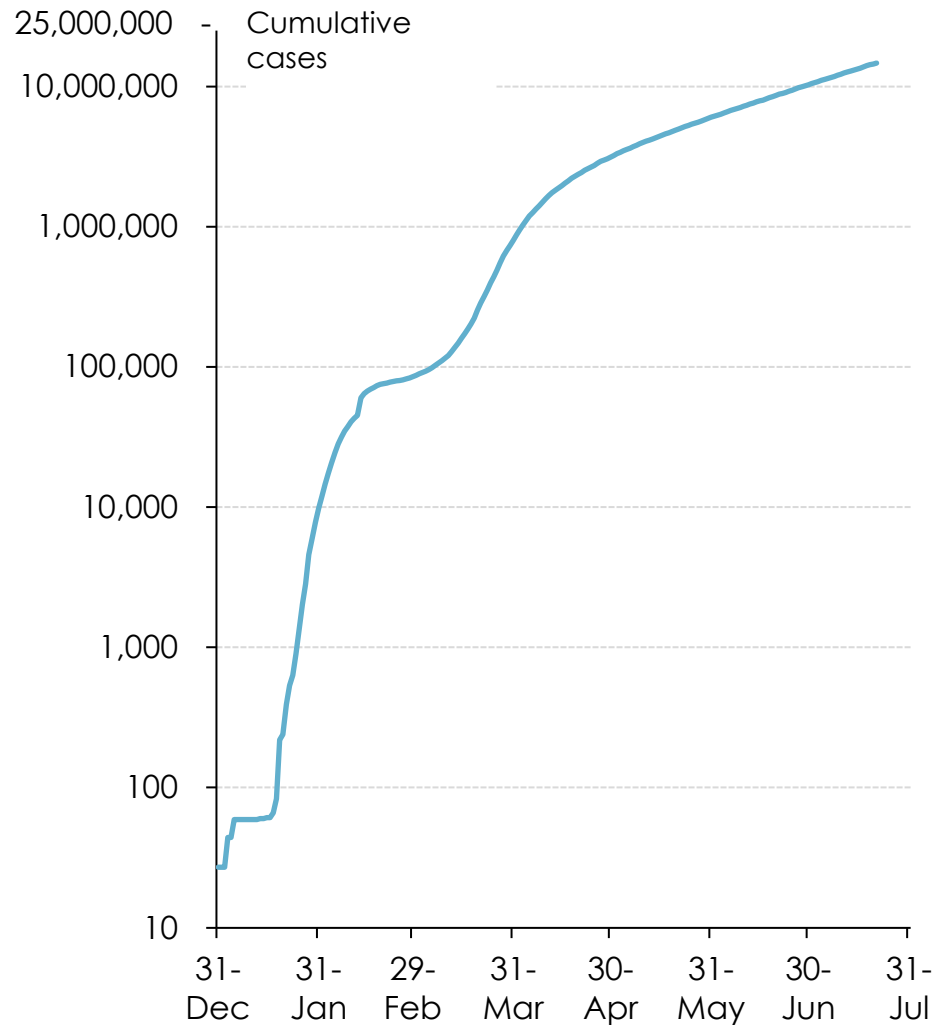
- ❑ **The virus**
- ❑ **The world economy**
- ❑ **The Australian economy**
- ❑ **The problem with Victoria**
- ❑ **The Australian policy response**
- ❑ **Some longer-term considerations**

Note: nothing in what follows constitutes investment advice, nor should it be construed as such!

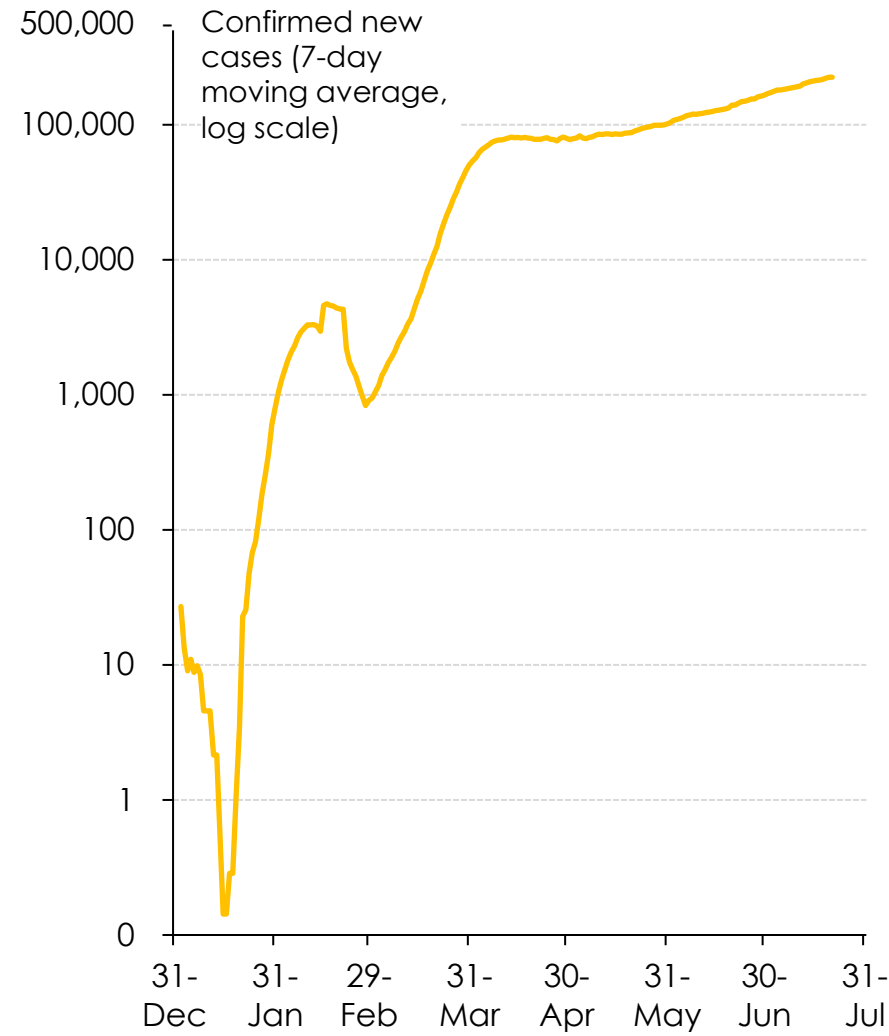
The virus

Globally, the virus is still 'out of control'

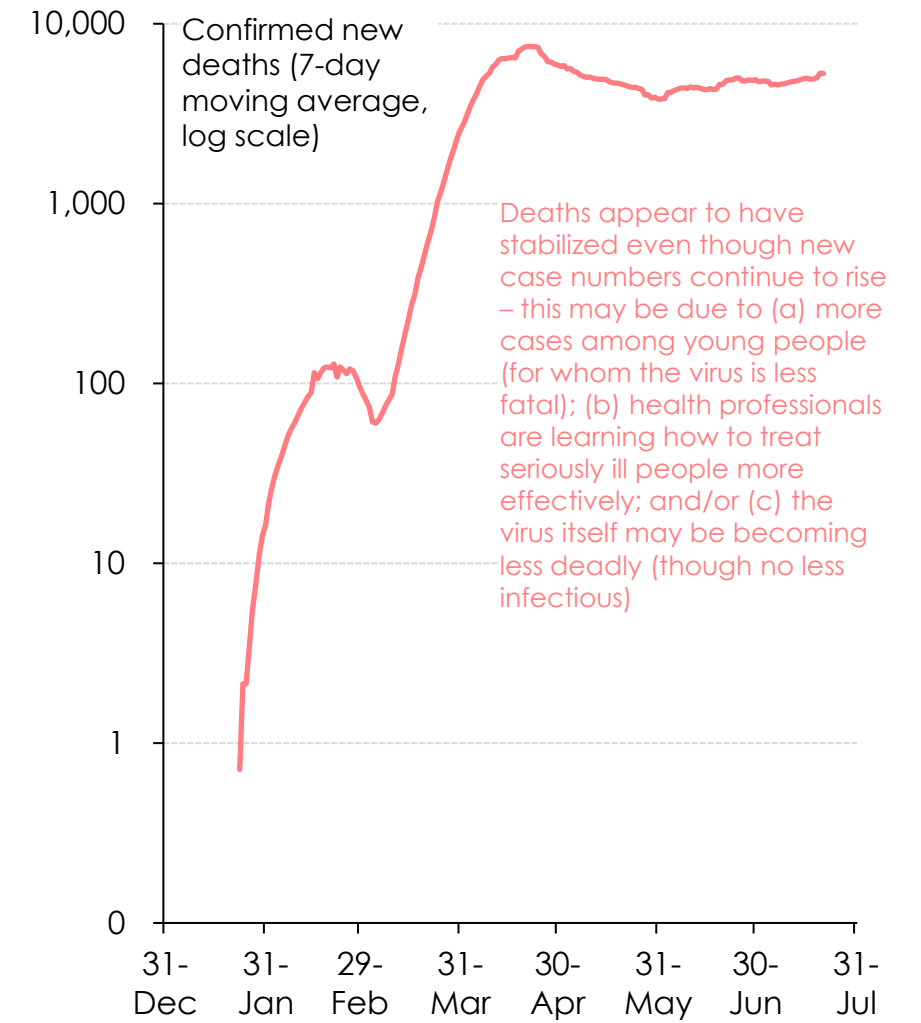
Cumulative confirmed cases – global total



New confirmed cases – global total



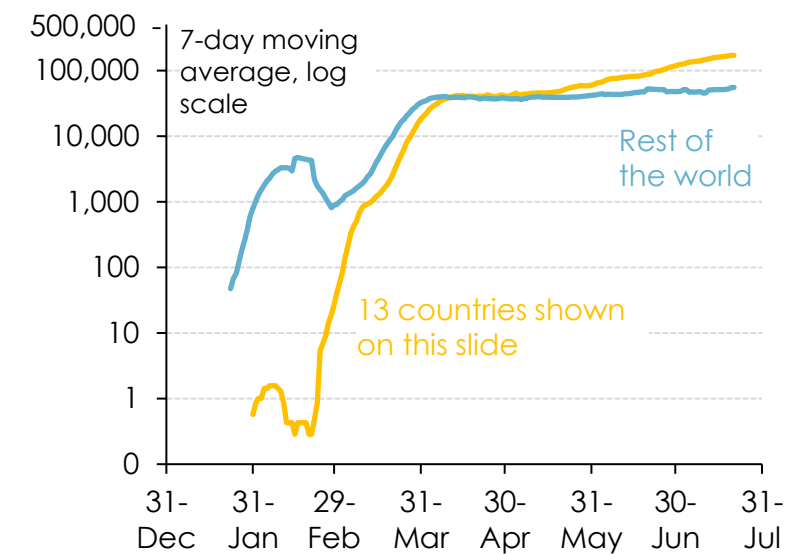
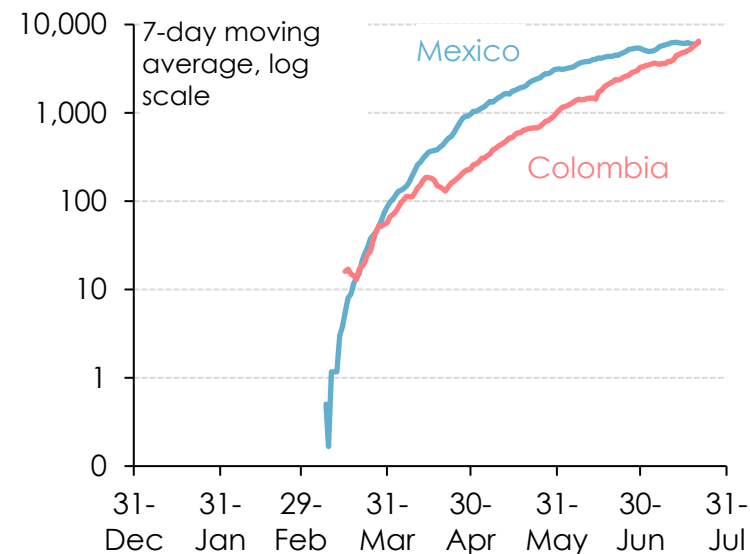
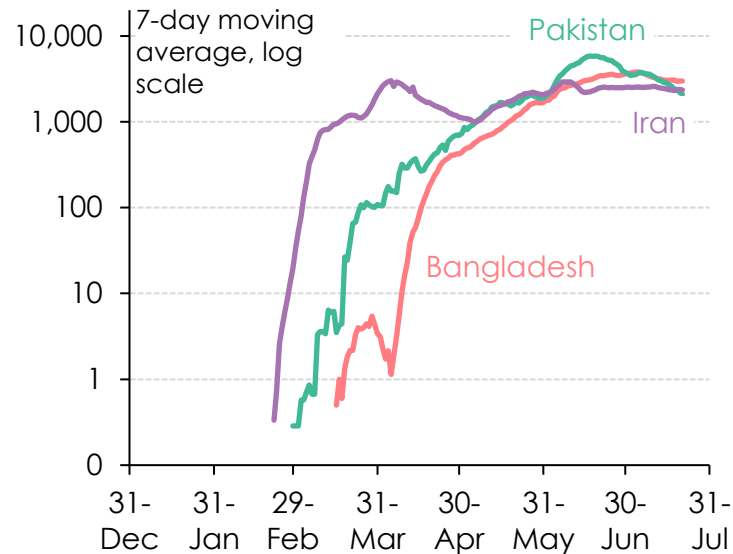
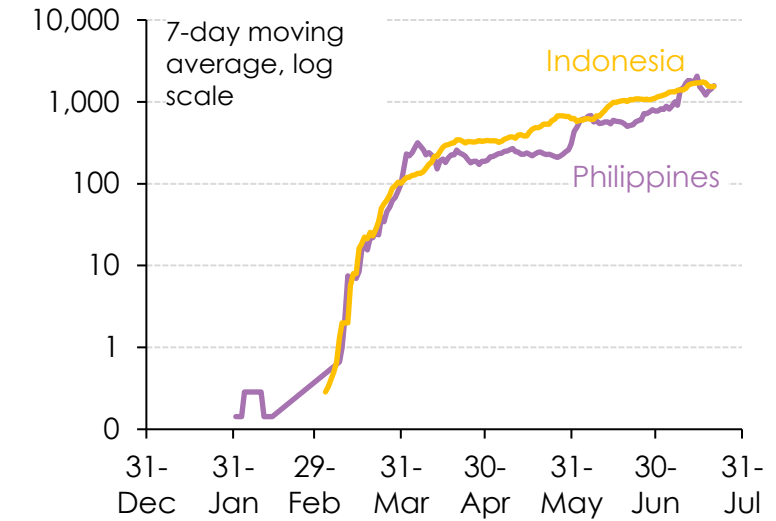
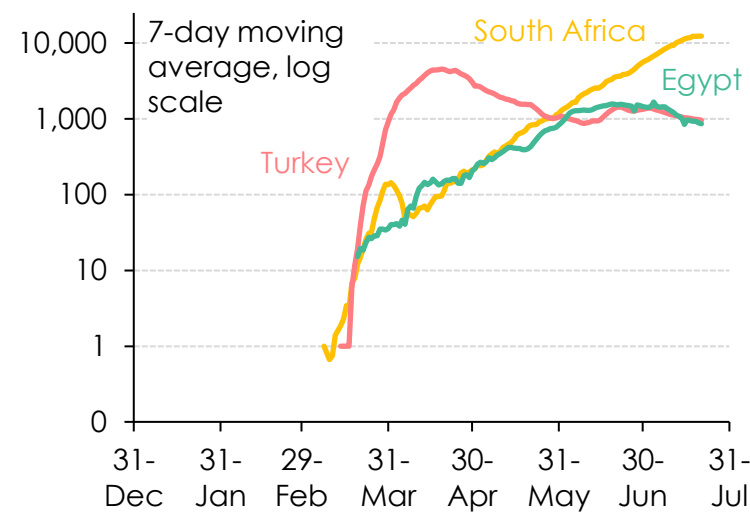
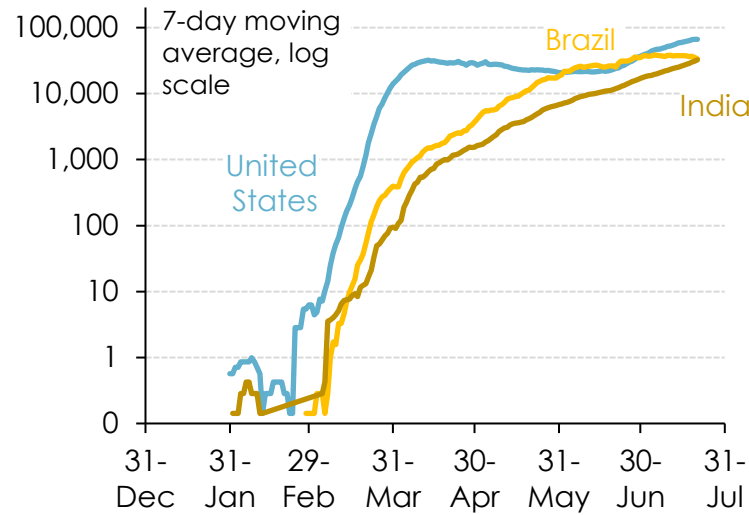
New deaths – global total



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

8 countries with large populations have yet to 'flatten their curves' – although another 5 appear now to have done so

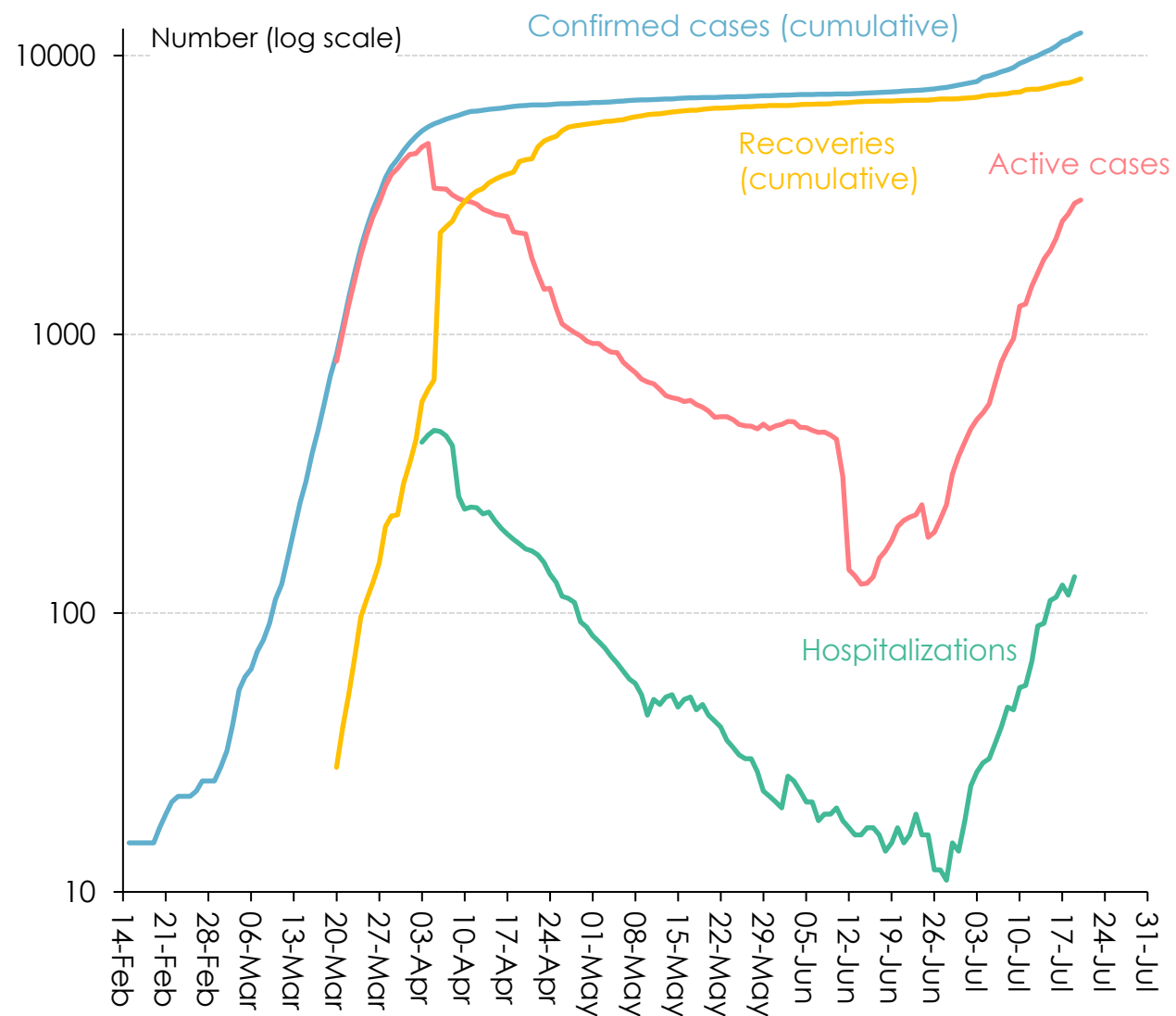
Daily new cases



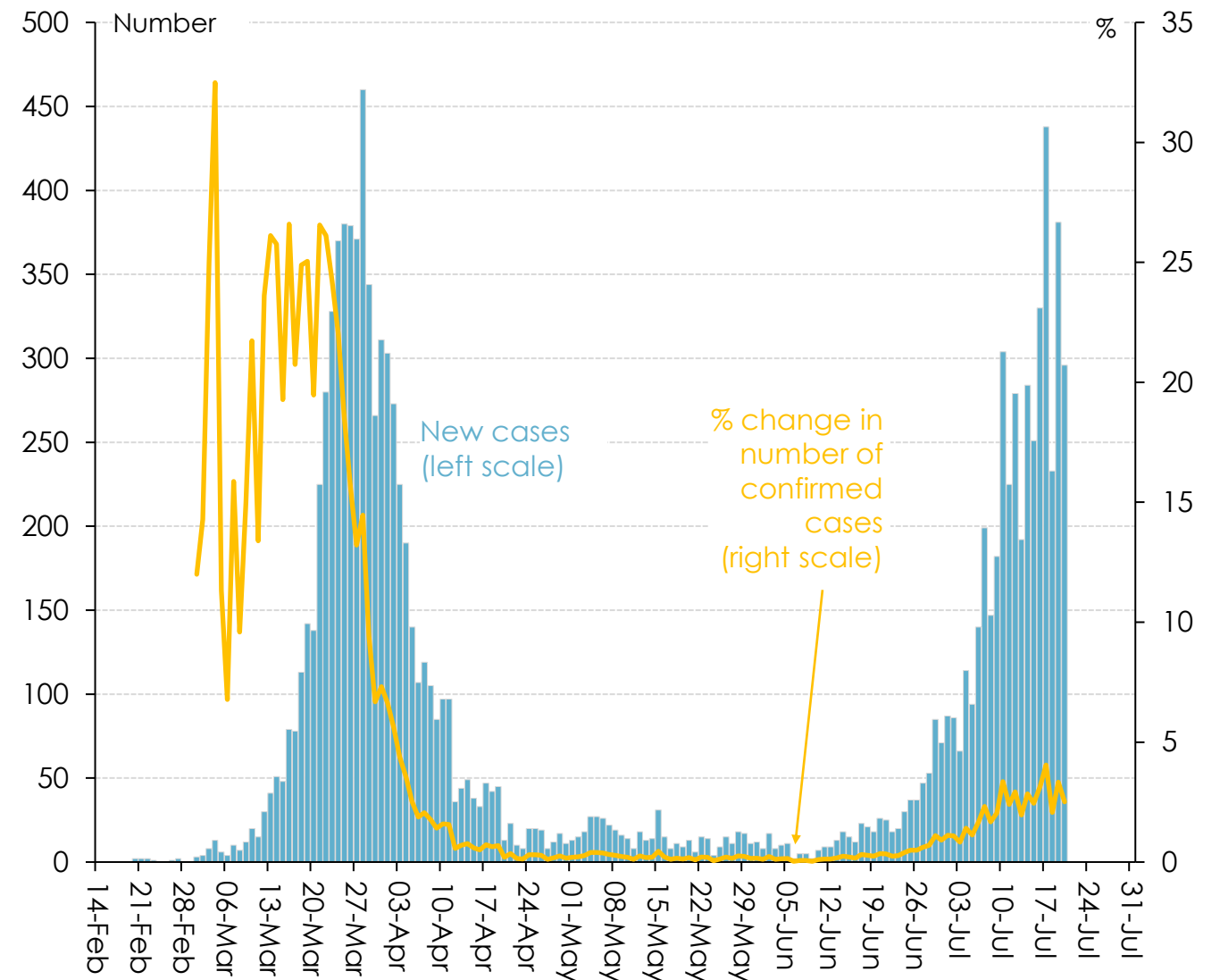
Note: Data up to 21st July. Source: University of Oxford, *Our World in Data*; Corinna.

The number of new cases in Australia has risen rapidly since the end of June, when restrictions began to be eased in most states

Cases, recoveries and hospitalizations



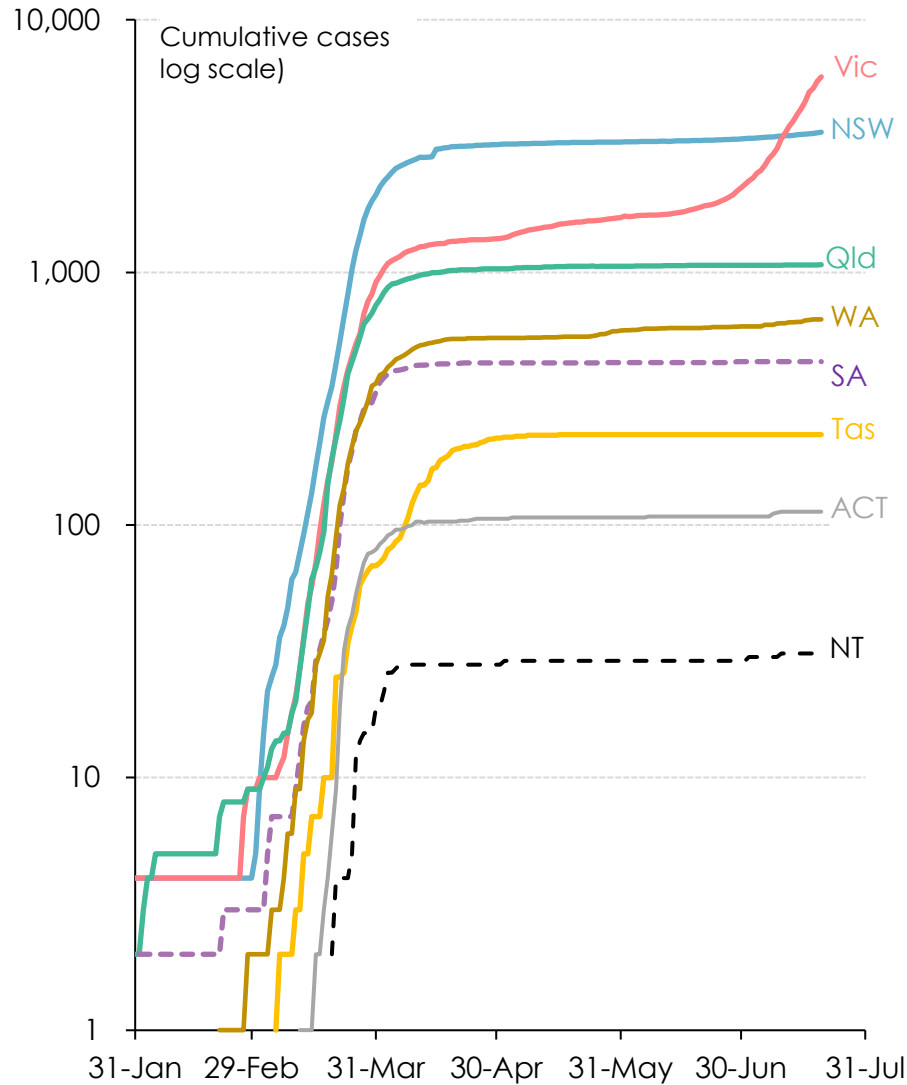
New cases



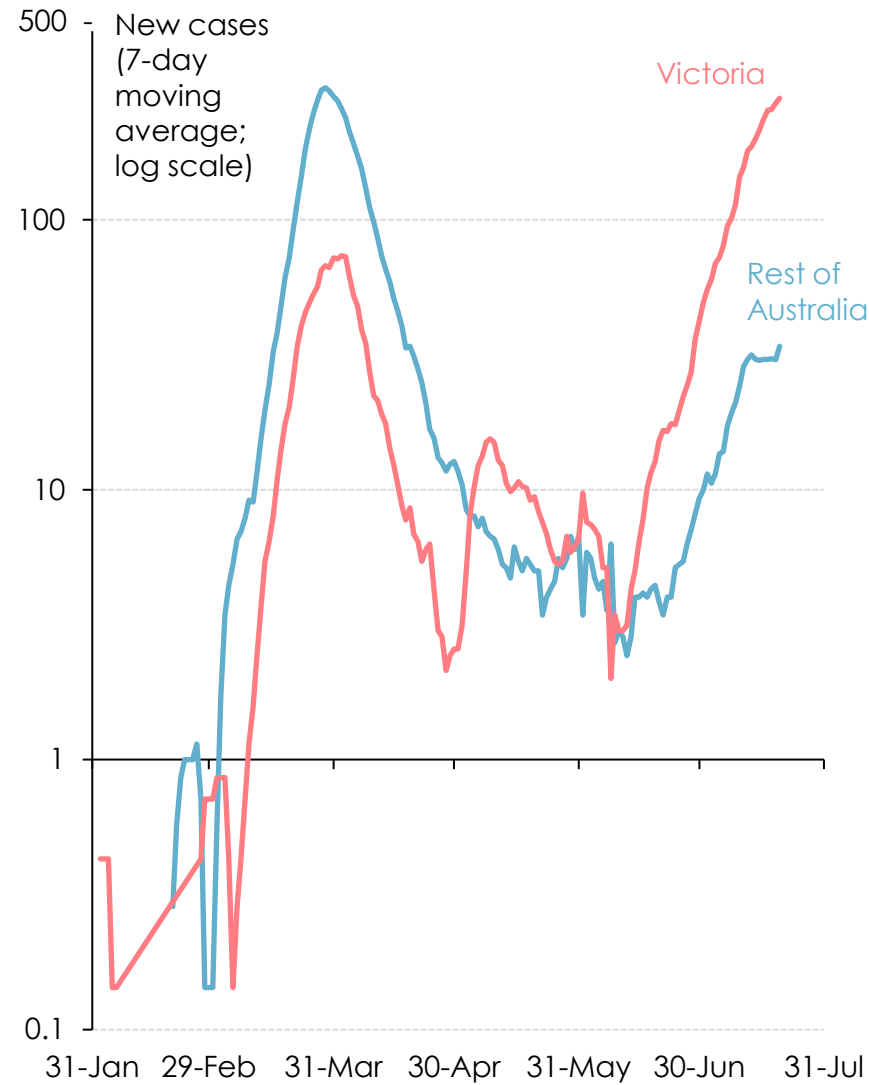
Note: Data up to 20th July. Source: covid19data.com.au

93% of the new cases in Australia since the middle of June have been in Victoria (and 6% in New South Wales)

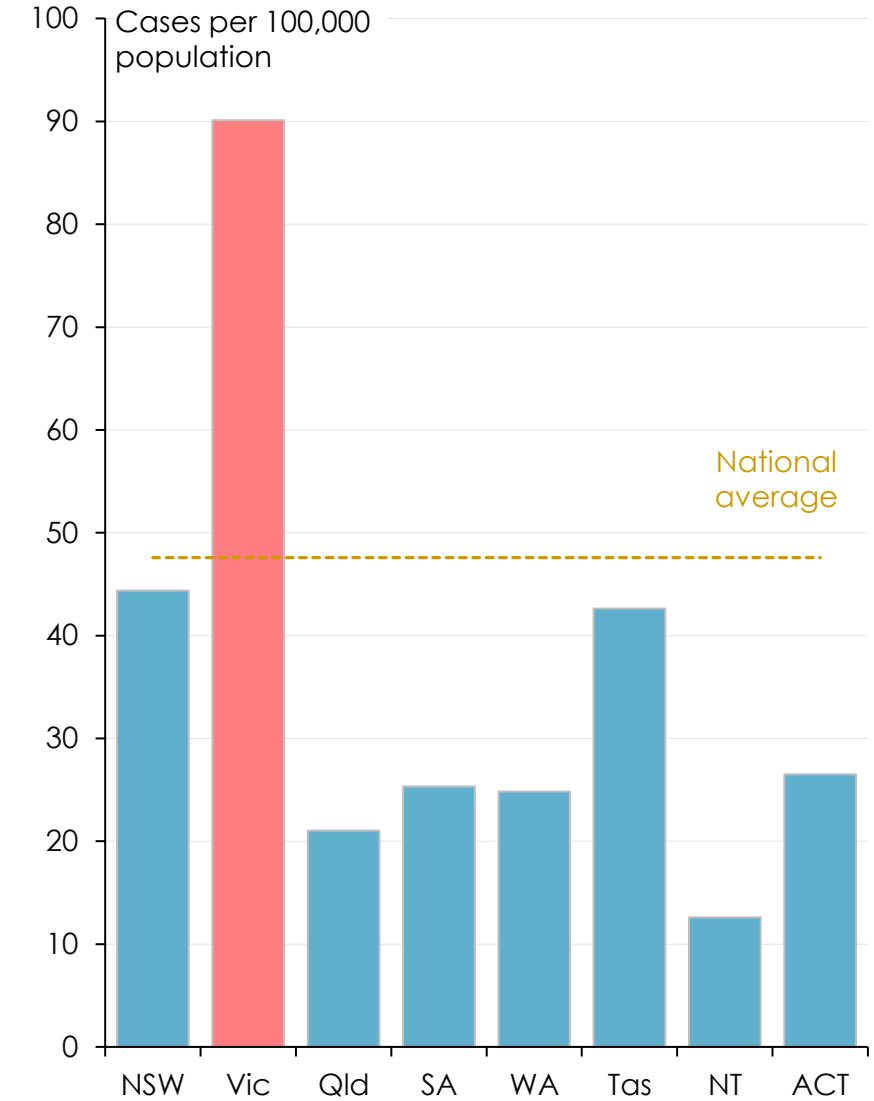
Cumulative cases, by State



New cases



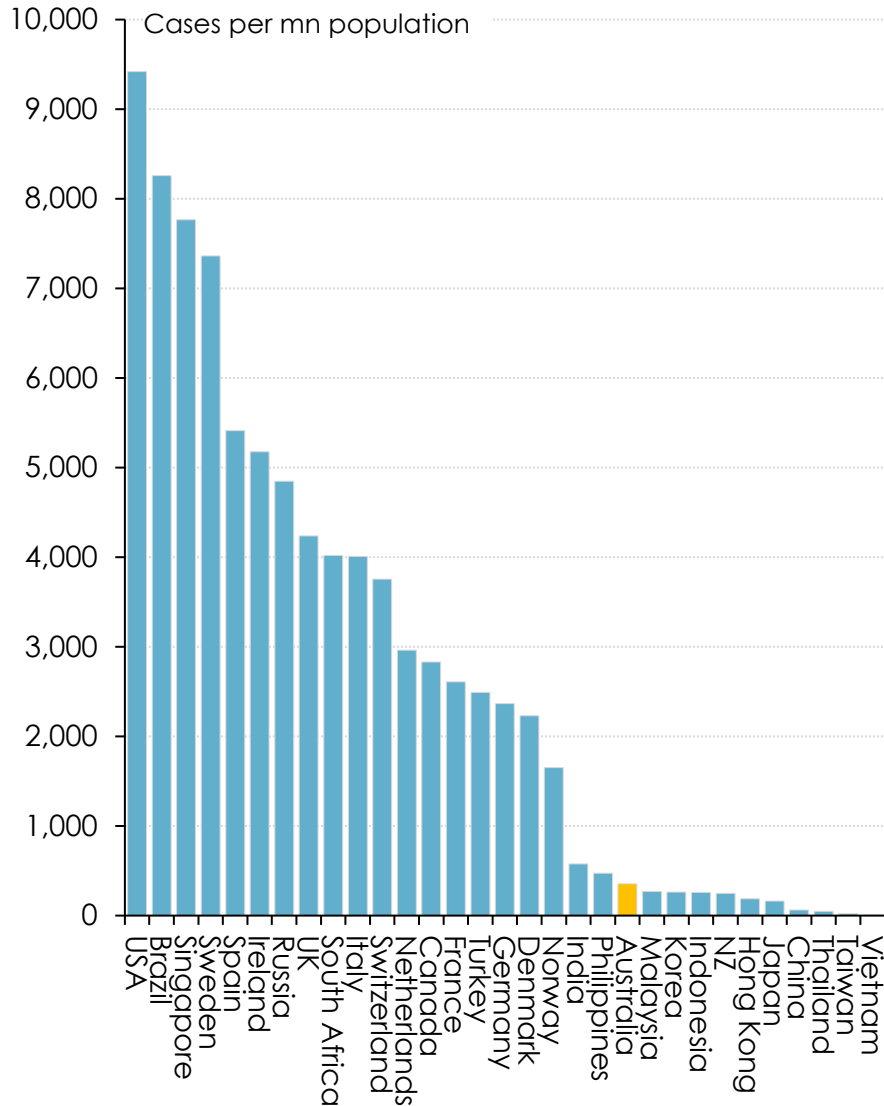
Cases per 100,000 population



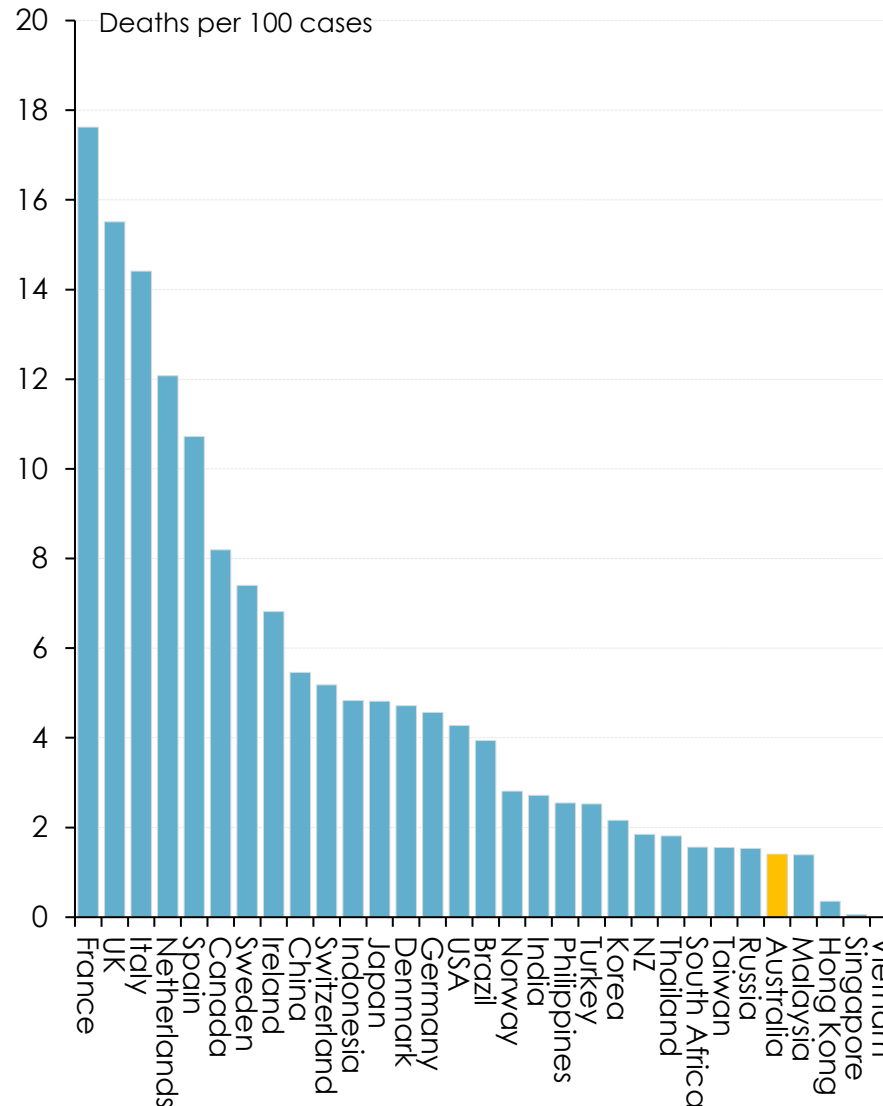
Note: Data up to 20th July. Source: covid19data.com.au

Despite the recent upsurge in cases, Australia's infection and fatality rates remain low by international standards ...

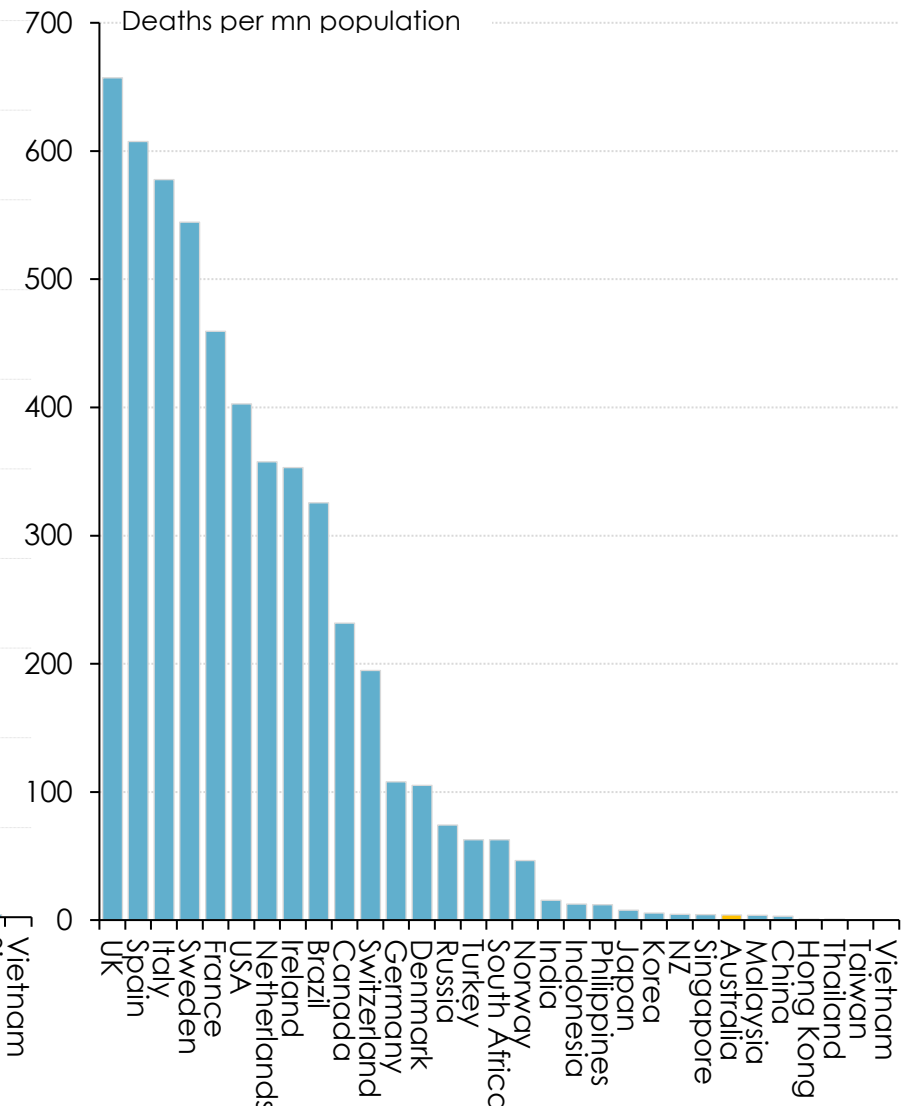
Apparent infection rate



Apparent death rate



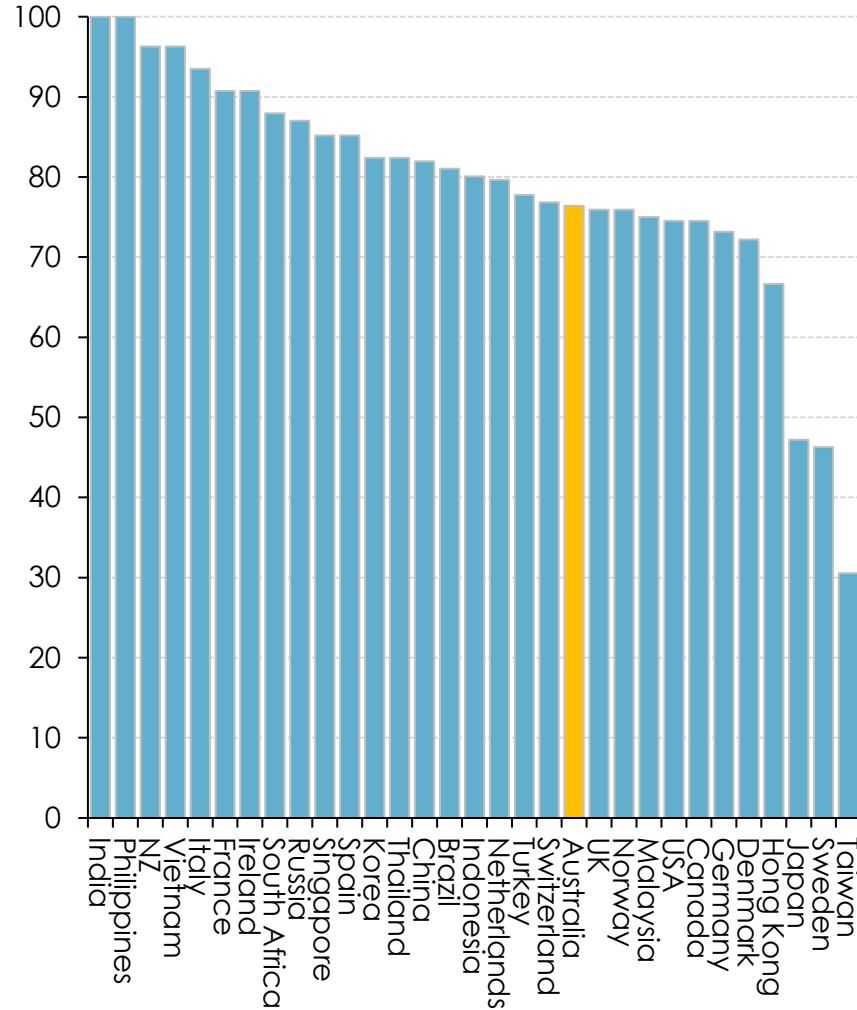
Deaths per mn population



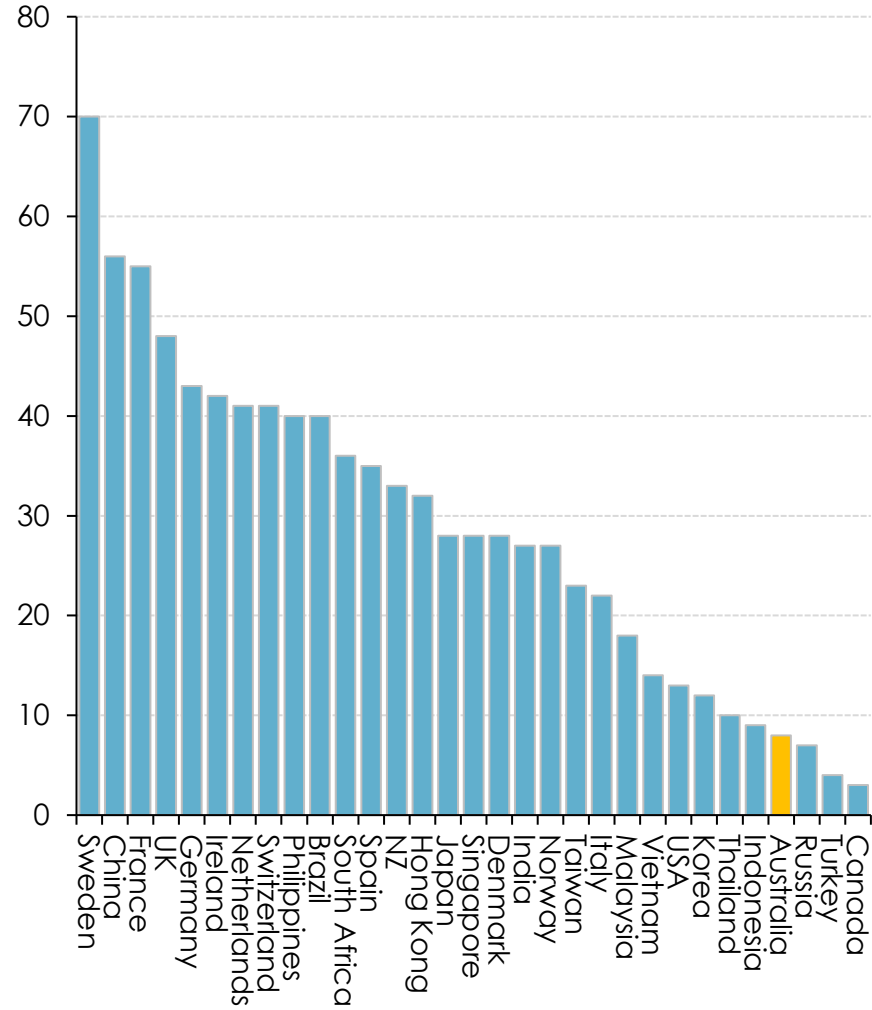
Note: Data up 17th July (except for Spain, 16th July). Source: University of Oxford, Our World in Data; Corinna.

... despite Australia's restrictions being, on average, less stringent than in most other 'advanced' economies, or other economies in our region

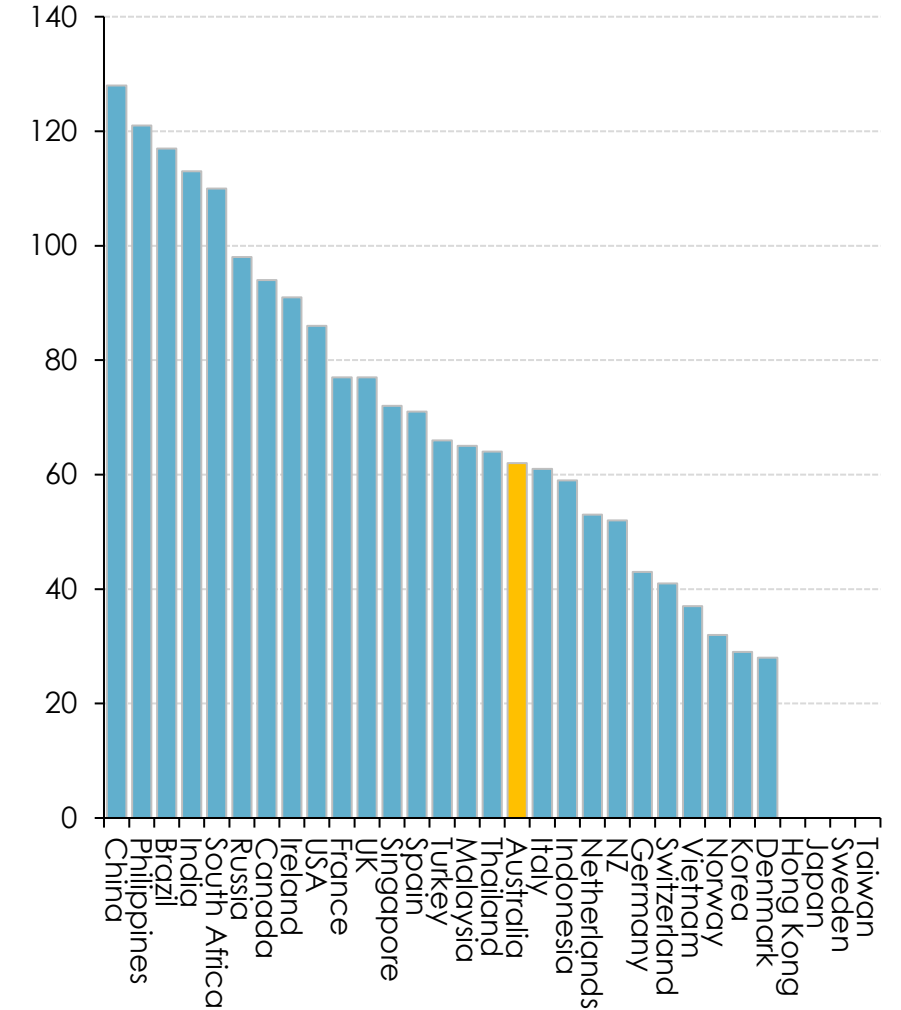
Highest level of restrictions imposed



Number of days restrictions at highest level



Number of days restrictions above 70 on Oxford index

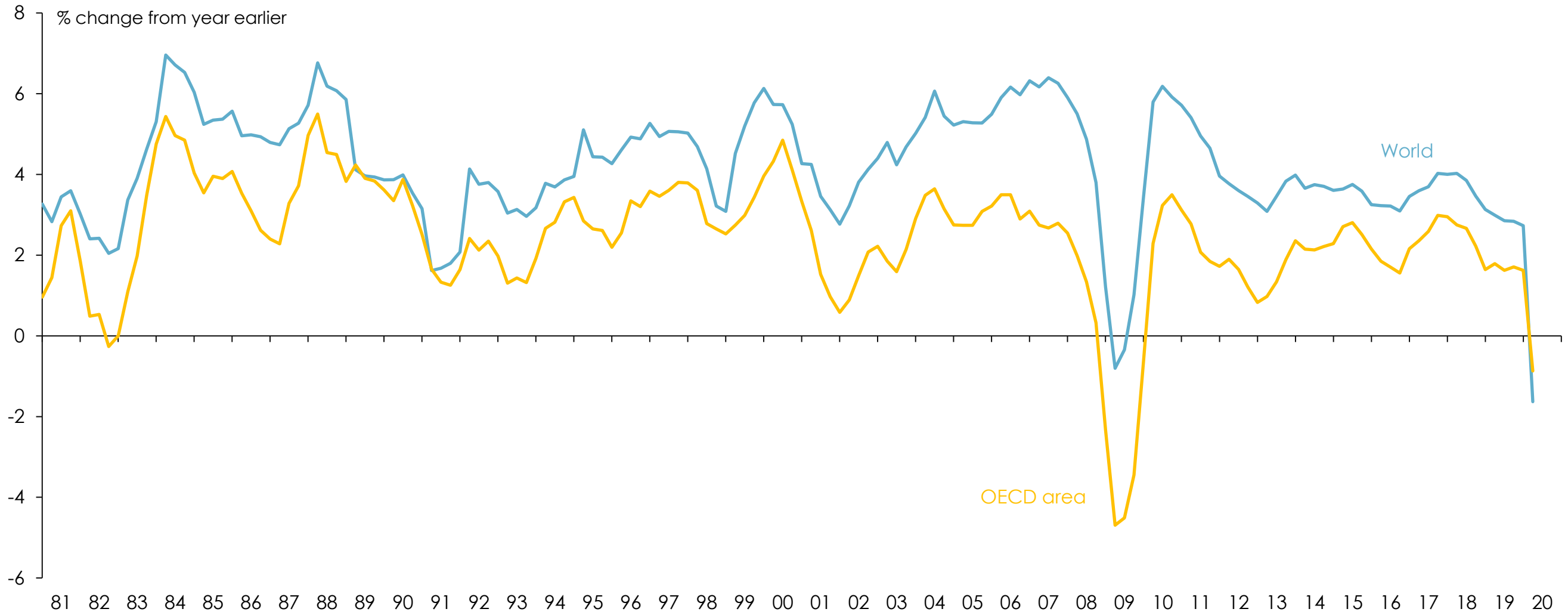


The Oxford COVID-19 Government Response Tracker collects publicly available information on 11 indicators of government response including school and workplace closures, public events cancellations, restrictions on public gatherings, stay at home requirements, public transport closures, domestic and international travel restrictions, public information campaigns, testing and contact tracing. Source: Blavatnik School of Government, Oxford University. Data up to 6th-15th July.

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

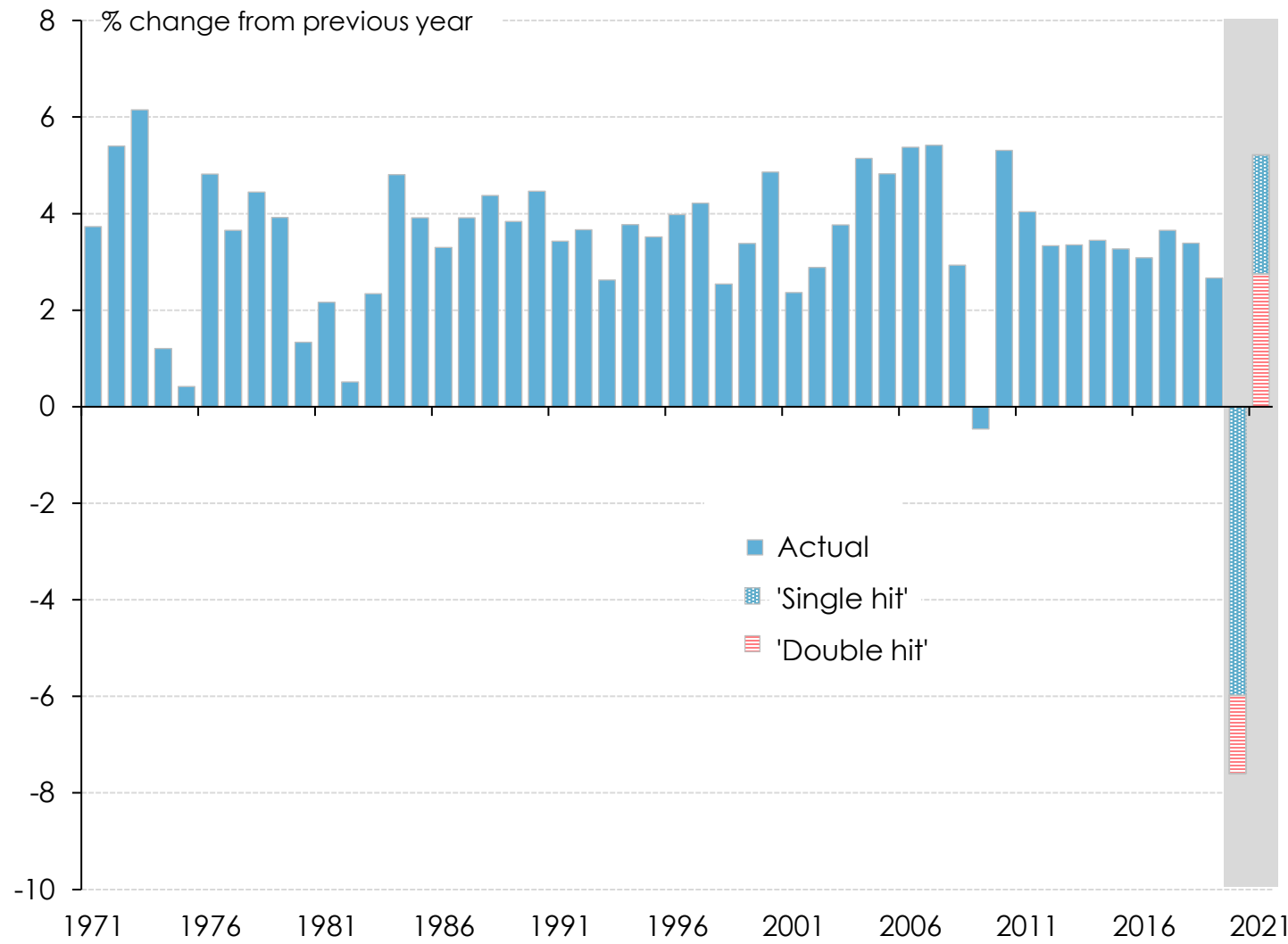
Major global institutions' growth forecasts for 2020 and 2021 compared

	<i>Actual</i>	<i>IMF</i>		<i>World Bank</i>		<i>OECD*</i>	
	2019	2020	2021	2020	2021	2020	2021
US	2.3	-8.0	4.5	-6.1	4.0	-7.3	4.1
China	6.1	1.0	8.2	1.0	6.9	-2.6	6.8
Euro area	1.2	-8.0	4.5	-9.1	4.5	-9.1	6.5
India	4.2	-4.5	6.0	-3.2	3.1	-3.7	7.9
Japan	0.7	-5.8	2.4	-6.1	2.5	-6.0	2.1
UK	1.4	-10.2	6.3	na	na	-11.5	9.0
Australia	1.8	-4.5	4.0	na	na	-5.0	4.1
New Zealand	2.2	-7.2 [†]	5.9 [†]	na	na	-8.9	6.6
World	2.9	-4.9	5.4	-5.2	4.2	-6.0	5.2
World trade	0.9	-11.9	8.0	-13.4	5.3	-9.5	6.0

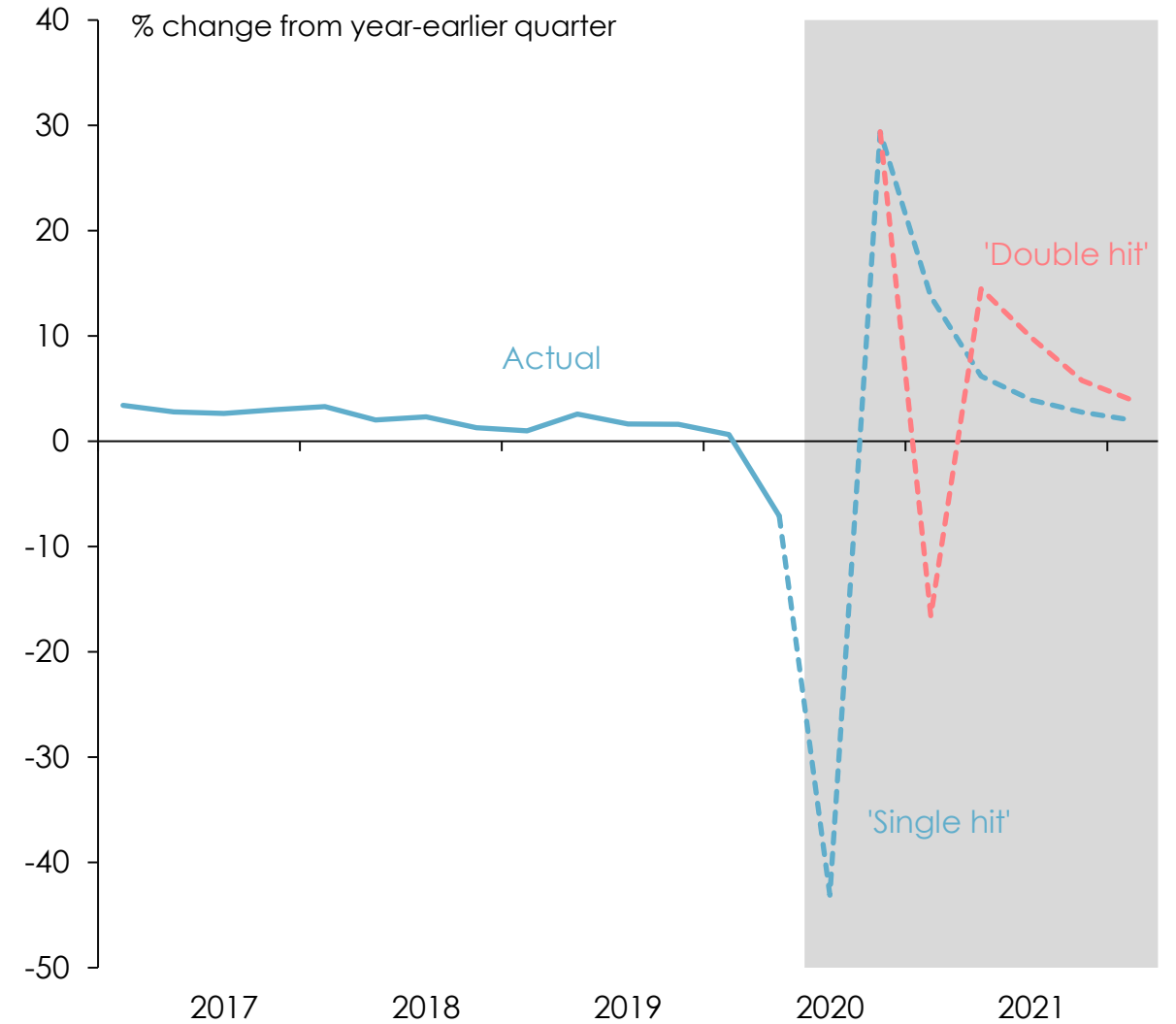
* OECD forecasts are their 'single hit' scenario to be consistent with the assumptions of the other institutions. [†] The IMF did not publish revised forecasts for New Zealand in its latest WEO publication. Source : International Monetary Fund (IMF), *World Economic Outlook*, 24th June 2020; The World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

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



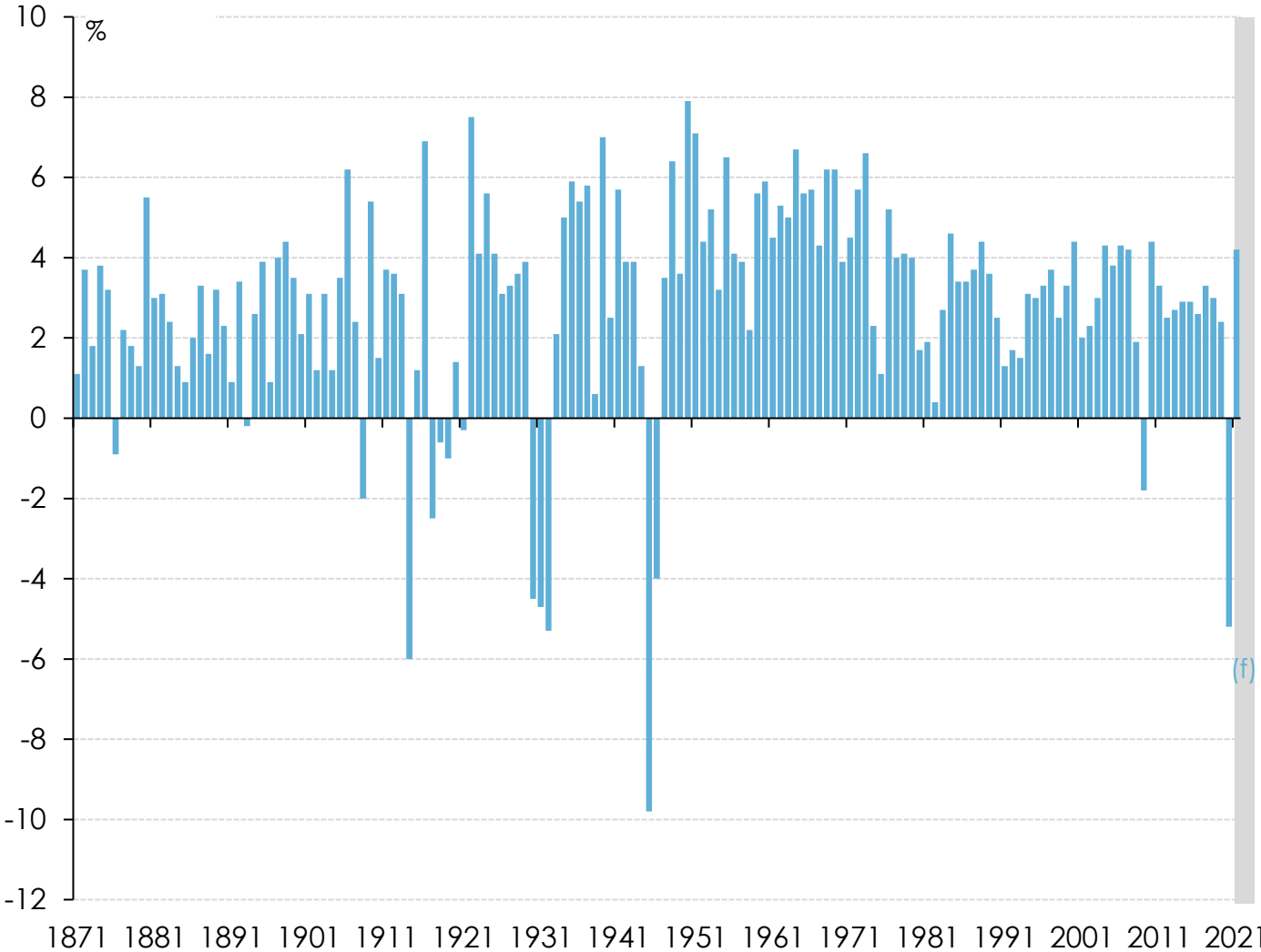
Quarterly growth and forecasts, 2017-2021



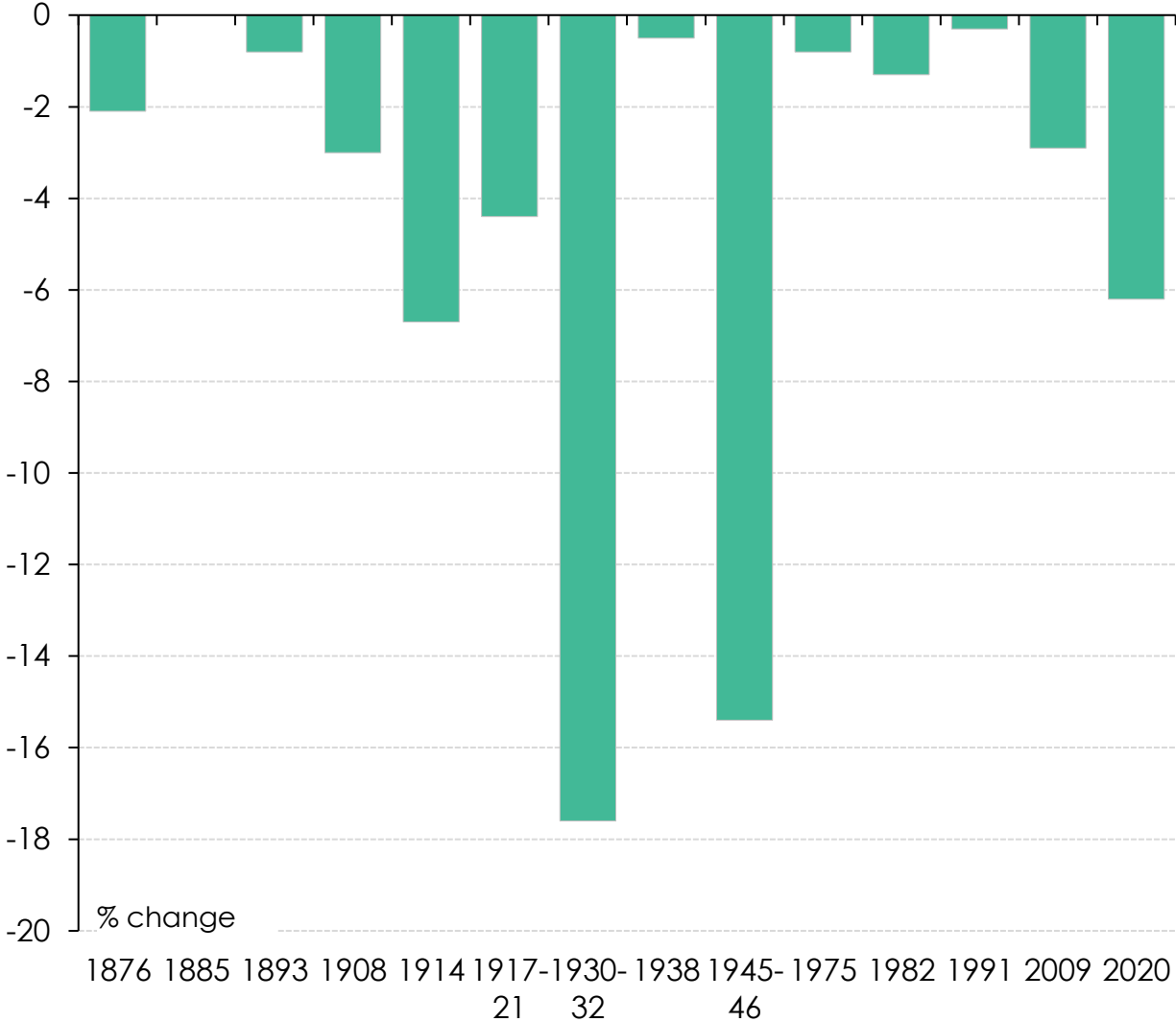
Note: The 'double hit' scenario assumes a 'second wave' of Covid-19 infections and deaths "in all economies towards the end of this year", while the 'single hit' scenario assumes this 'second wave is avoided'. The OECD regards each scenario as "equally likely". Source: OECD, *Economic Outlook*, No. 107,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



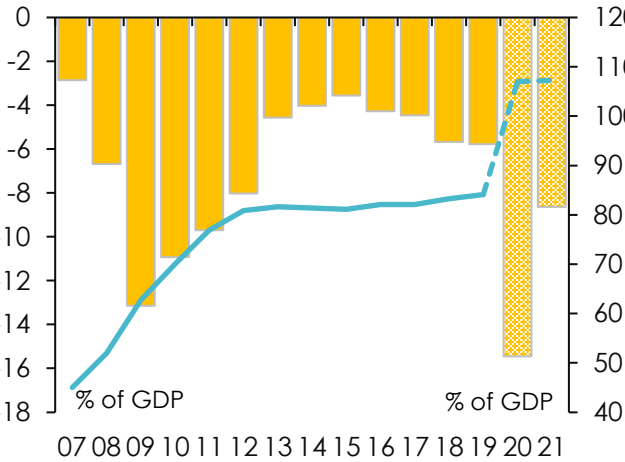
Cumulative decline in real per capita GDP during global recessions



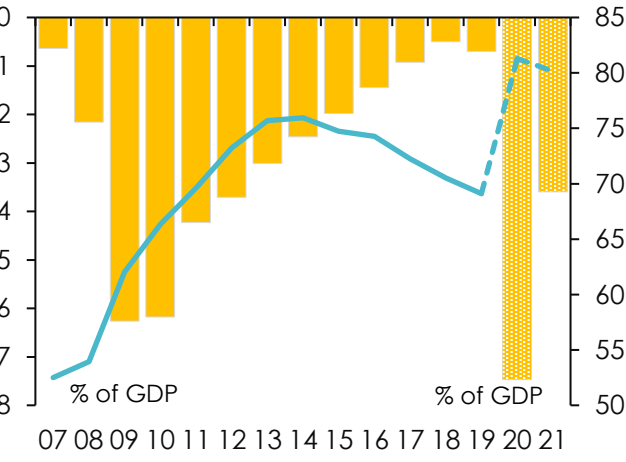
Source: The World Bank, *Global Economic Prospects*, 8th June 2020.

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

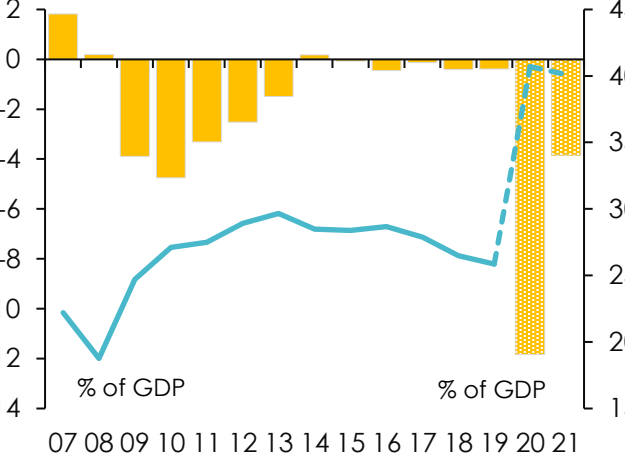
United States



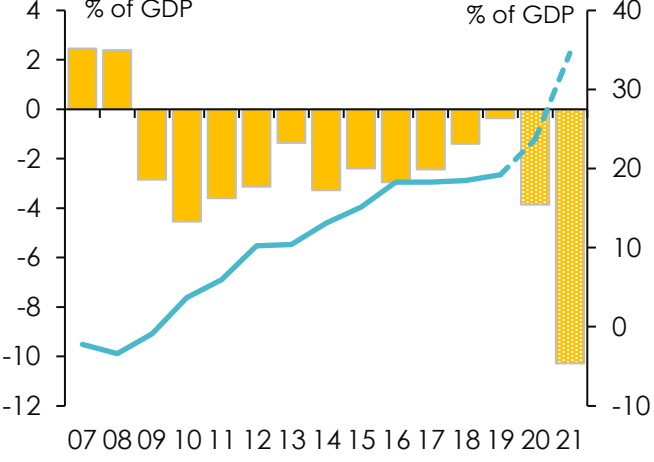
Euro area



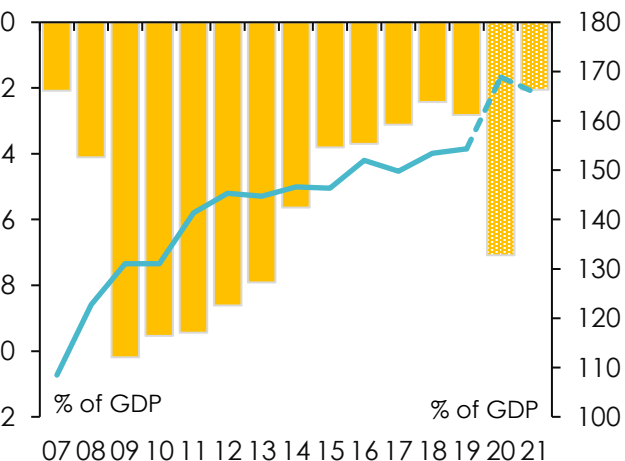
Canada



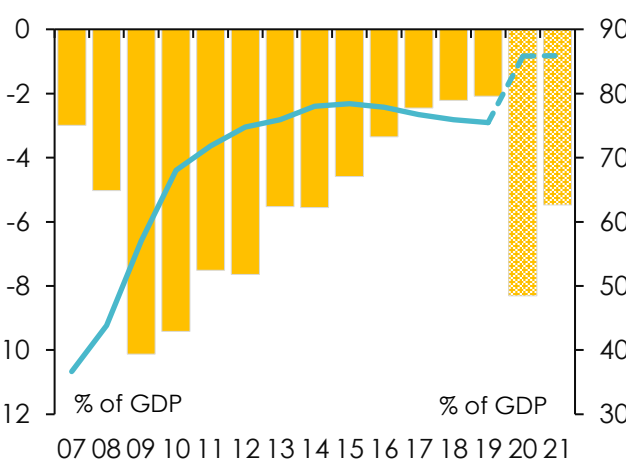
Australia



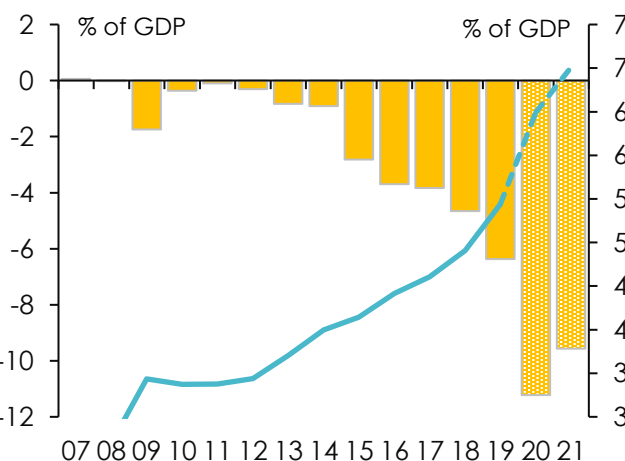
Japan



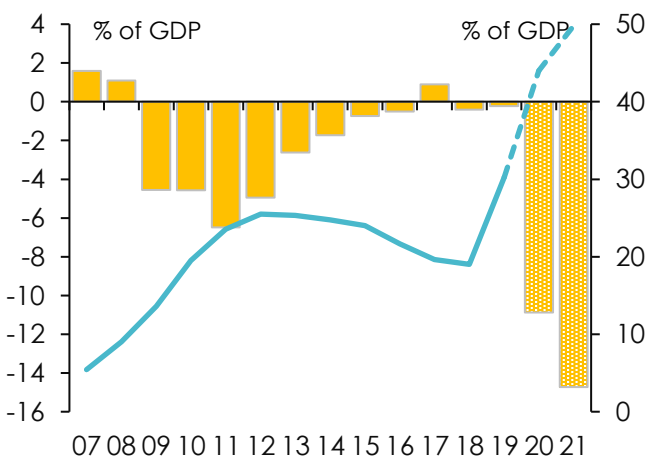
United Kingdom



China



New Zealand

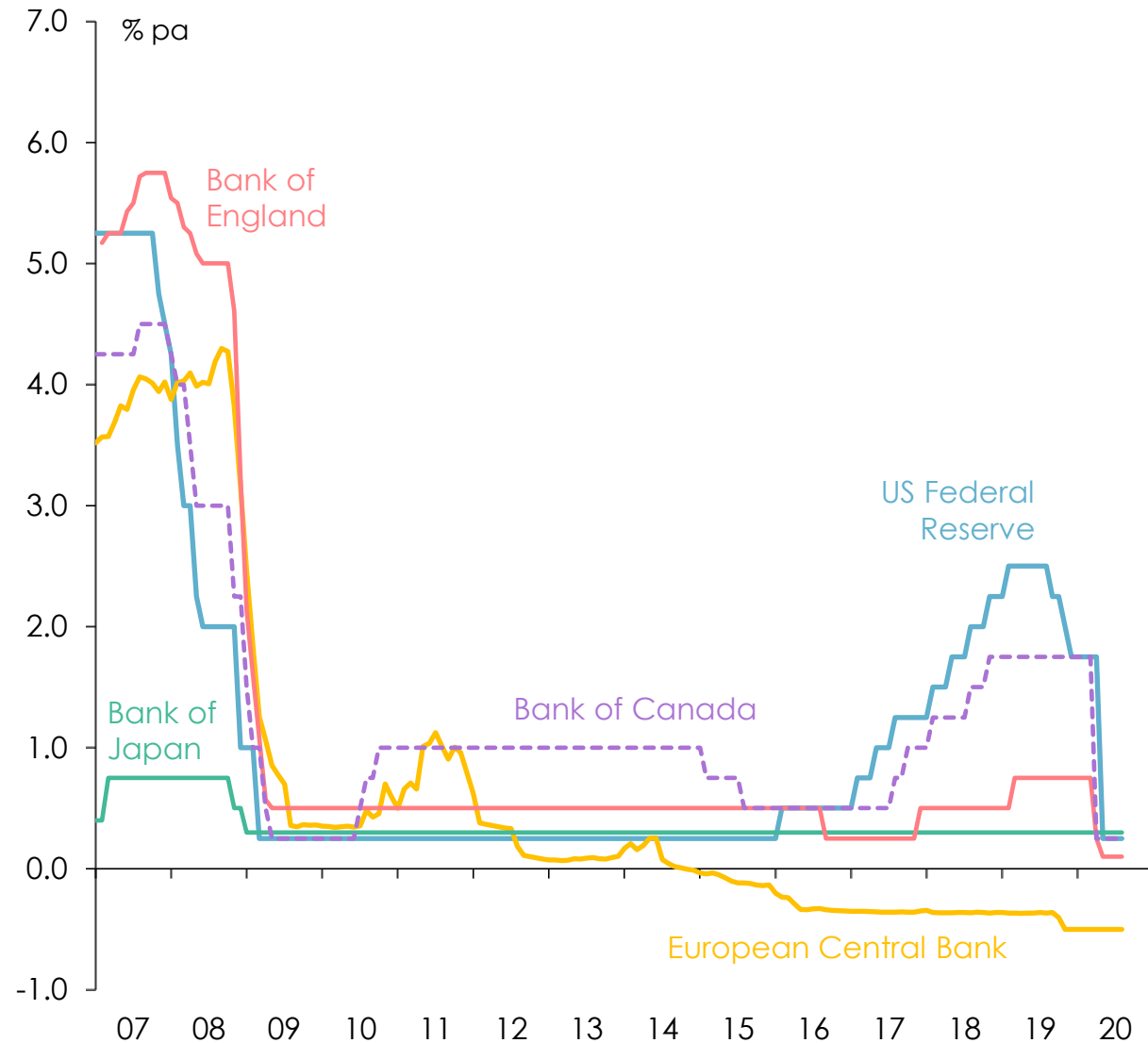


General government overall fiscal balance (left scale)
 General government net debt (right scale)

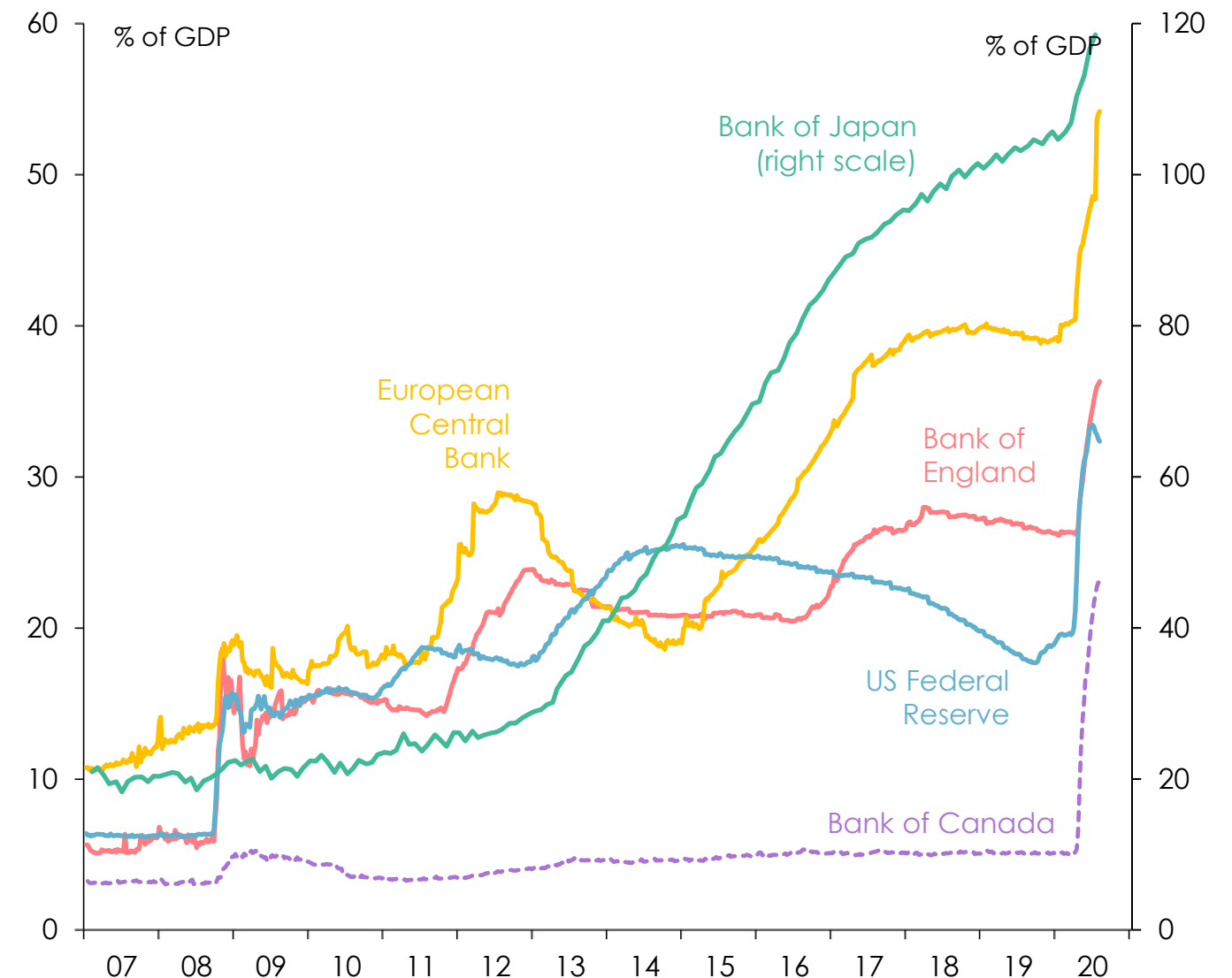
Note: UK data does not include the measures announced by the Chancellor on 8th July; China debt is gross debt, not net; Australian data are for the federal government only and are for fiscal years ended 30th June; NZ data are for fiscal years ended 31st March. Sources: International Monetary Fund, *Fiscal Monitor*, April 2020, and *World Economic Outlook*, June 2020; Australian Parliamentary Budget Office, *Medium-term fiscal projections: impact of Covid-19 pandemic and response*, June 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



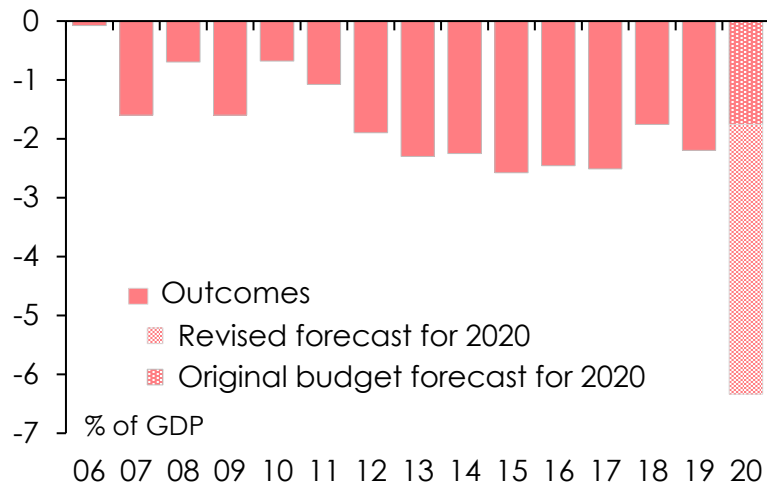
Major central bank balance sheets



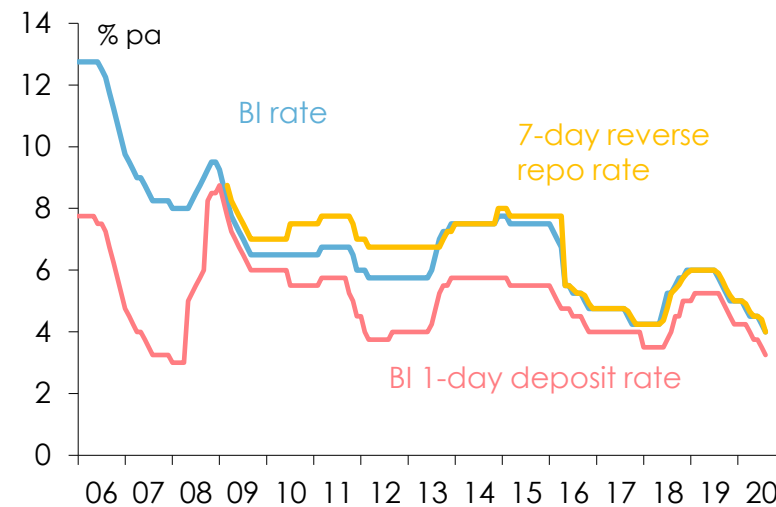
Sources: US Federal Reserve; European Central Bank; Bank of Japan; Bank of England; Bank of Canada.

Bank Indonesia is pursuing a mixture of quantitative easing and 'modern monetary theory' (MMT)

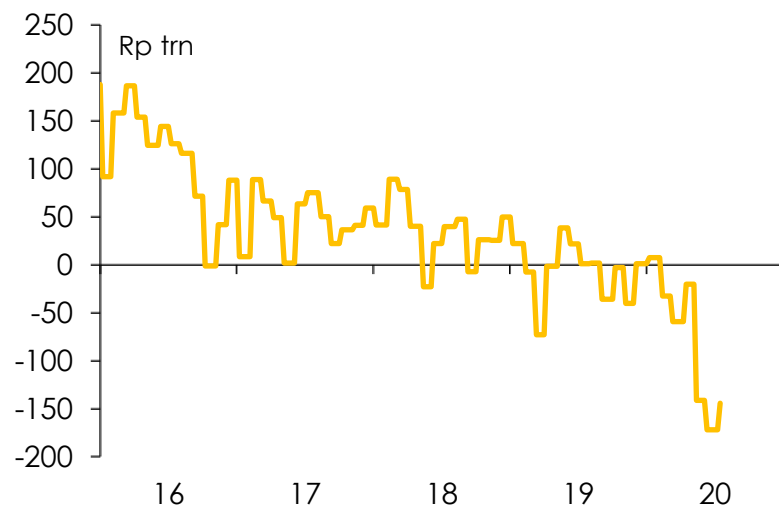
Indonesia budget deficit



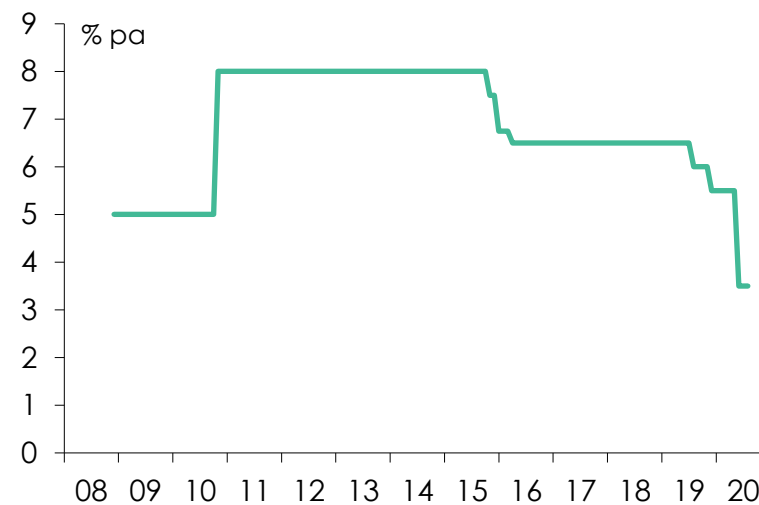
BI monetary policy rates



BI claims on central government



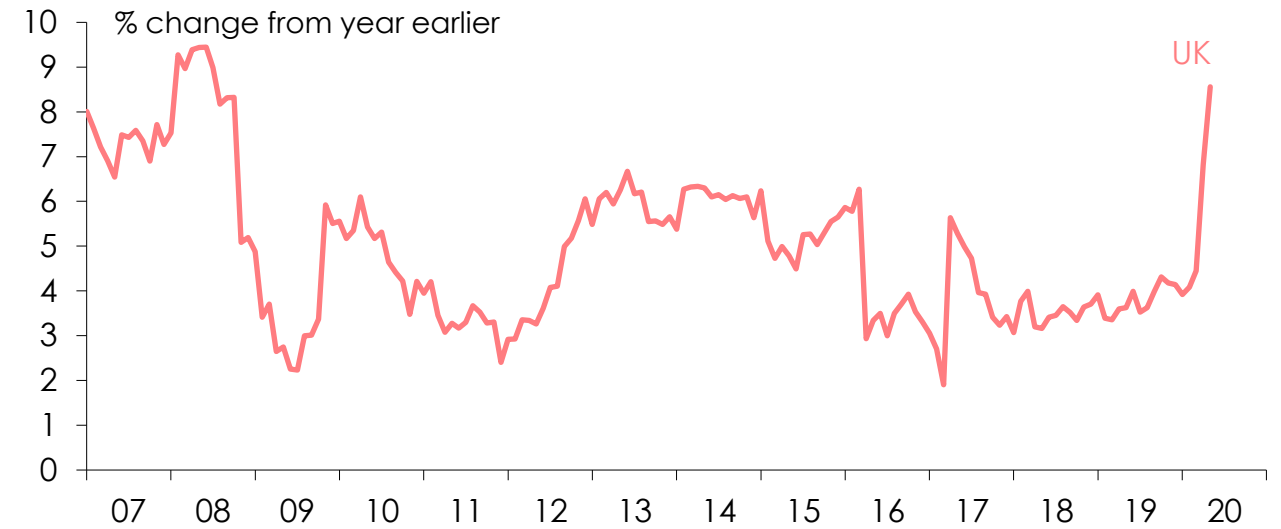
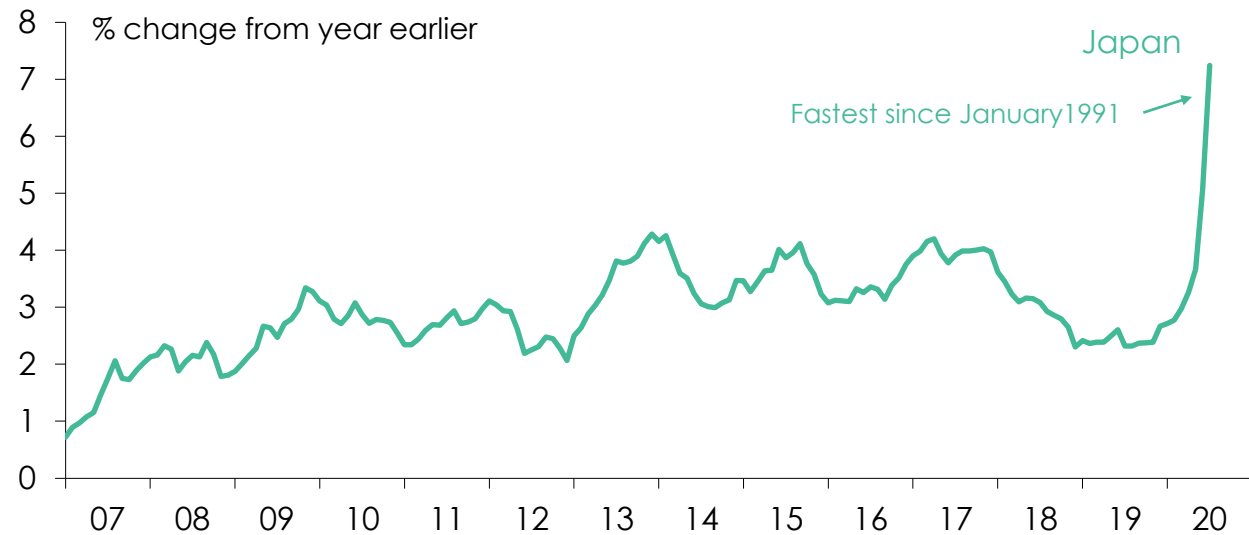
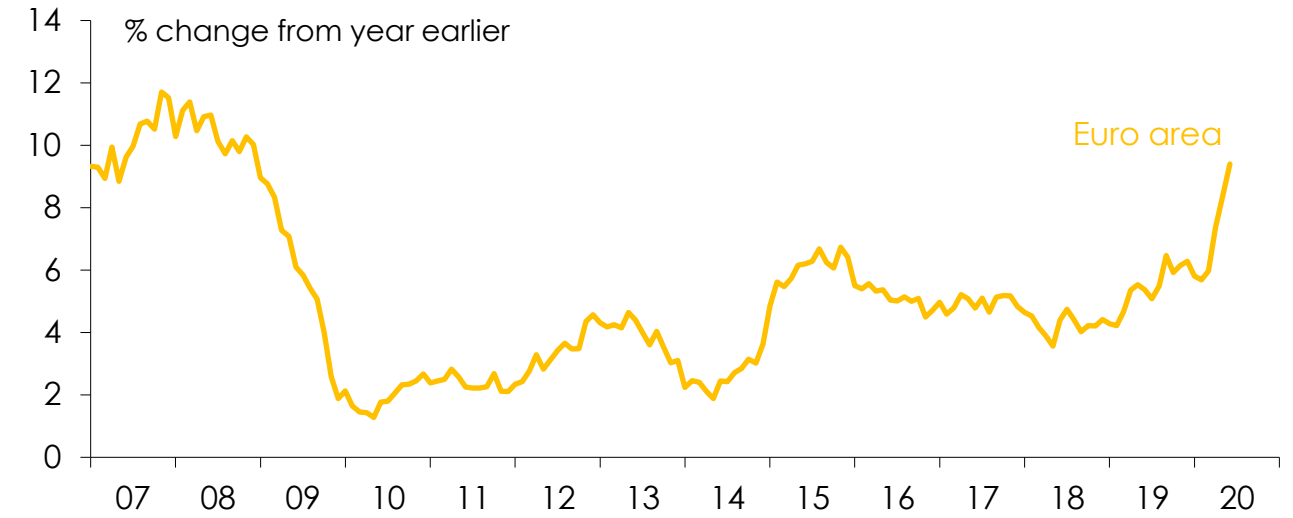
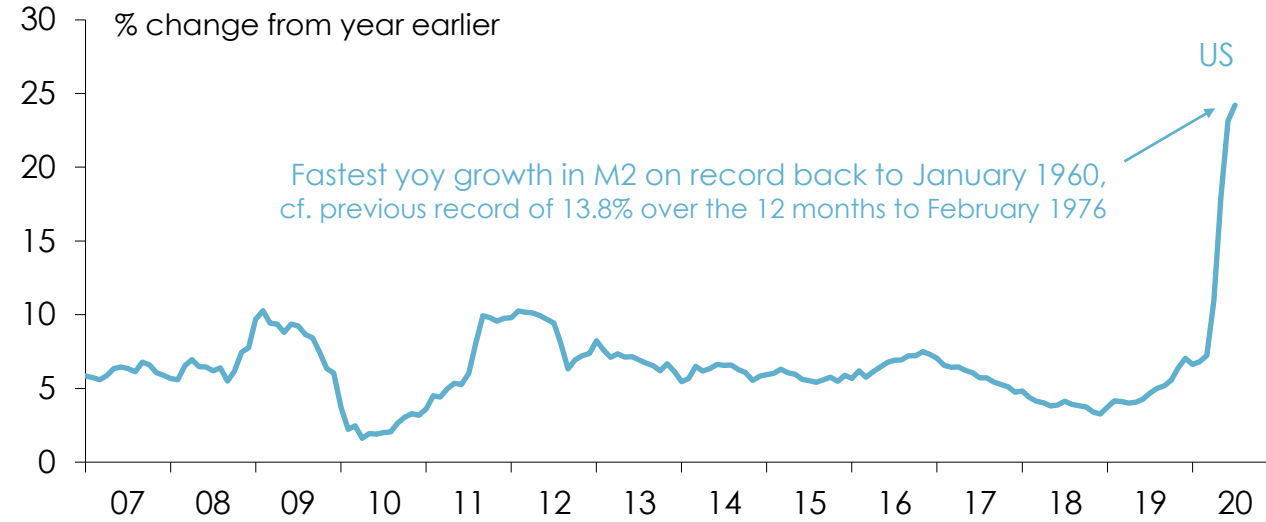
Bank reserve requirement ratio



- ❑ Last week 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 deficit financing requirement – at its benchmark reverse repo rate, and return the interest received to the Government
 - up to this week BI has purchased Rp36.7 trn of SBNs (although this isn't clear from B I's weekly balance sheet)
 - prior to this BI had also purchased at least Rp166trn of SBNs in the secondary market
- ❑ 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
- ❑ BI calls all this 'synergic monetary expansion'
- ❑ BI is also doing conventional monetary policy: at its monetary policy meeting this Thursday, it cut its policy indicator rates by 25bp

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

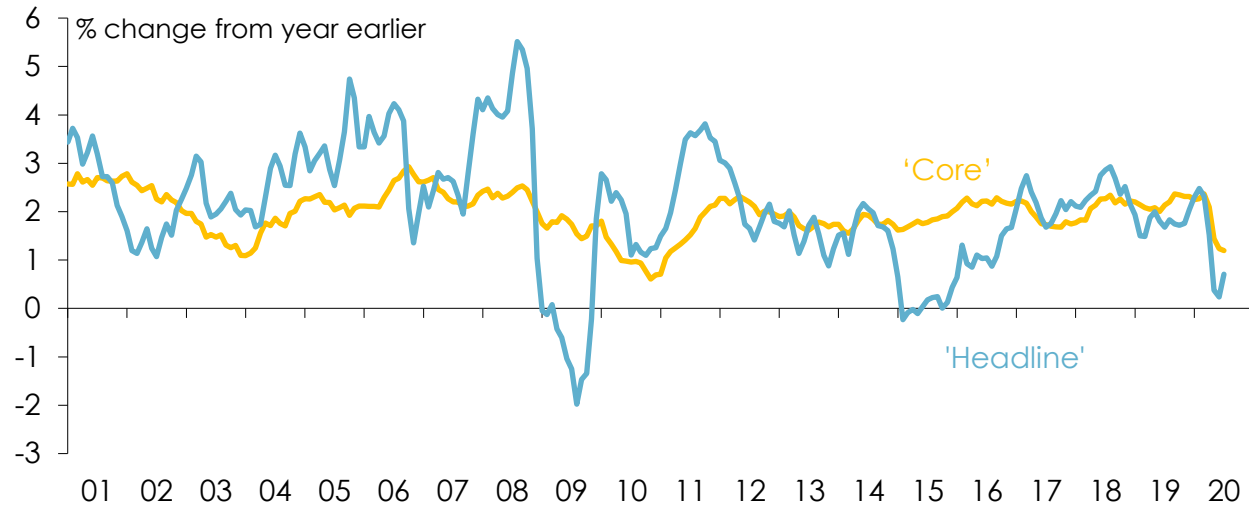
M2 money supply growth



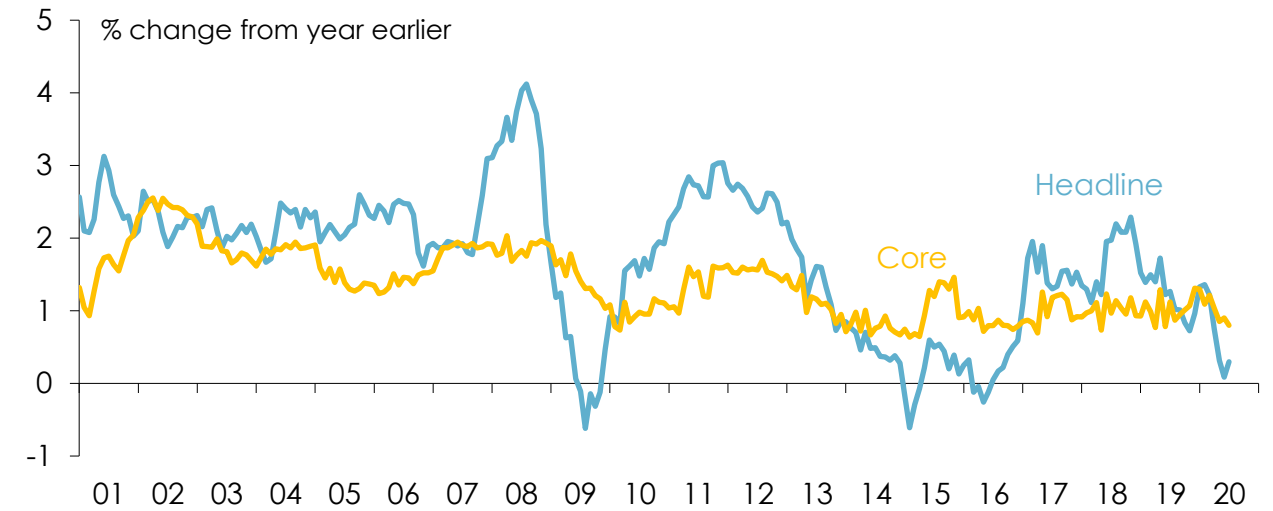
Note: Japan is M2+CDs; UK is M4. Sources: US Federal Reserve; European Central Bank; Bank of Japan; Bank of England.

...but so far at least, inflation has been falling rather than rising, even discounting the impact of lower oil prices

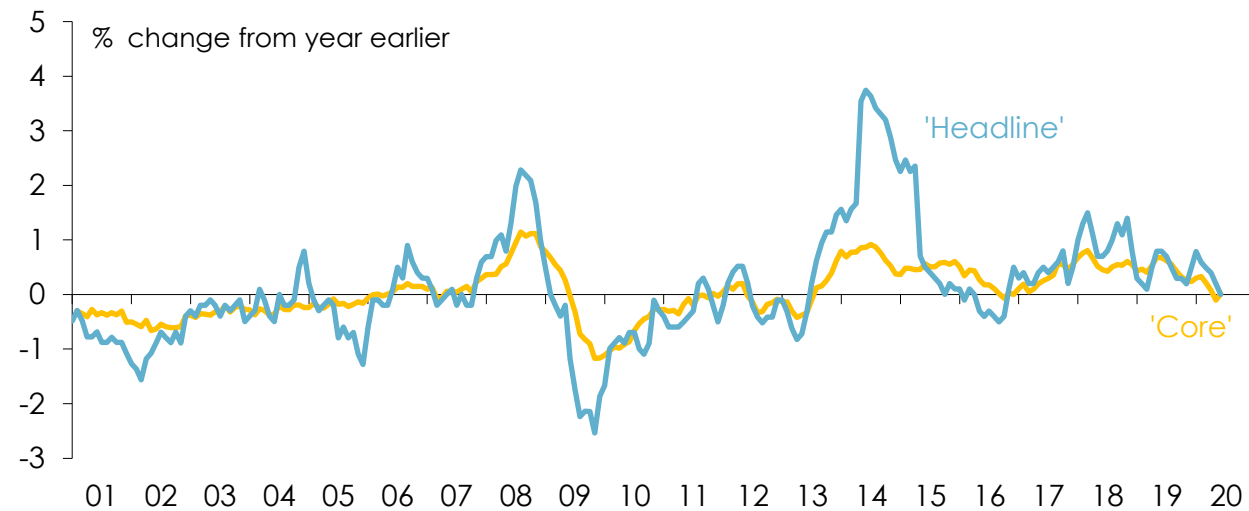
'Headline' and 'core' inflation - US



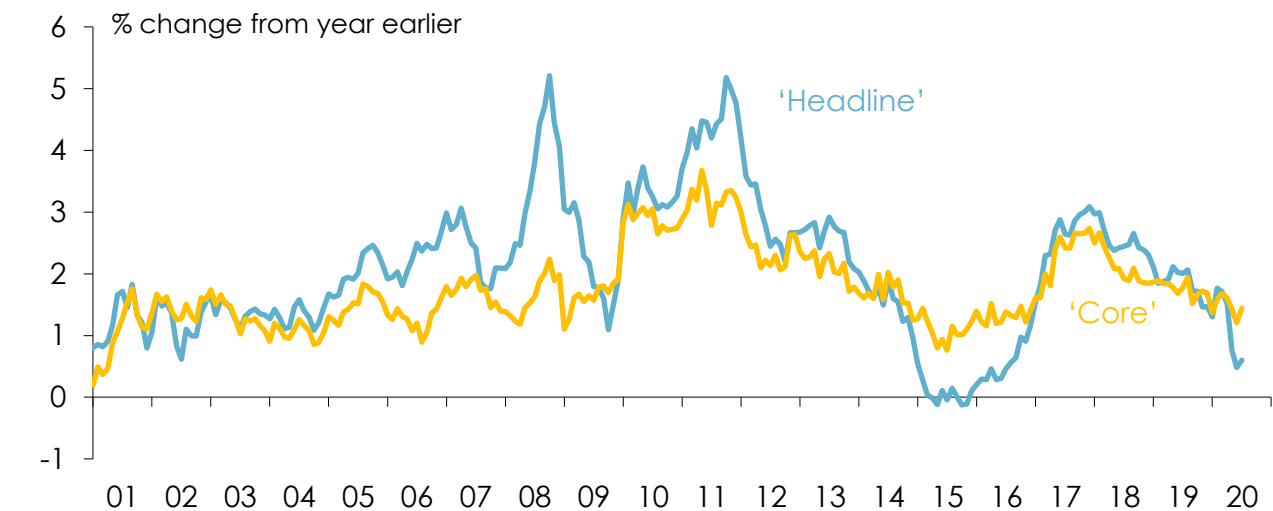
'Headline' and 'core' inflation – Euro area



'Headline' and 'core' inflation - Japan



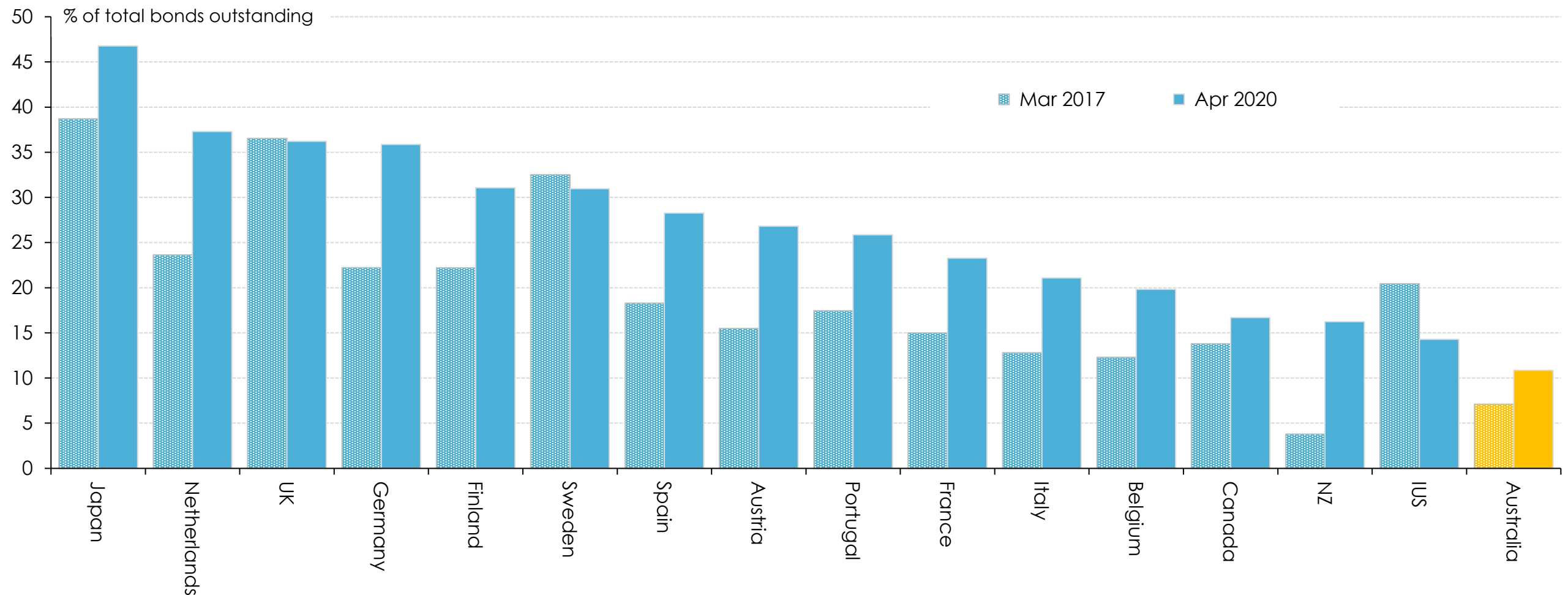
'Headline' and 'core' inflation – UK



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.

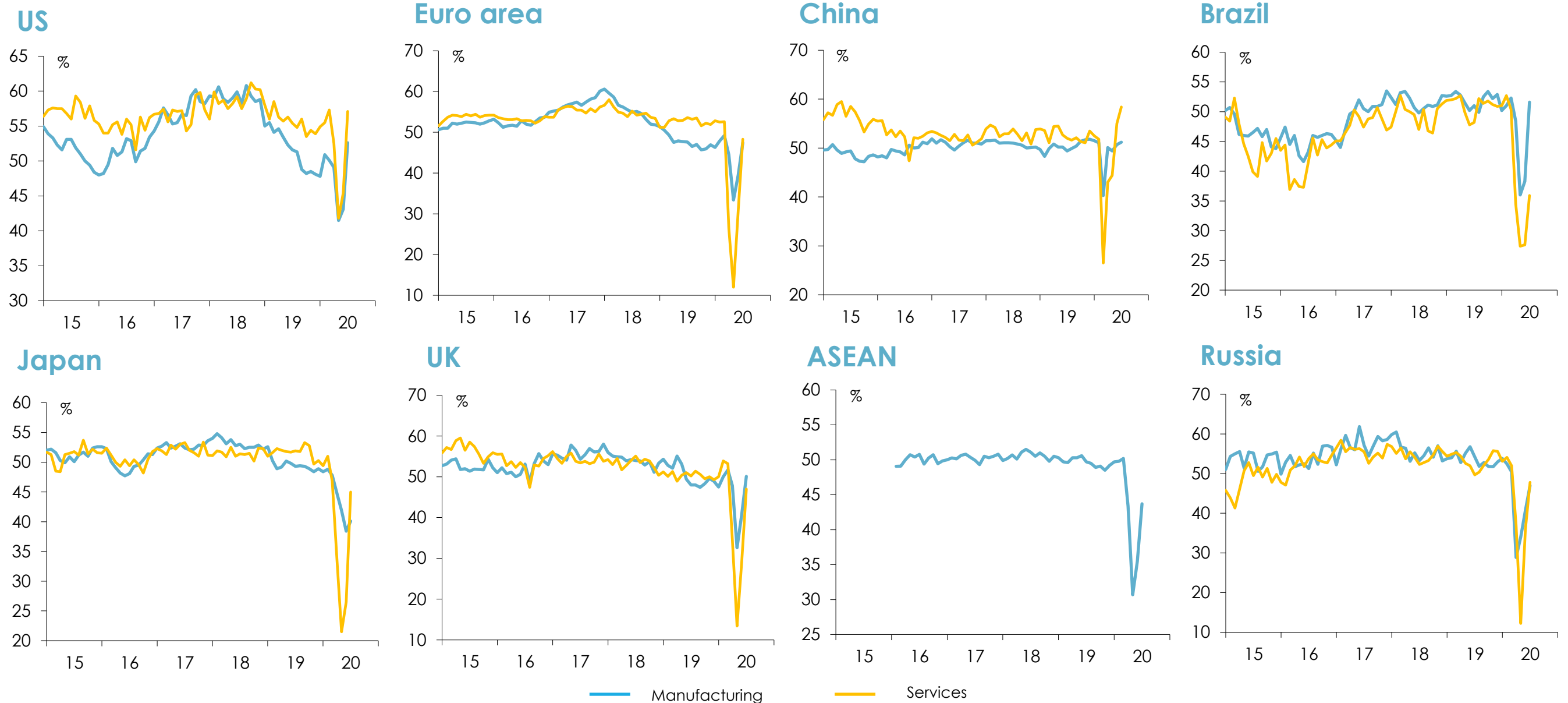
Central banks now hold significant proportions of total government debt in a growing number of countries

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).

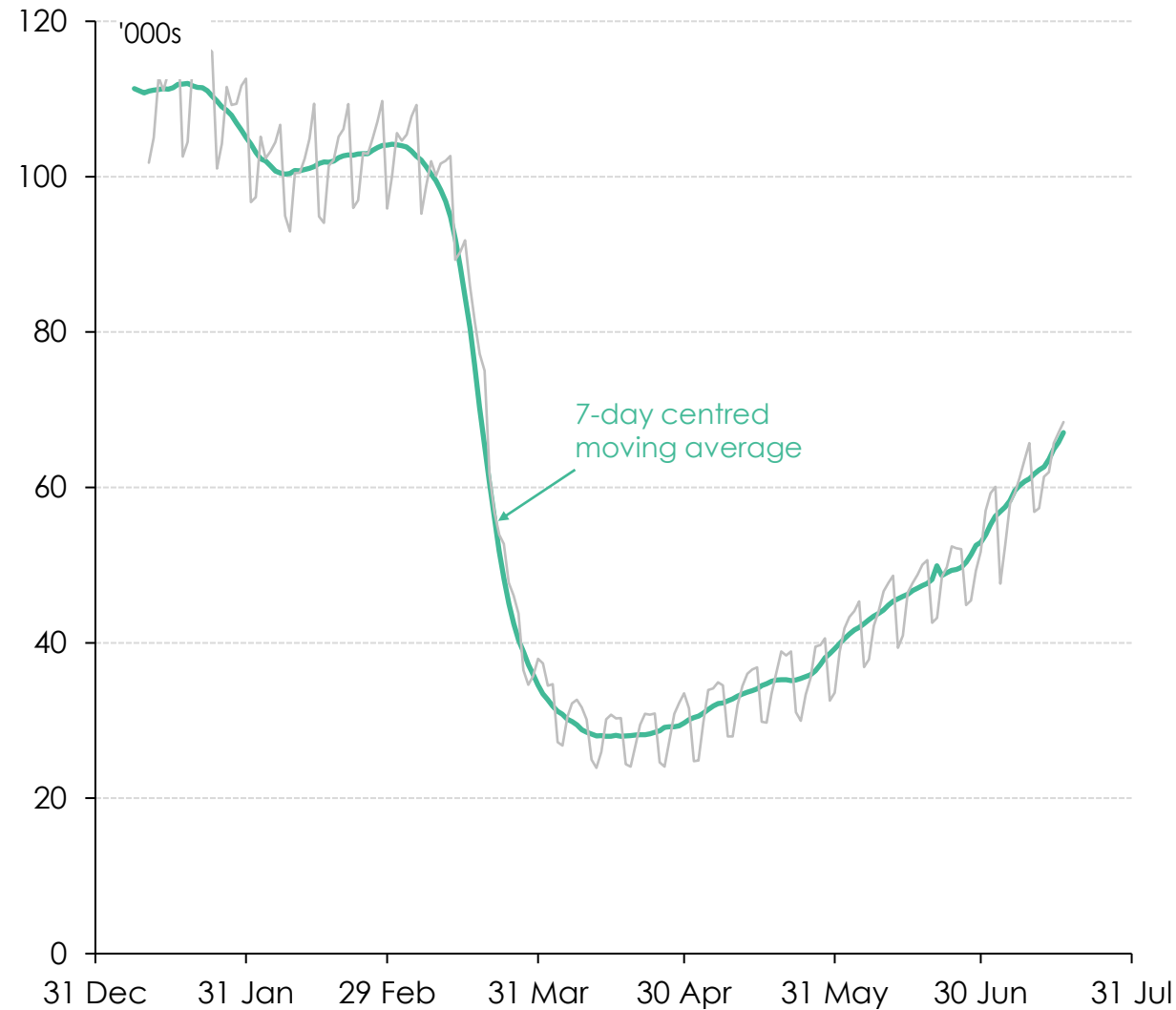
Purchasing managers' indices (PMIs) point to a rebound in manufacturing and services in major economies since May



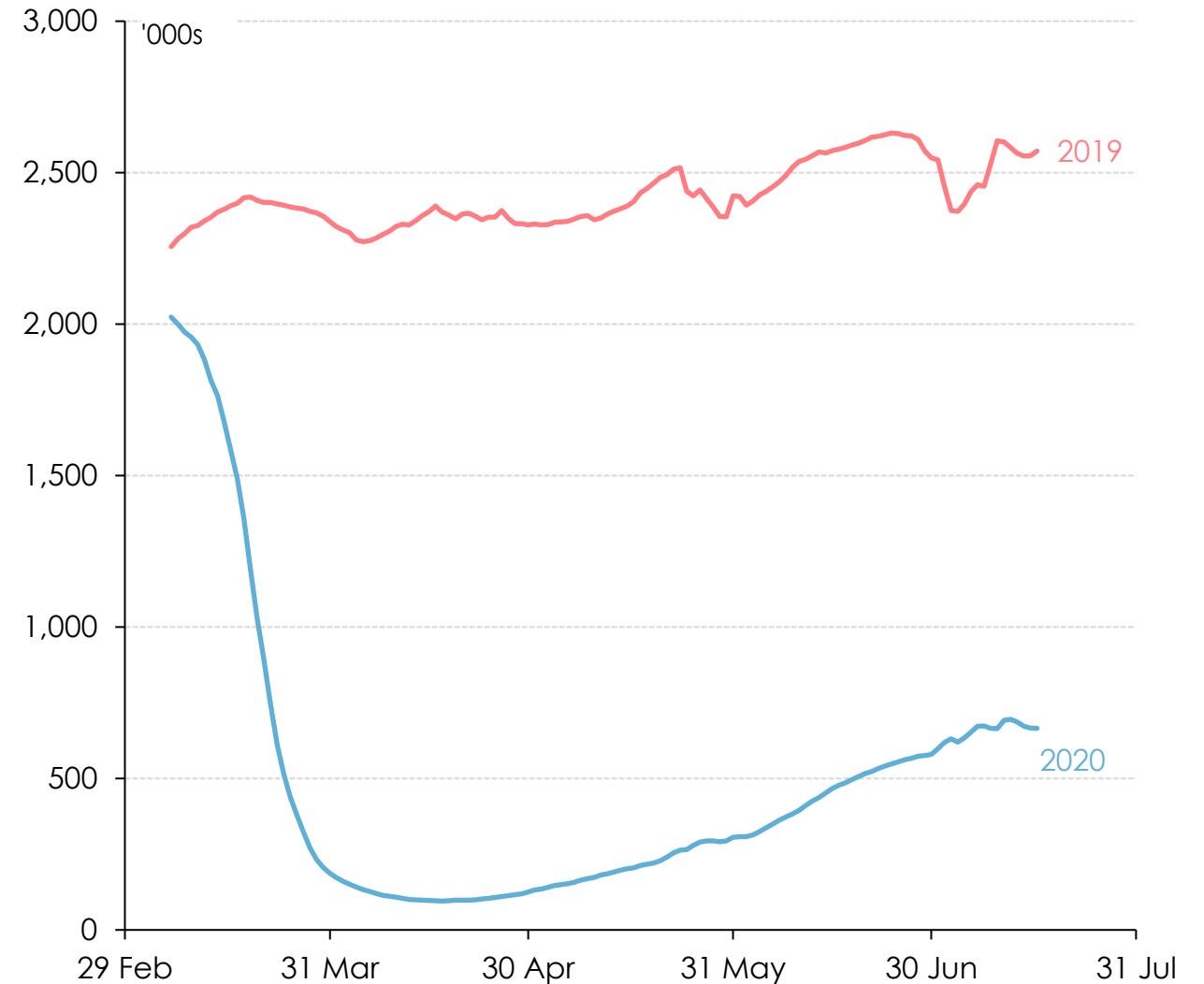
Note: Purchasing Managers' Indexes (PMIs) are derived from surveys of senior executives, who are asked to report whether various dimensions of business activity recorded an increase, decrease or no change compared with the previous month. A reading of 50 indicates an overall increase cf. the previous month, and a reading of less than 50 indicates a decrease. Latest data are for June. See also PMIs for other Asia-Pacific economies on slide 35. Sources: US Institute of Supply Management; INH Markit; Caixin; Refinitiv Datastream.

Global flight numbers are steadily improving (though still ~36% below pre-pandemic levels), but in the US traffic appears to have stalled

Daily commercial flights worldwide



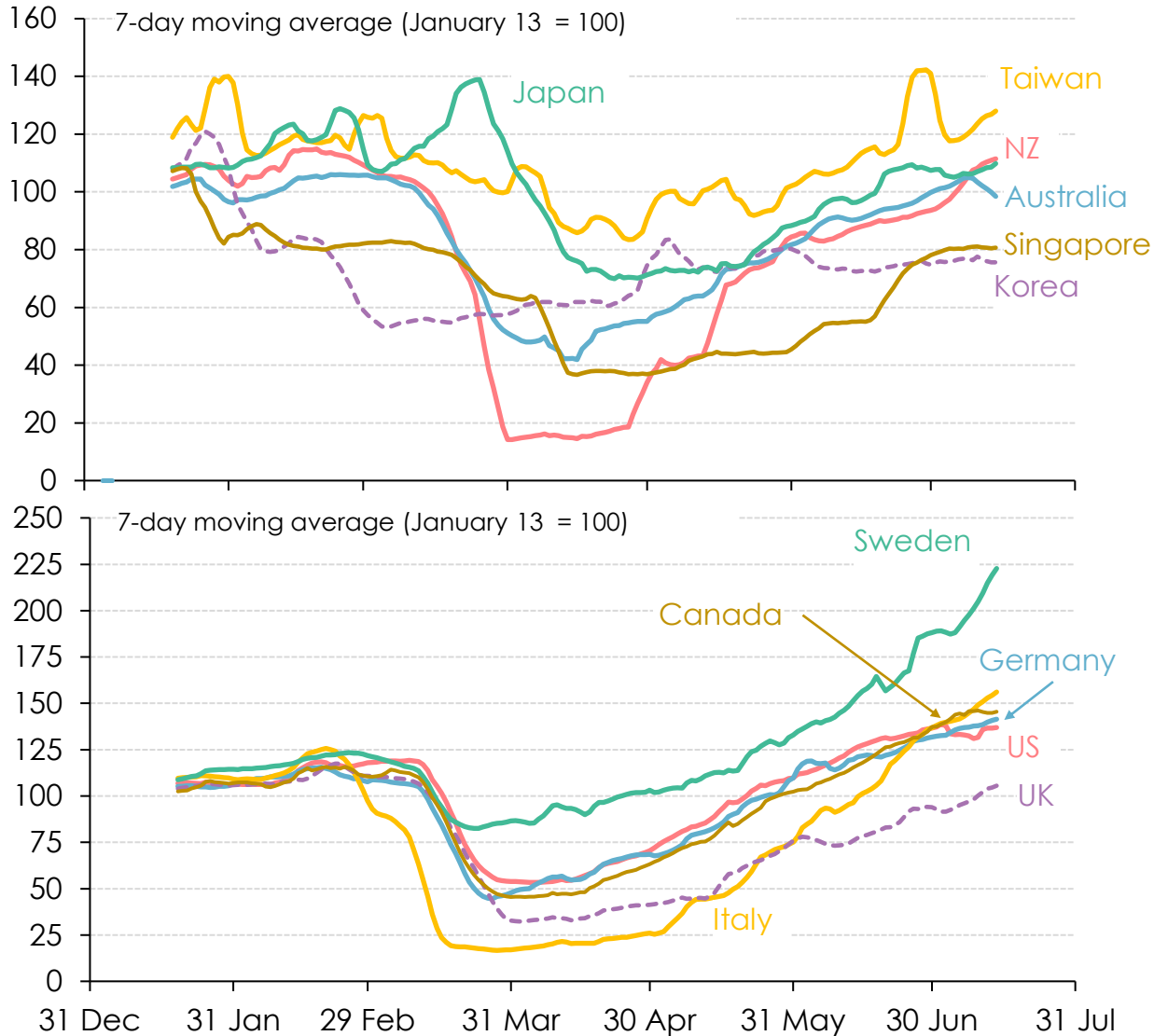
Daily US TSA security checks



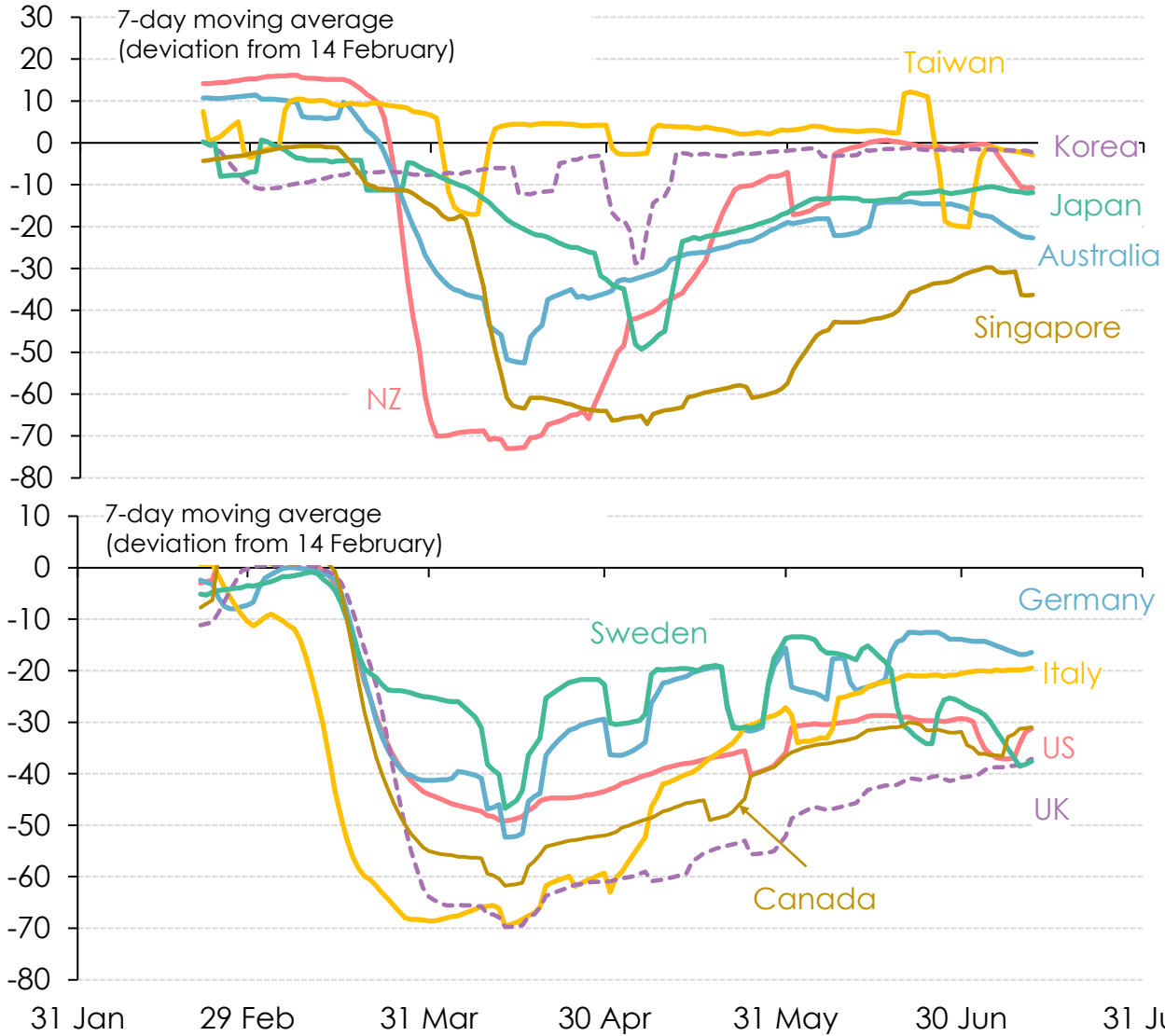
Note: Commercial flights include commercial passenger flights, cargo flights, charter flights, and some business jet flights. Data up to 17th July.
Sources: Flightradar24.com; US Transport Safety Administration (at last, something useful produced by aviation 'security'!!!)

Mobility data suggest that much of Asia is continuing to return toward more normal levels of activity, but people in the US are becoming more cautious

Time spent driving



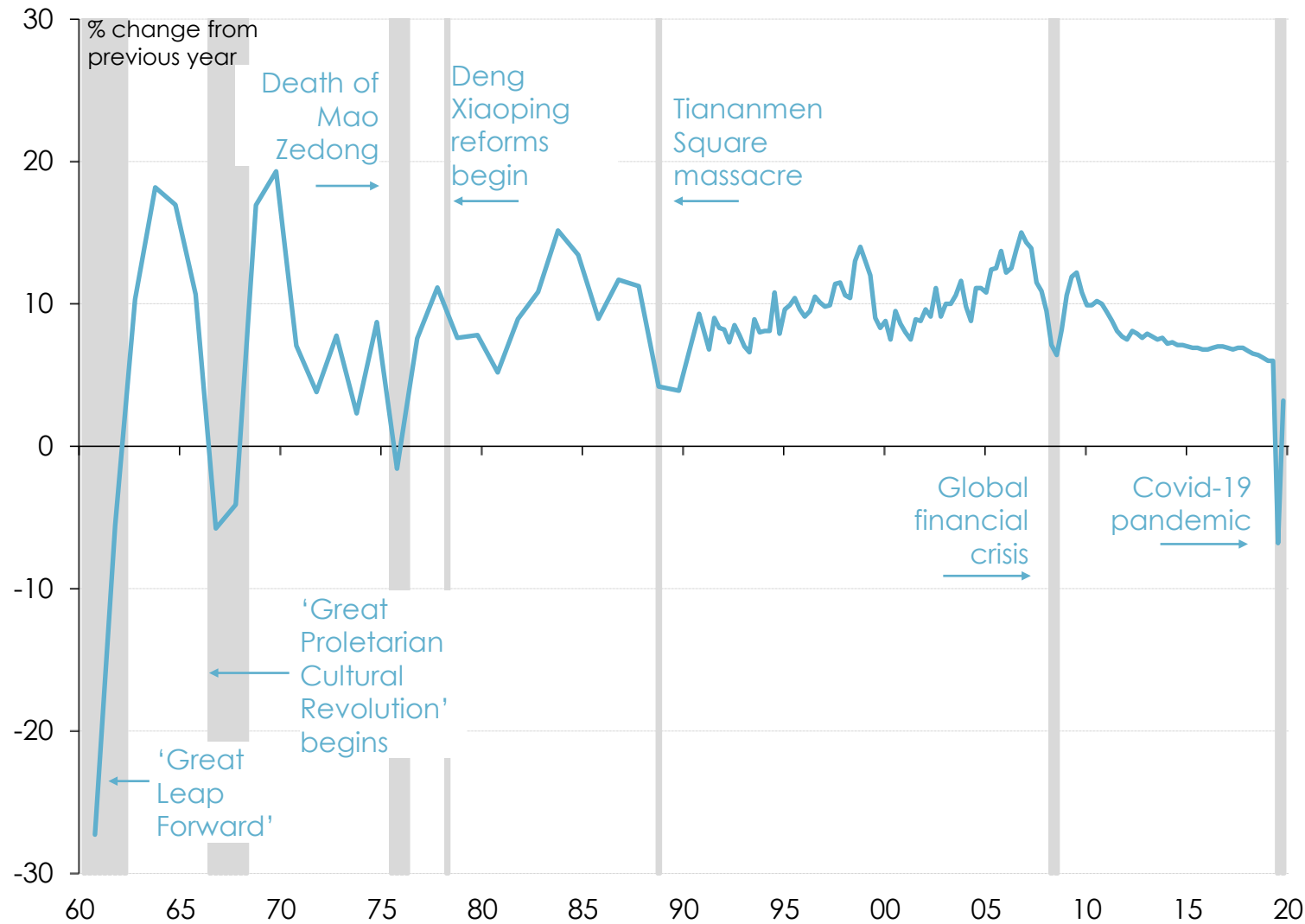
Time spent in work places



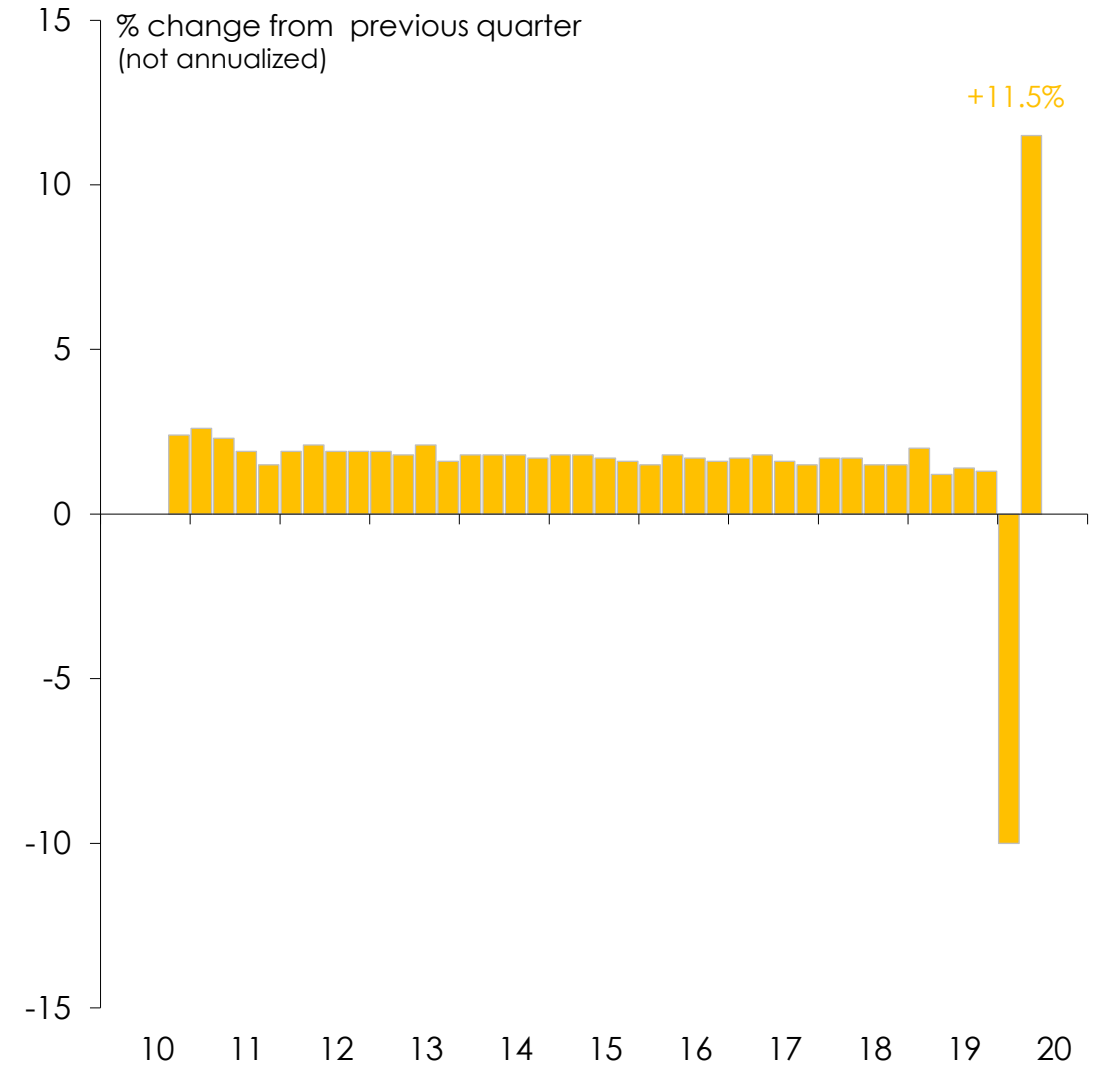
Sources: Apple Mobility Trends Reports (data up to 14th July); Google Covid-19 Community Mobility Reports (data up to 12th July).

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



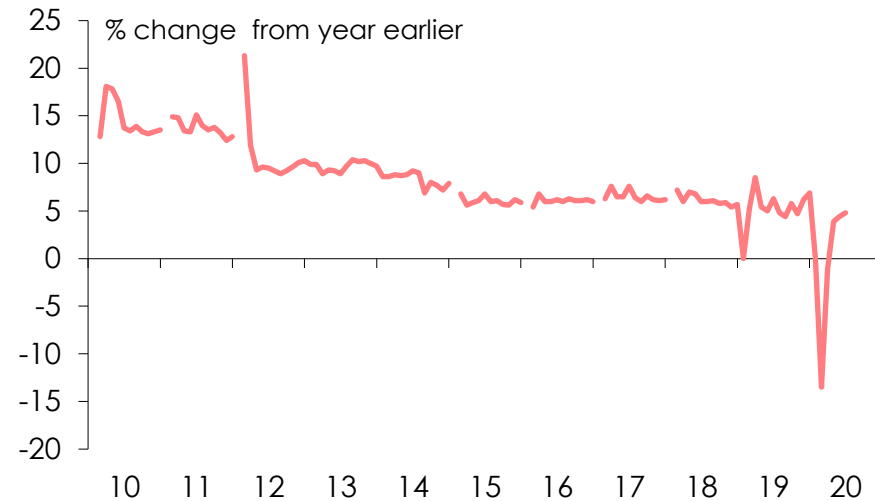
Quarterly real GDP growth, 2010-2020



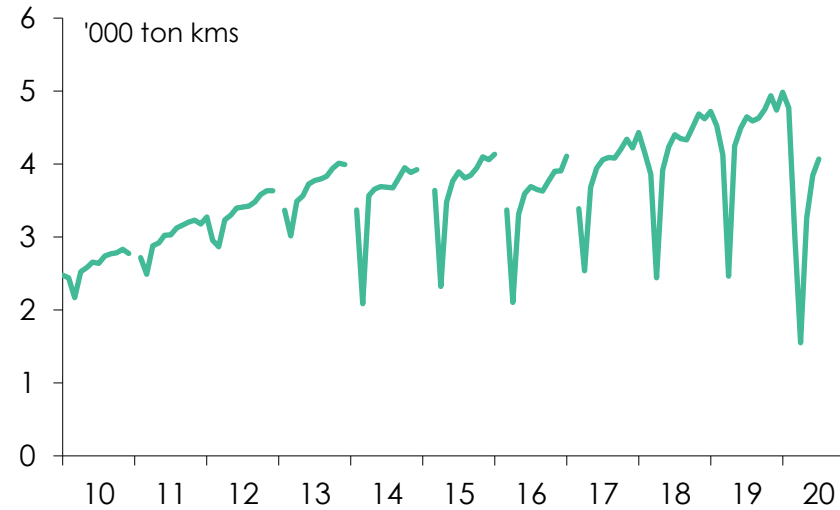
Note: In the left-hand chart, GDP growth rates are annual averages up to the December quarter of 1991, and then quarter-on-corresponding-quarter-of-previous-year thereafter. Sources: China National Bureau of Statistics.

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

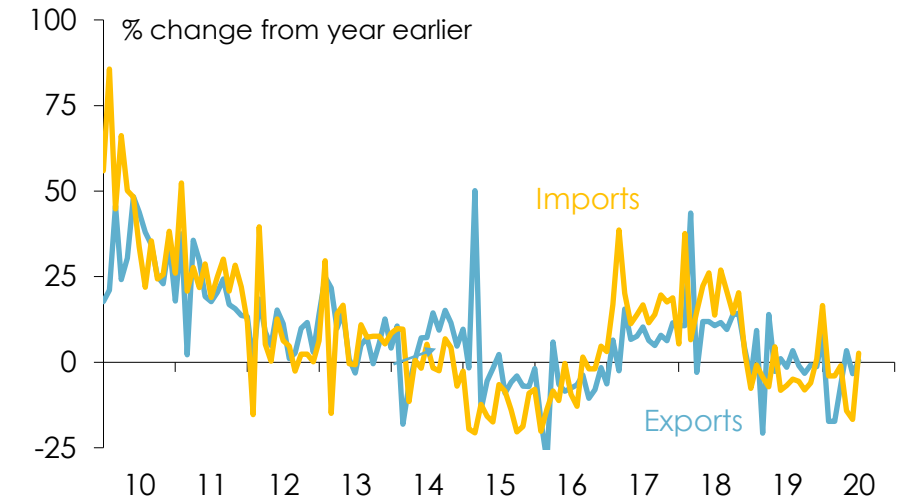
Industrial production



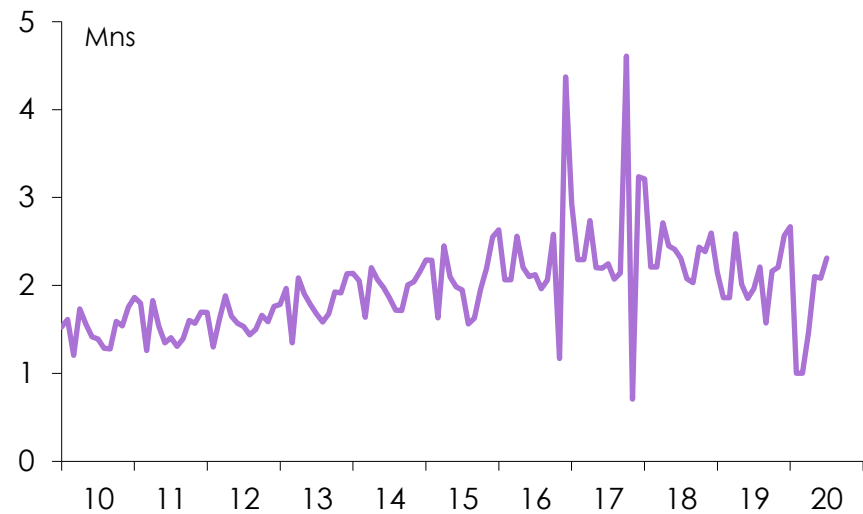
Freight traffic volumes



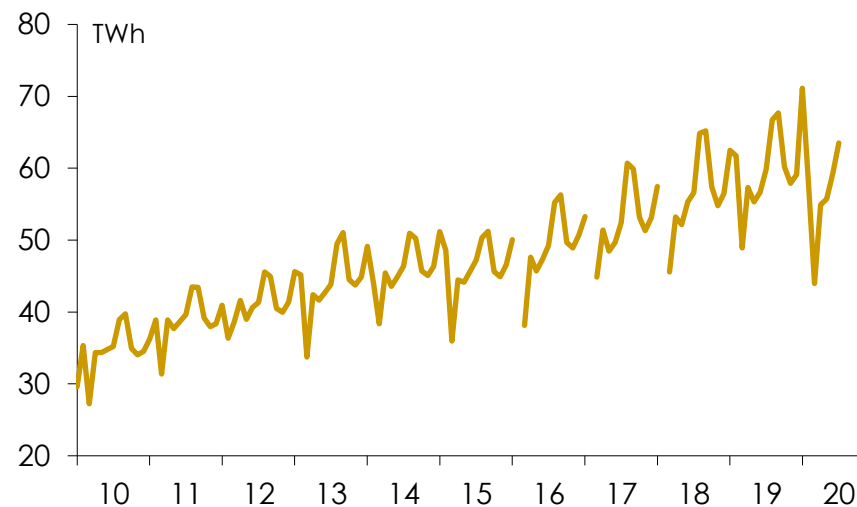
Merchandise trade



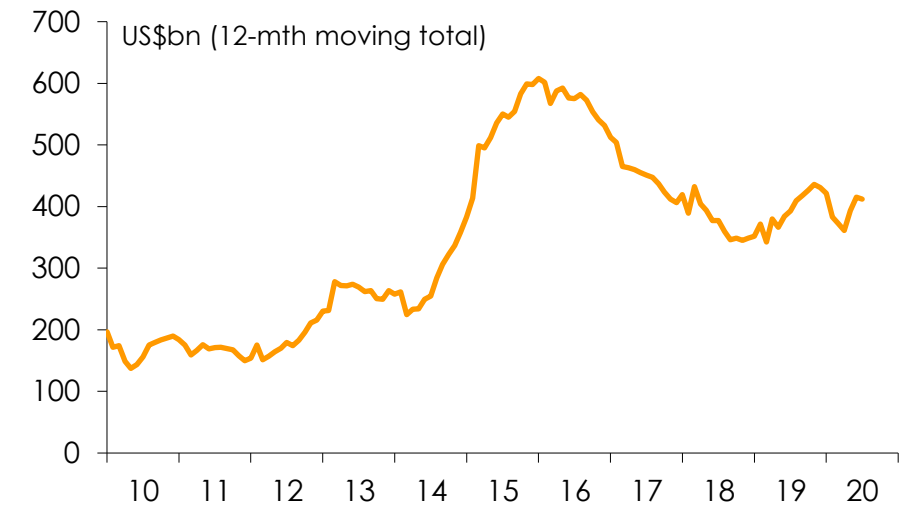
Motor vehicle production



Primary electricity production



Merchandise trade balance



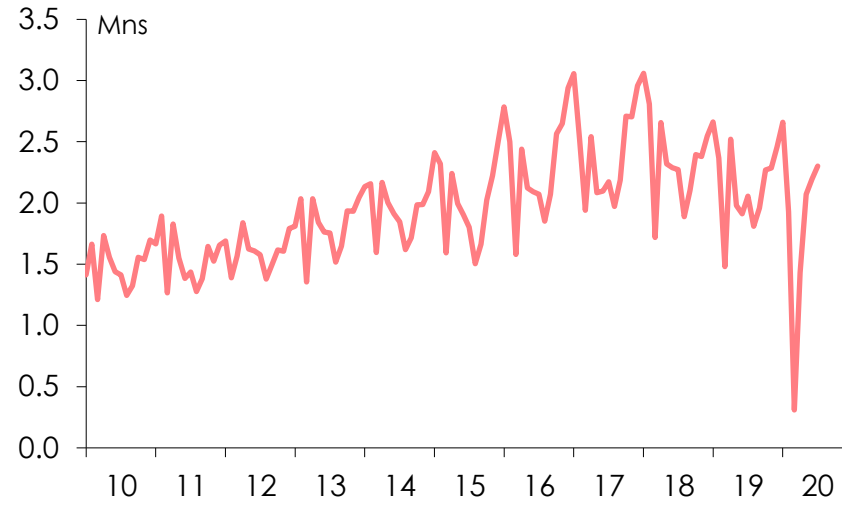
Sources: China National Bureau of Statistics; China Association of Automobile Manufacturers; China General Administration of Customs.

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

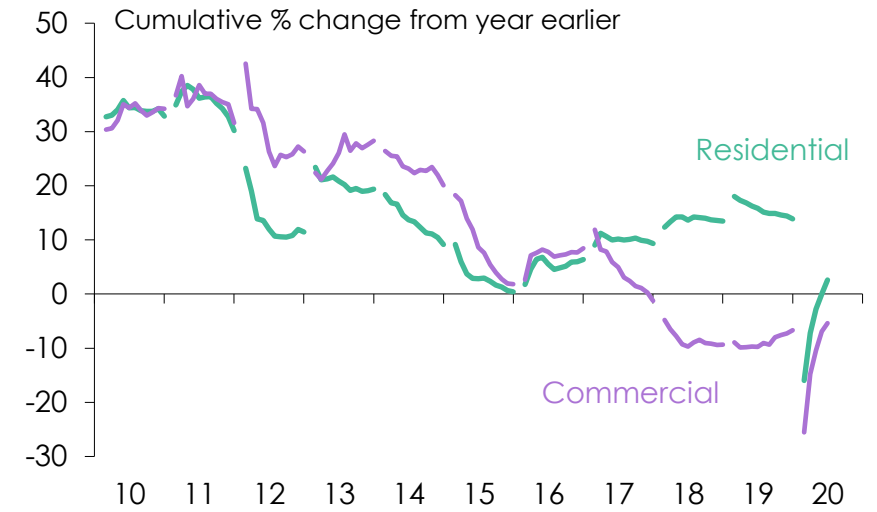
Consumer sentiment



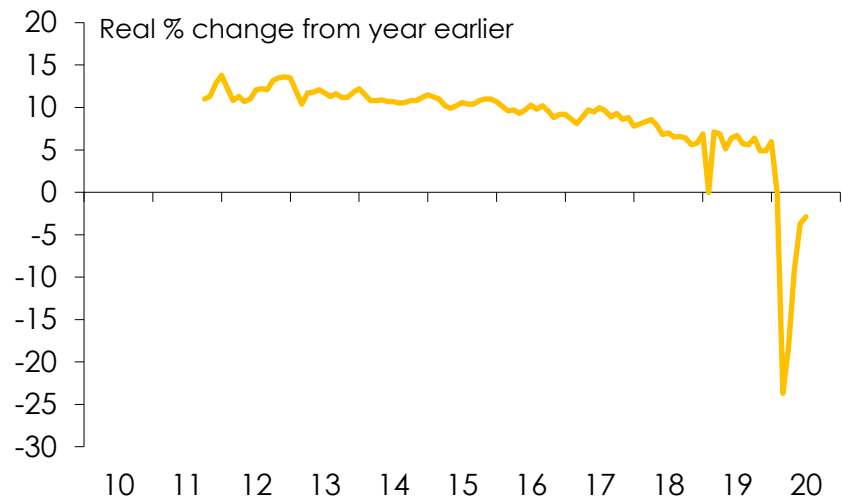
Motor vehicle sales



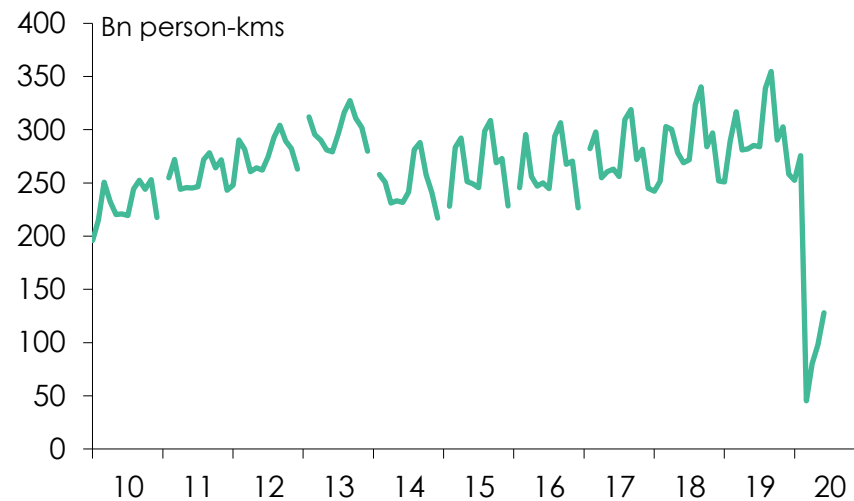
Real estate investment



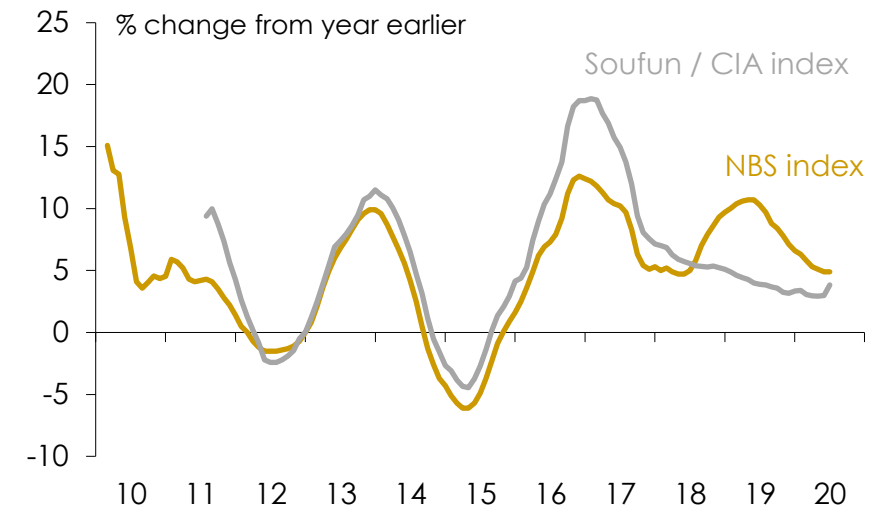
Retail sales volume



Passenger traffic volumes



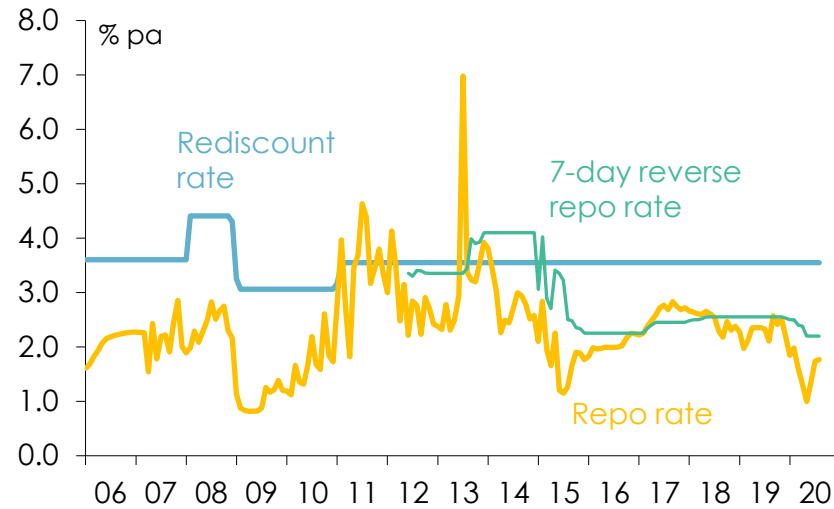
Residential real estate prices



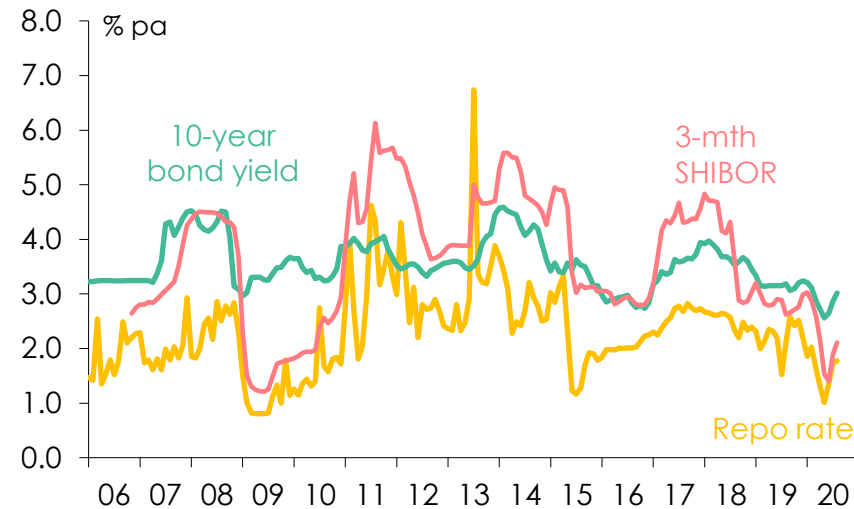
Sources: China National Bureau of Statistics; China Association of Automobile Manufacturers; China Index Academy.

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

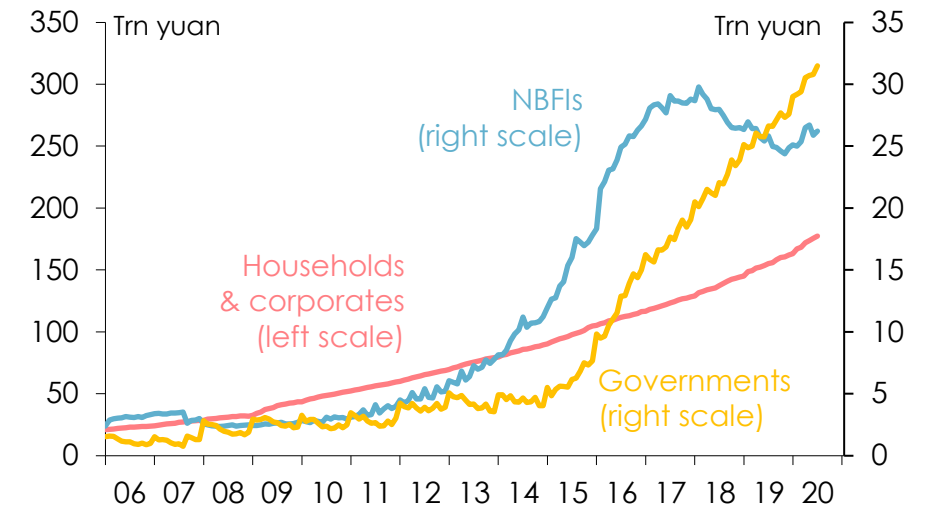
PBoC policy interest rates



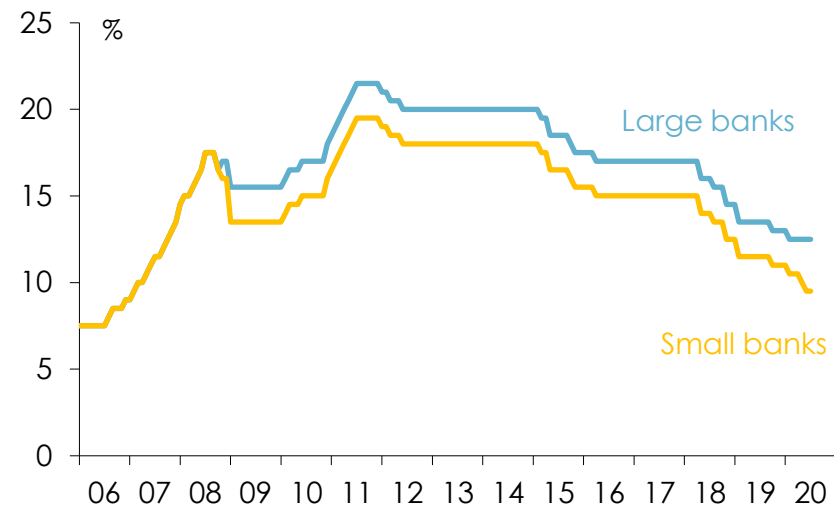
Market interest rates



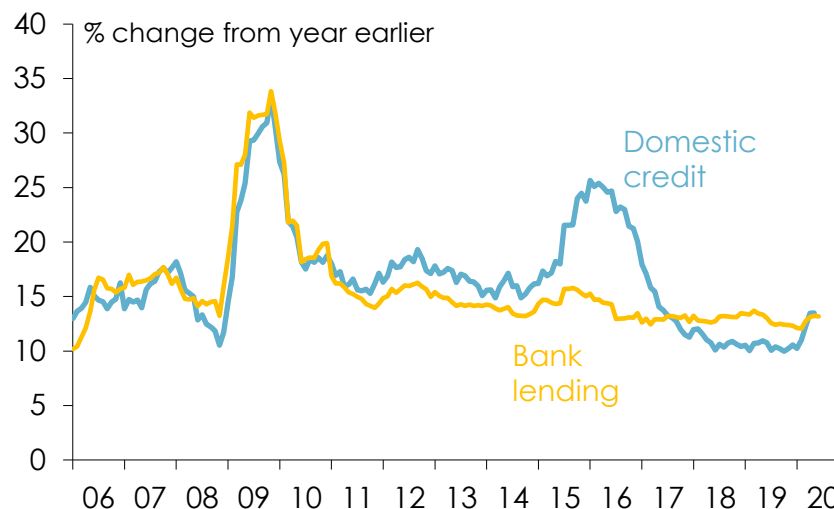
Depository corporation assets



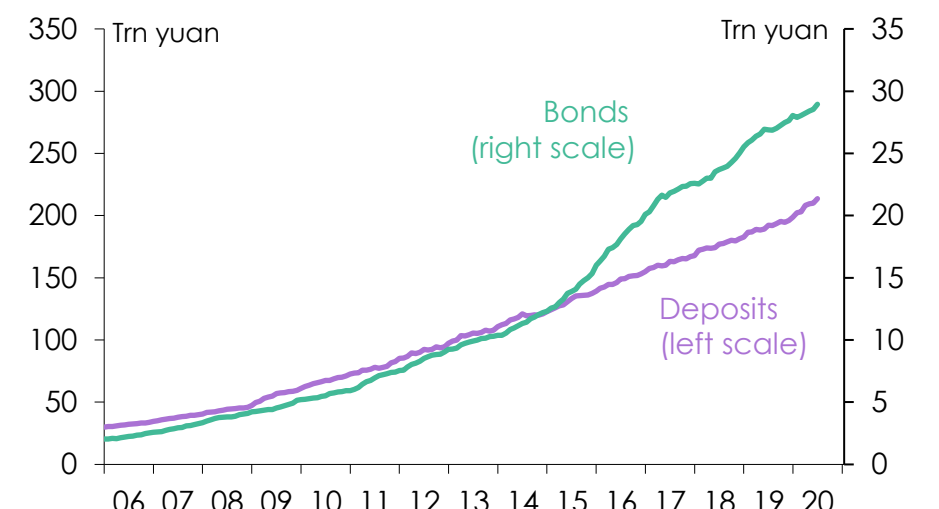
Bank reserve requirement ratios



Credit growth



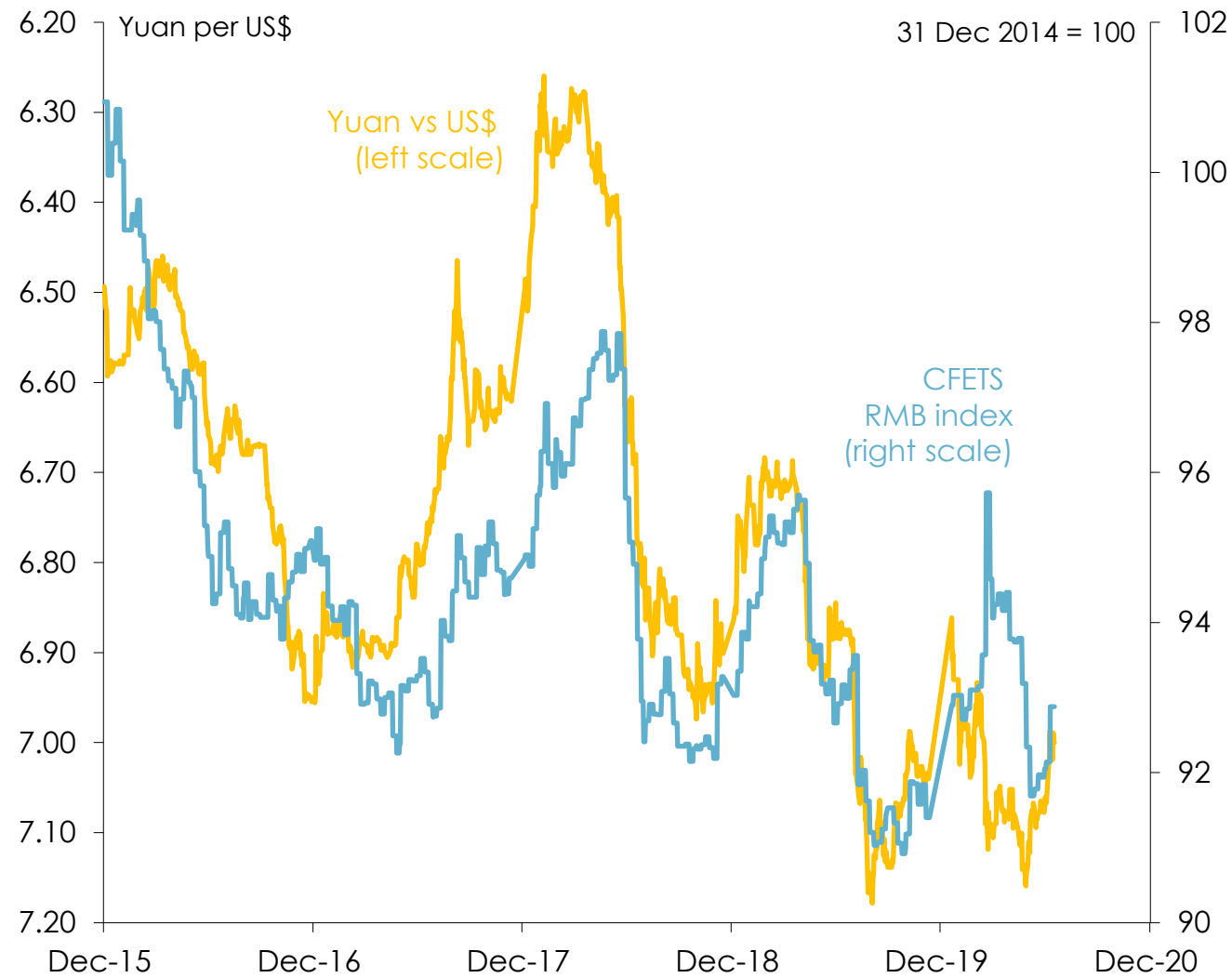
Depository corporation liabilities



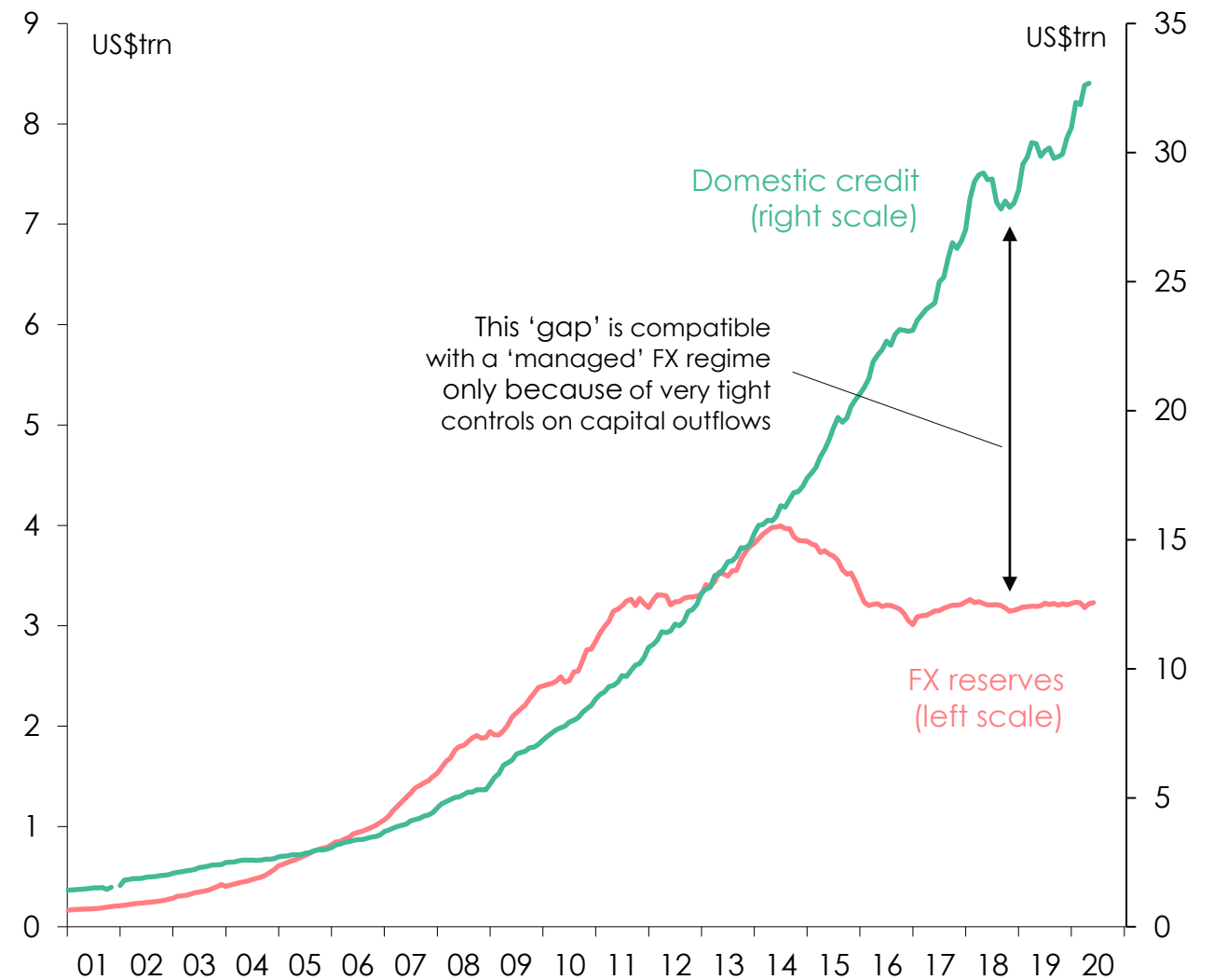
Sources: Refintiv Datastream; People's Bank of China.

The yuan has risen by 2% against the US\$ since the end of May, mainly reflecting US\$ weakness – but the FX regime depends on capital controls

Chinese yuan vs US\$ and trade-weighted index



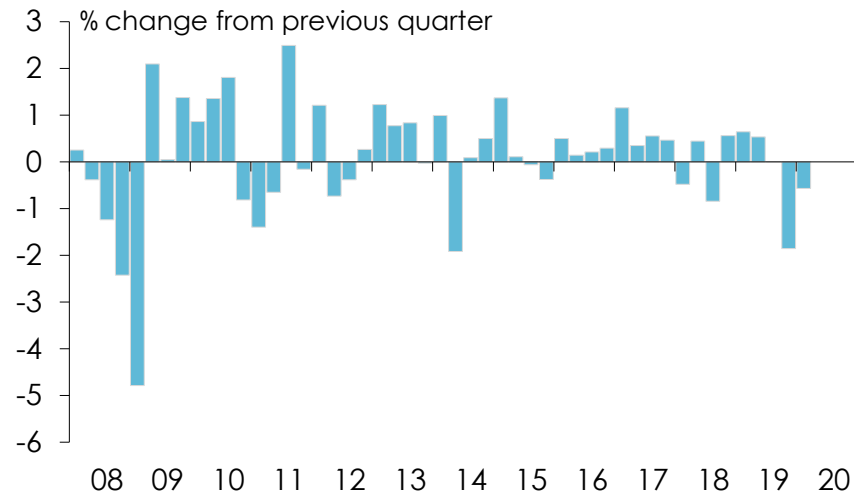
FX reserves and domestic credit



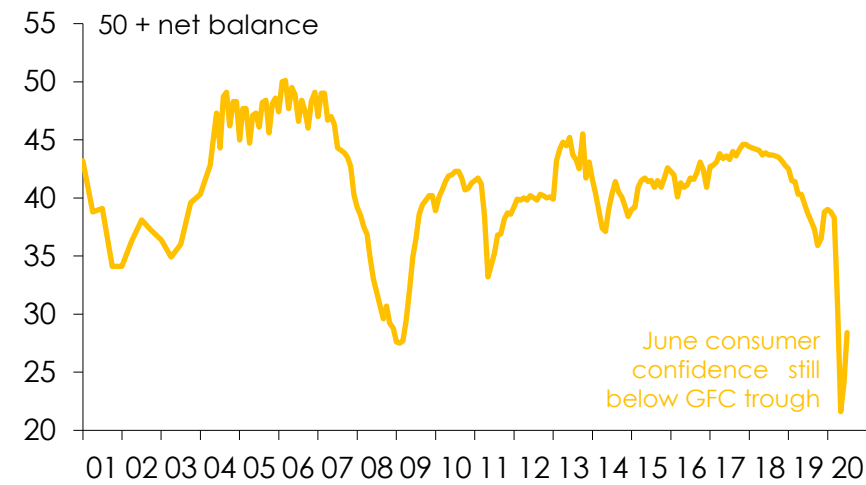
Sources: Refinitiv Datastream; China Foreign Exchange Trading System; People's Bank of China.

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

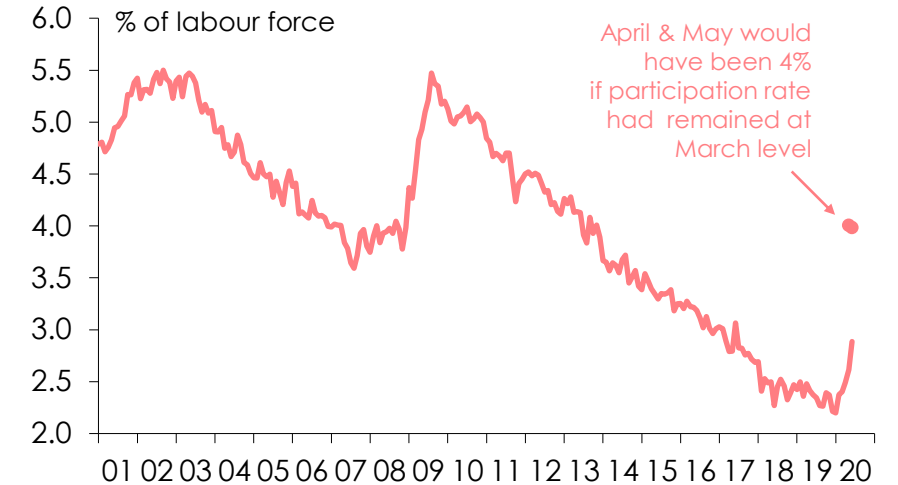
Real GDP



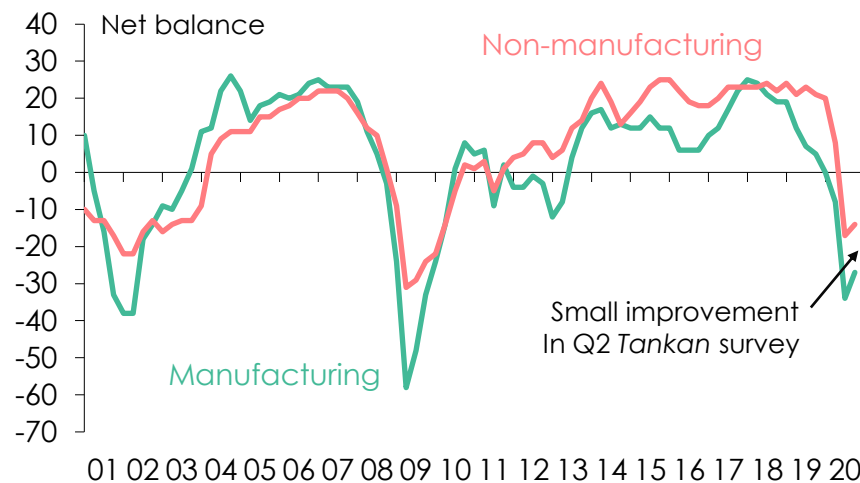
Consumer confidence



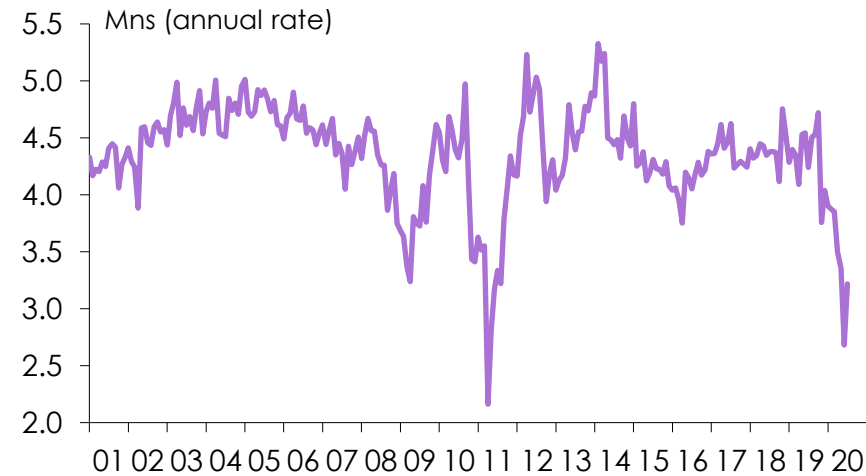
Unemployment



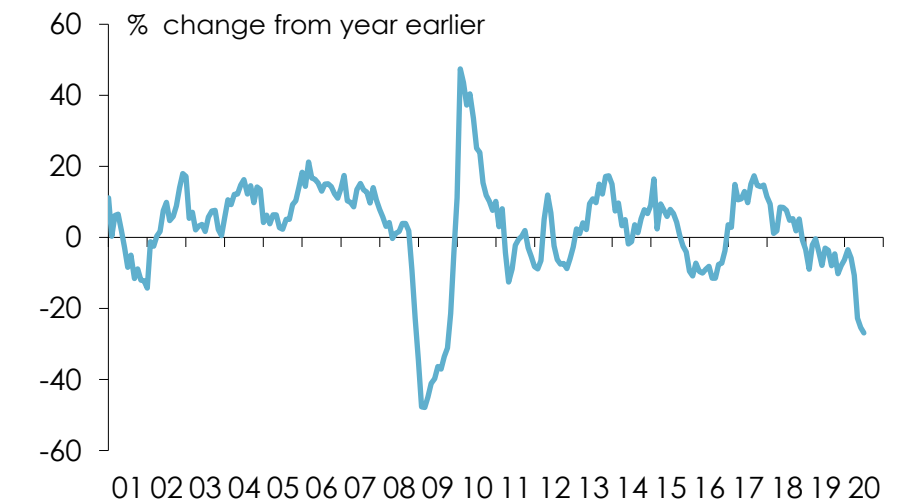
Business conditions – large firms



Passenger vehicle sales



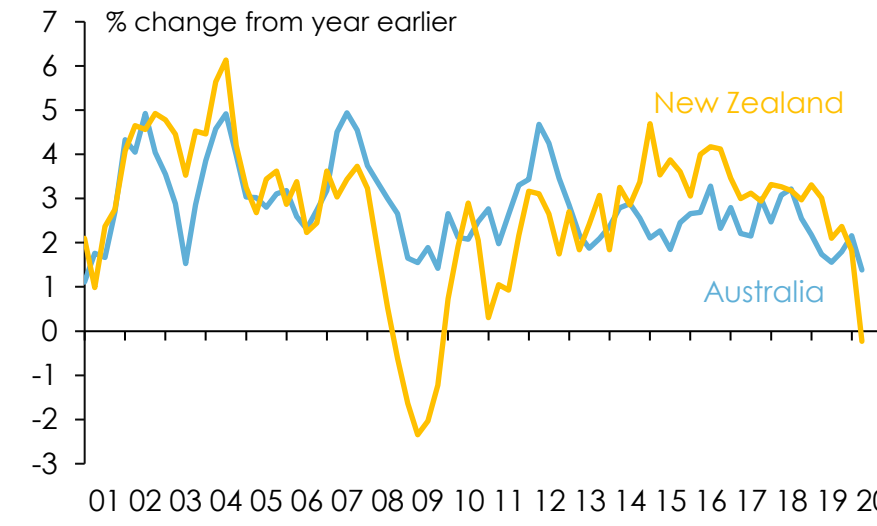
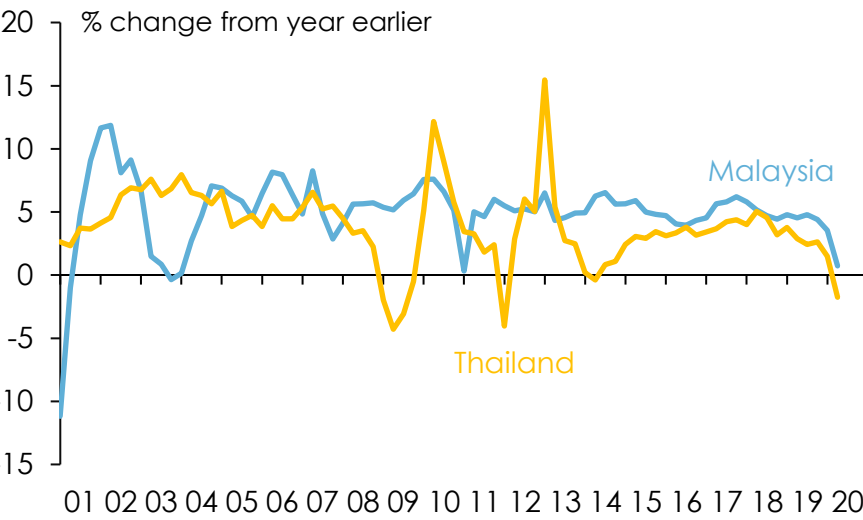
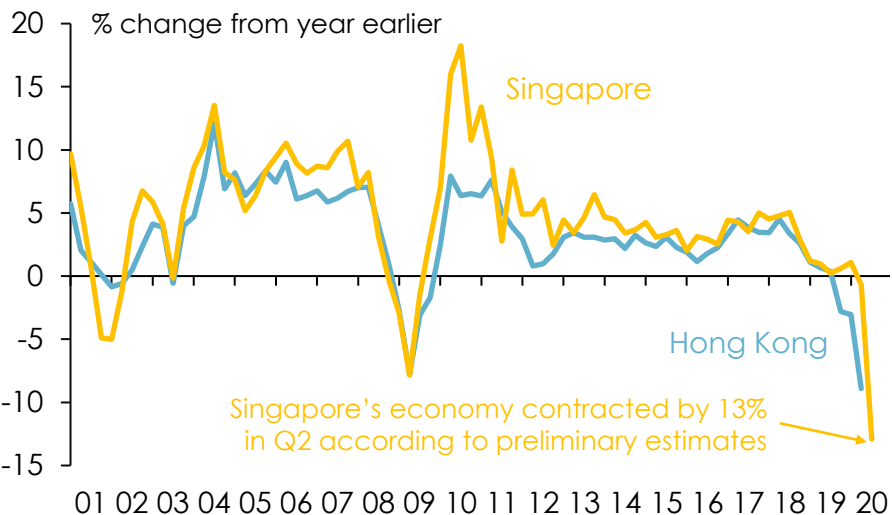
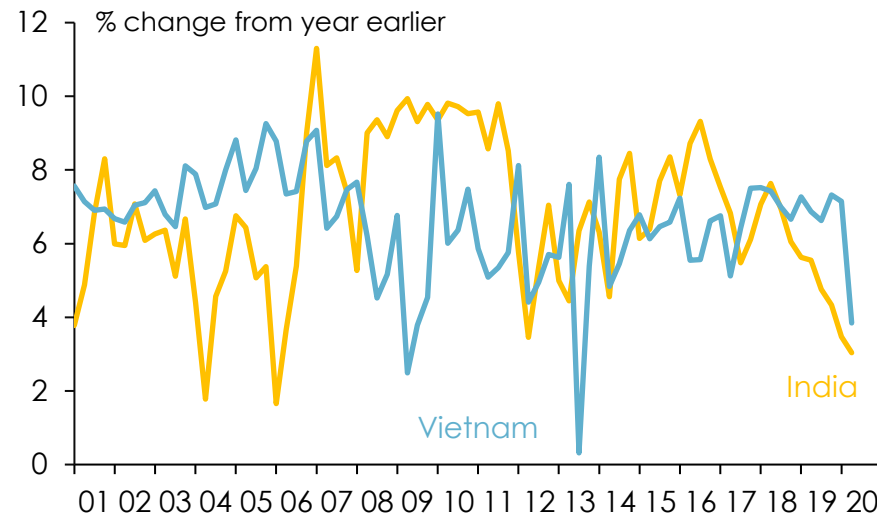
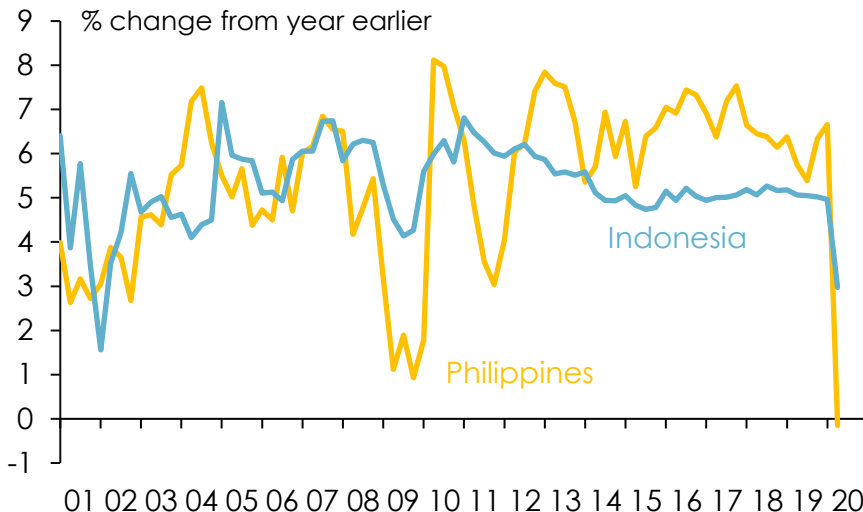
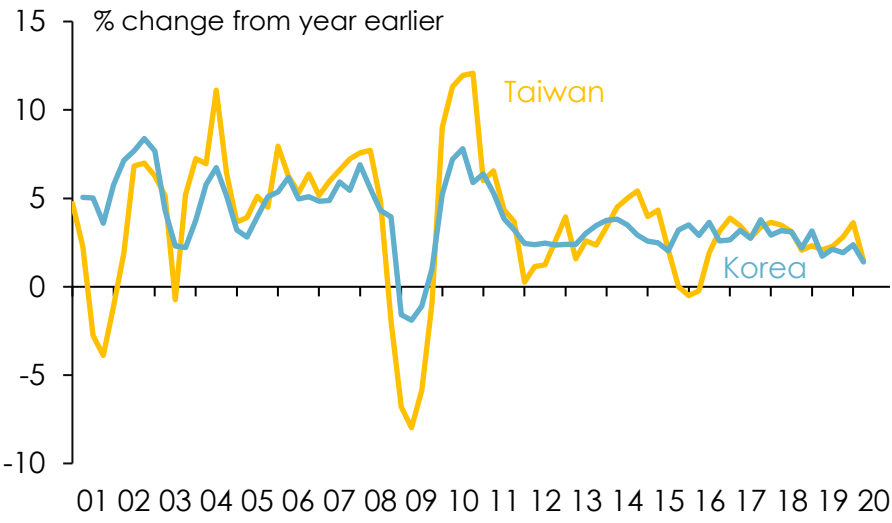
Merchandise exports



Sources: Japan Cabinet Office; Bank of Japan; Japan Automobile Dealers' Association; Ministry of Health, Labour & Welfare. The first estimate of Q2 GDP will be released on 17th August.

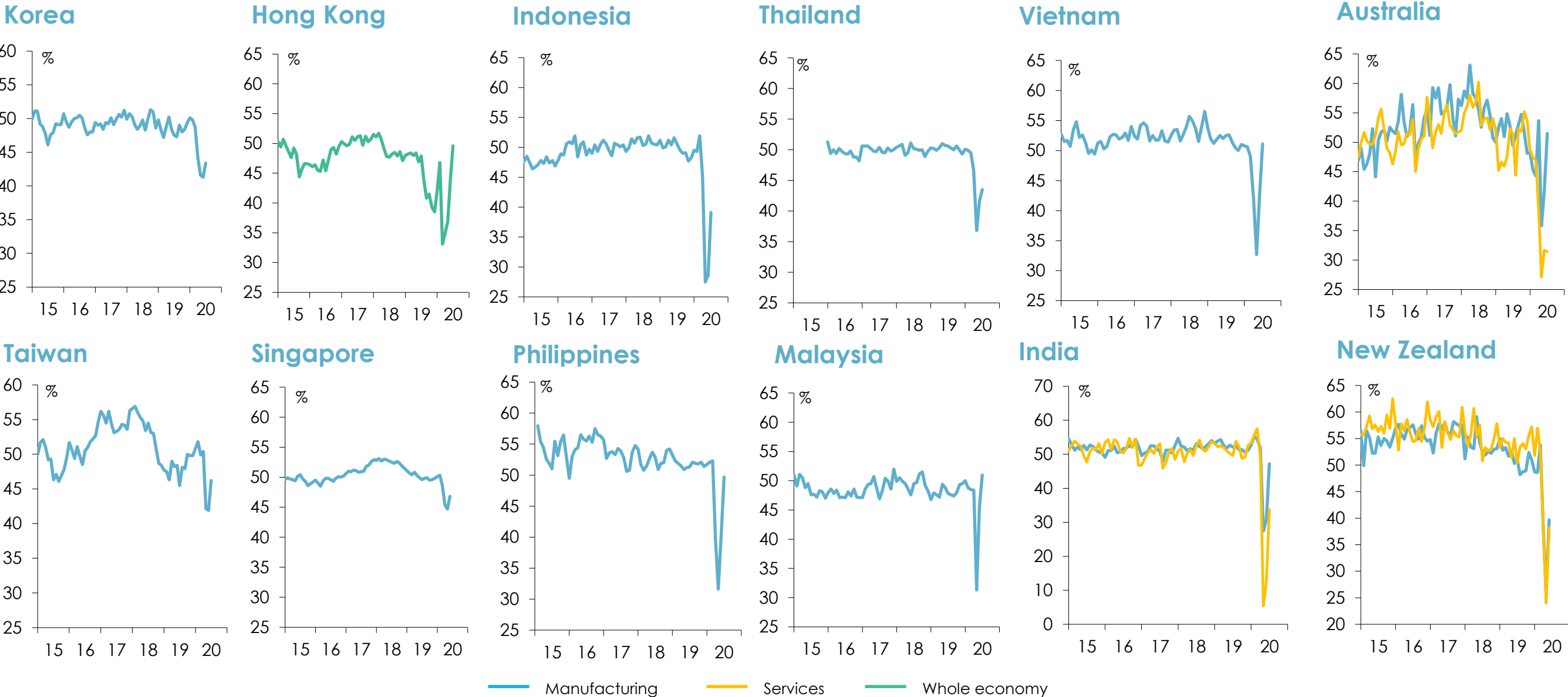
Most other Asian economies experienced a slowdown during the first quarter of 2020, with worse to come in the second quarter

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; .

Purchasing managers' indices suggest activity in Asia-Pacific economies started to recover in May and improved further in June

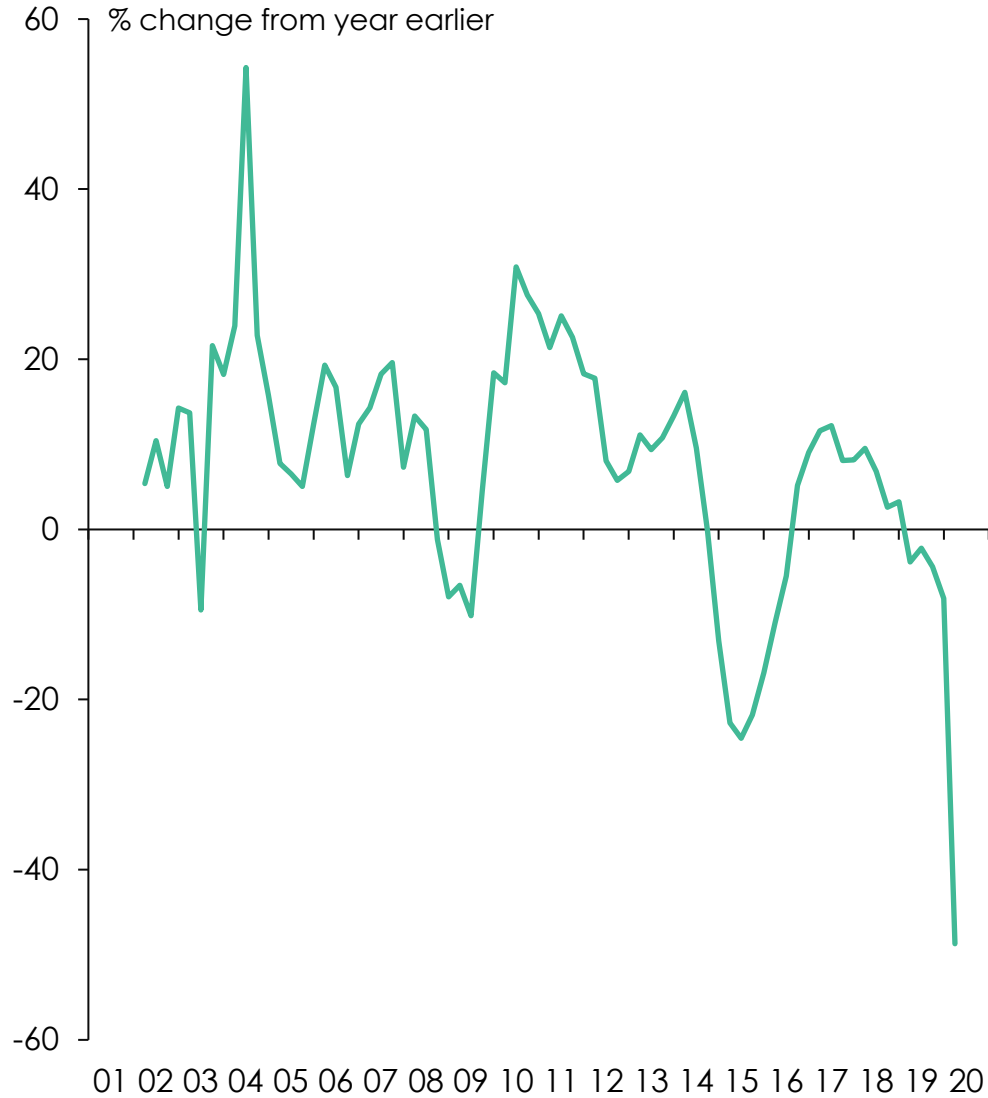


Note: Purchasing Managers' Indexes (PMIs) are derived from surveys of senior executives, who are asked to report whether various dimensions of business activity recorded an increase, decrease or no change compared with the previous month. A reading of 50 indicates an overall increase cf. the previous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

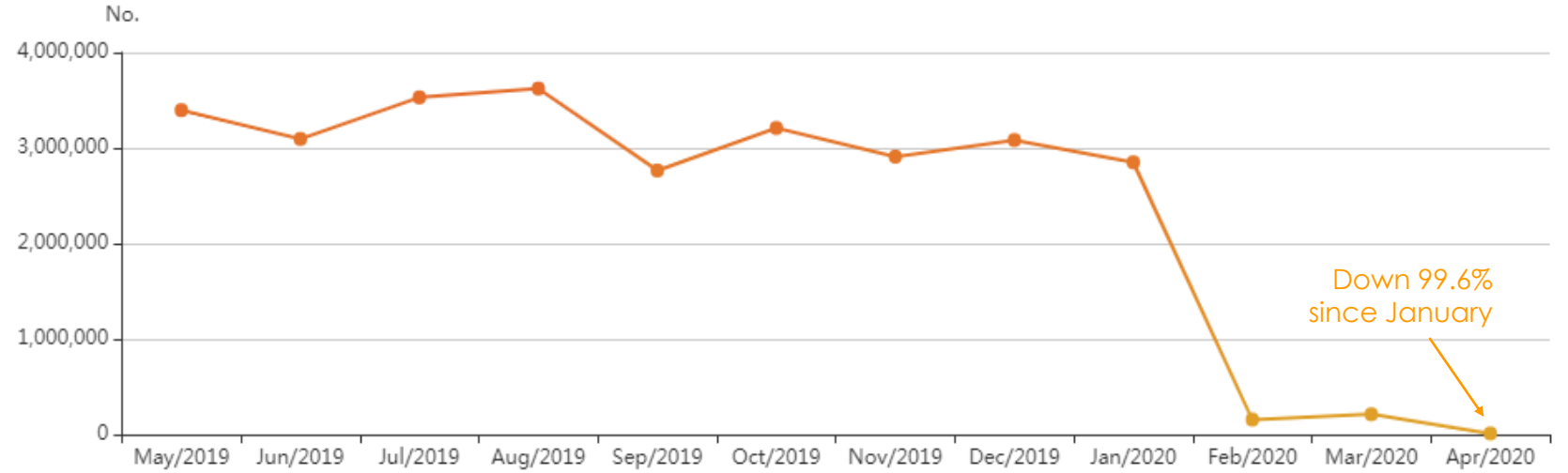
Sources: IHS Markit; Singapore Institute of Purchasing & Materials Management; Australian Industry Group; Business NZ; Refinitiv Datastream.

The world's worst recession is probably in Macau

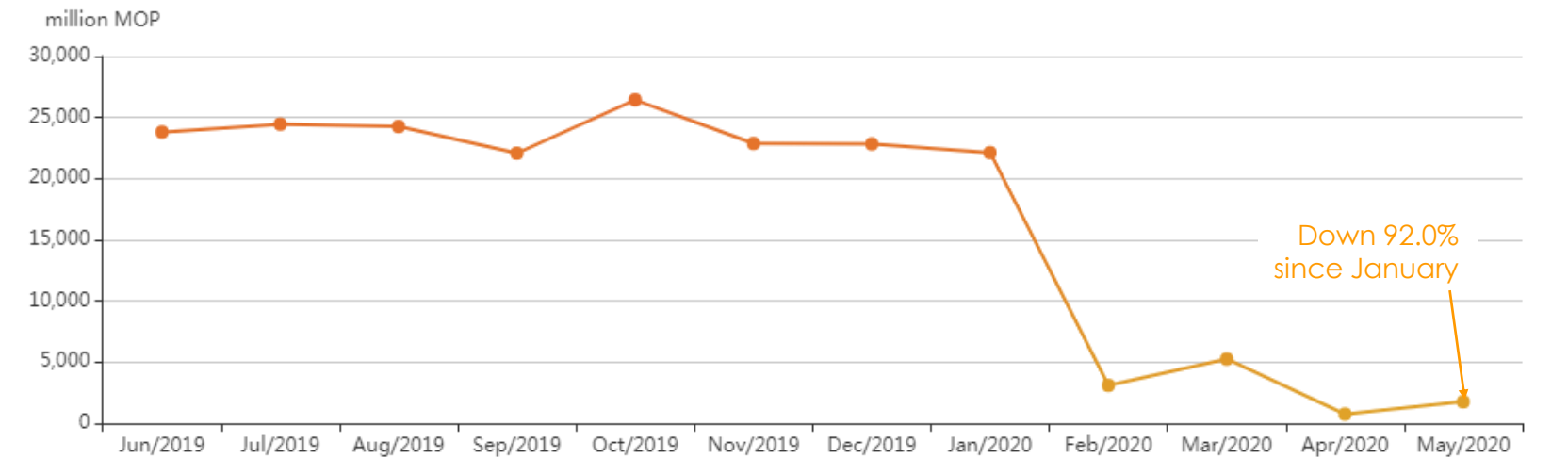
Macau – real GDP



Visitor arrivals



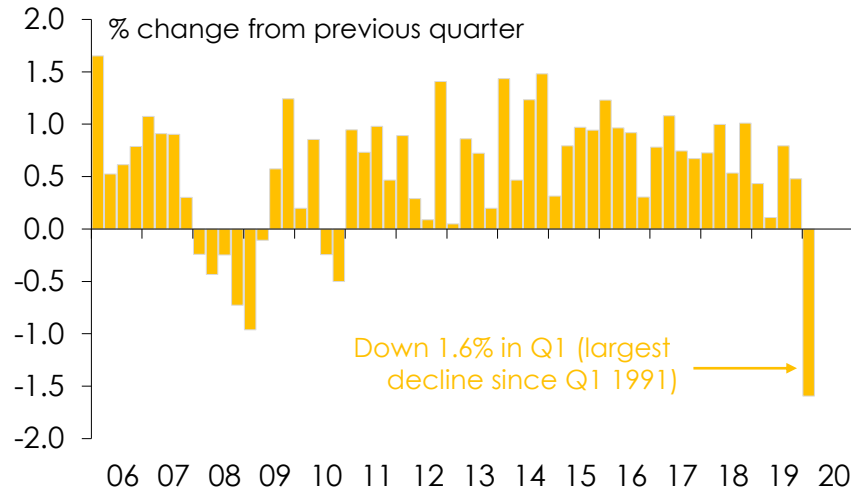
Gambling revenue



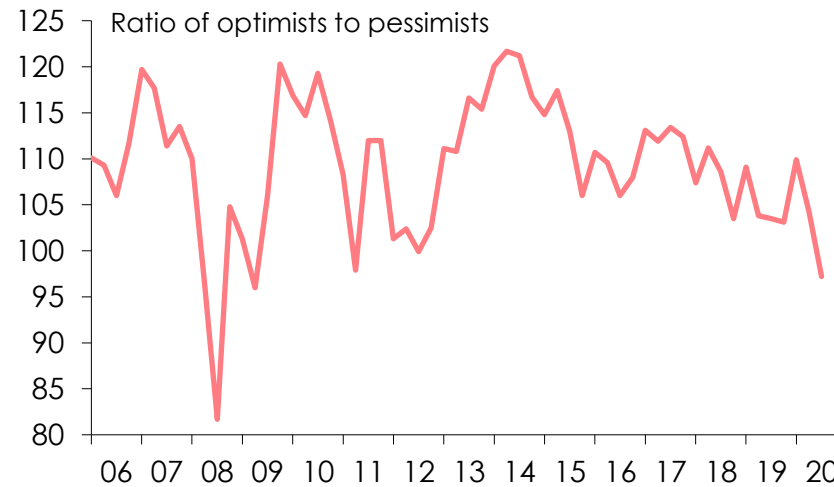
Source: Macau Statistics and Census Service.

New Zealand has paid a high economic price for its success in (nearly) eradicating the Covid-19 virus

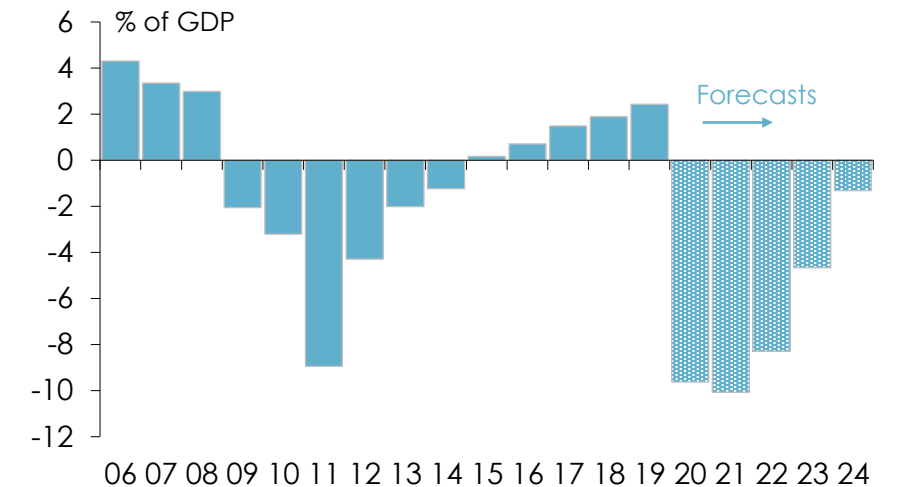
Real GDP



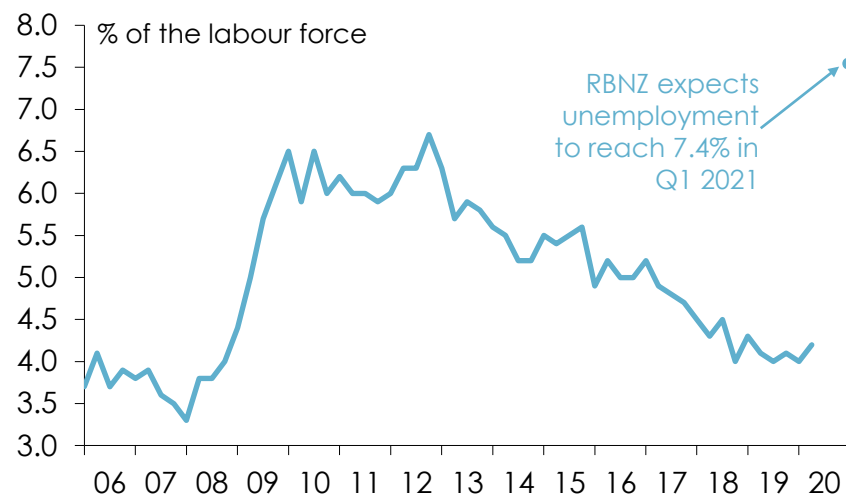
Consumer confidence



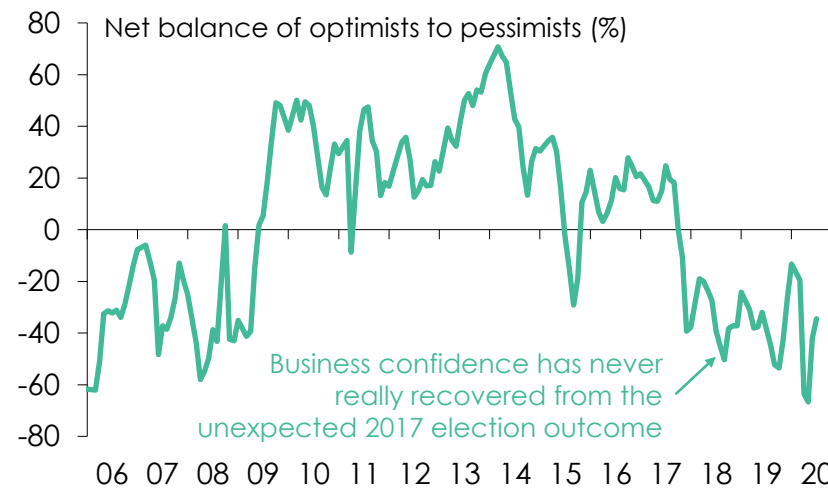
NZ government budget balance



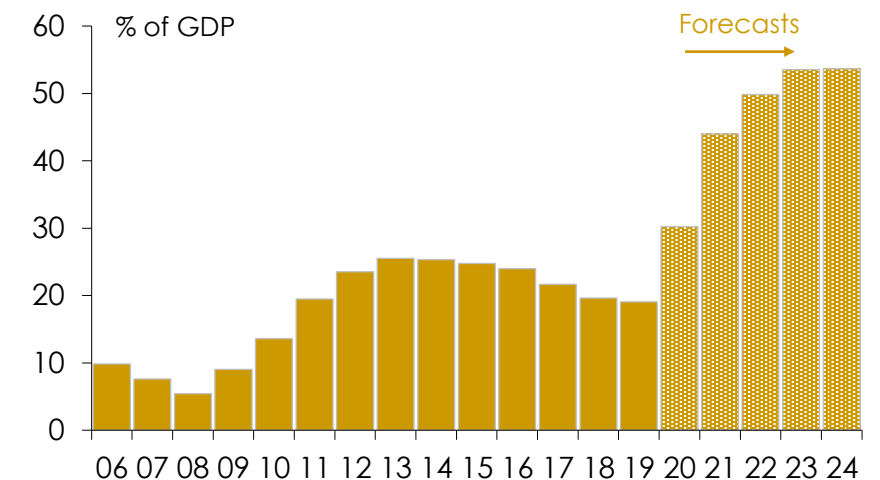
Unemployment rate



Business confidence



NZ 'core Crown debt'

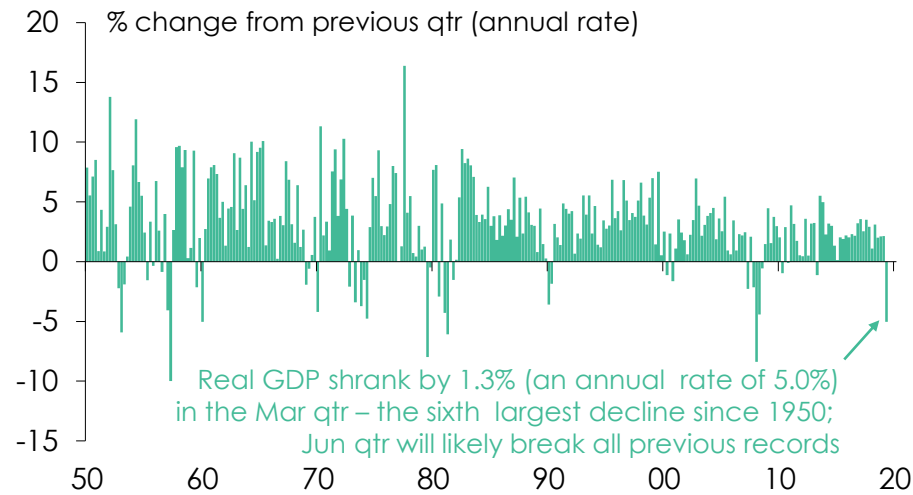


Note: New Zealand uses GDP(P) as its preferred measure of GDP. Unemployment rates are quarterly. The measure of the NZ Government budget balance is 'OBEGAL', operating balance excluding gains and losses (an accrual accounting measure). Net 'core Crown debt' excludes assets of the NZ Super Fund, student 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.

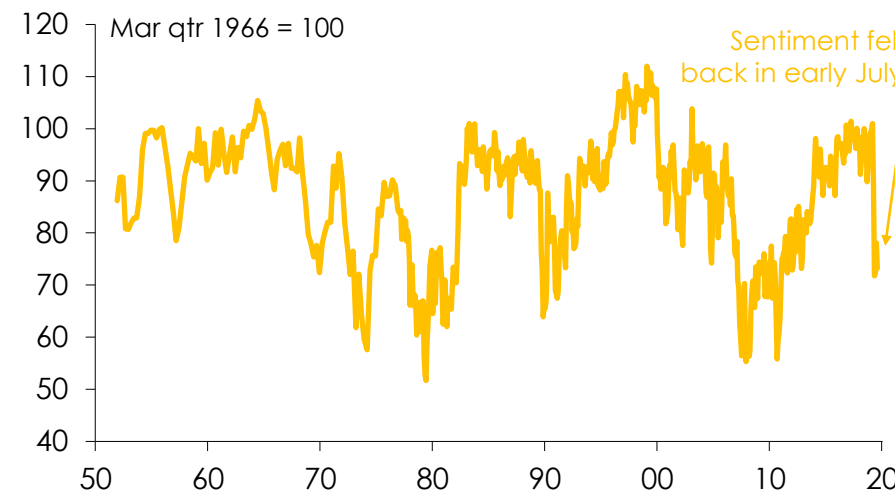
Sources: Statistics NZ; Westpac-McDermott Miller; ANZ Bank; NZ Treasury *Budget Economic and Fiscal Update 2020*. Q2 GDP estimates will be released on 17th September.

The US economy has experienced its sharpest contraction since the 1930s, but there are increasing signs that a rebound began in May

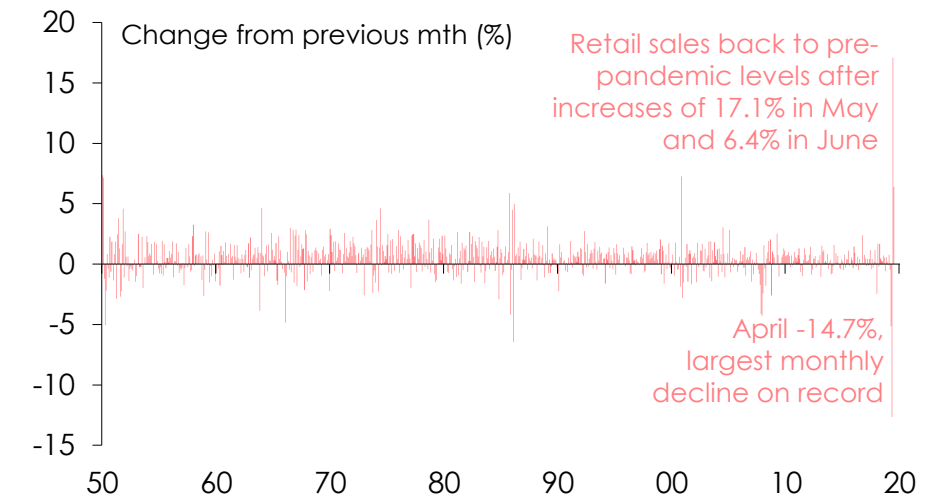
Real GDP



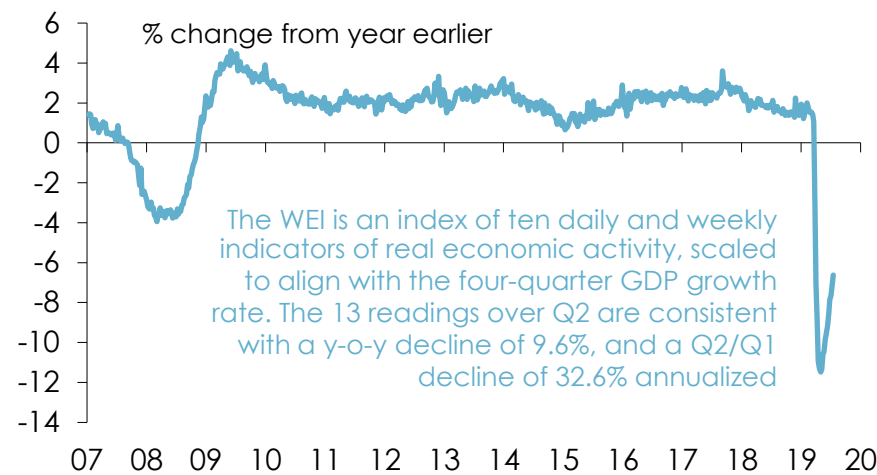
Consumer sentiment



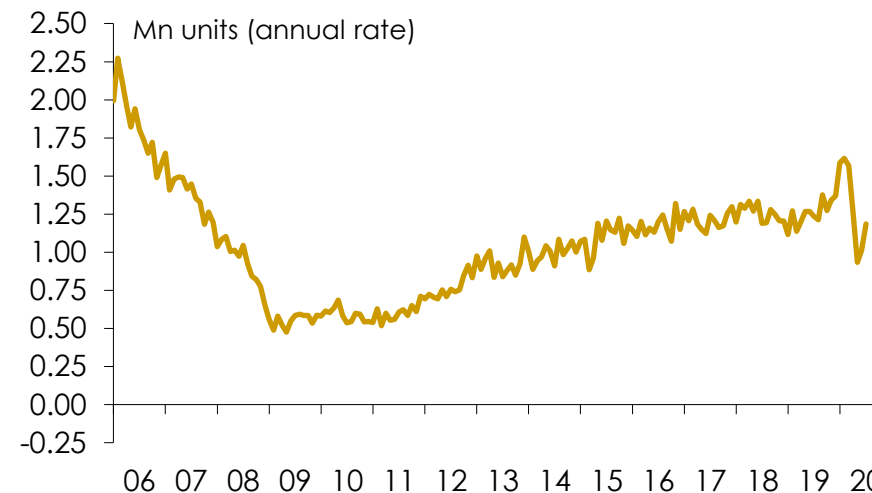
Retail sales



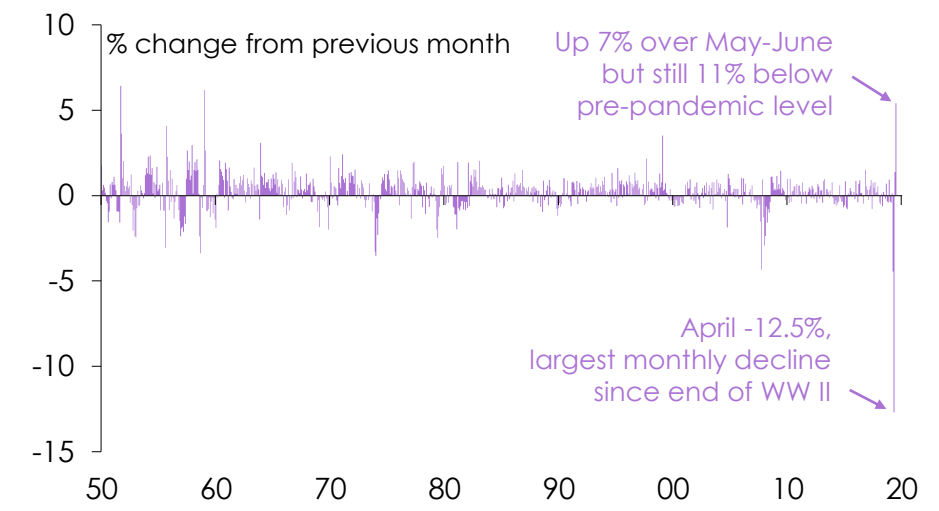
NY Fed weekly economic index



Housing starts



Industrial production



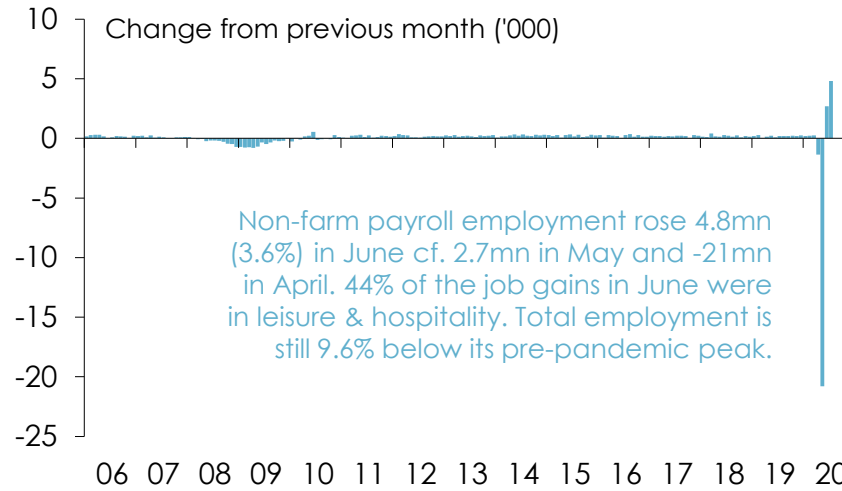
Sources: US Bureau of Economic Analysis; Federal Reserve Bank of New York; Michigan University Survey Research Center; US Commerce Department; Board of Governors of the Federal Reserve System. The first estimate of Q2 GDP will be released on 30th July.

The impact on the US labour market has been particularly severe – although employment rose, and unemployment fell, in May and June

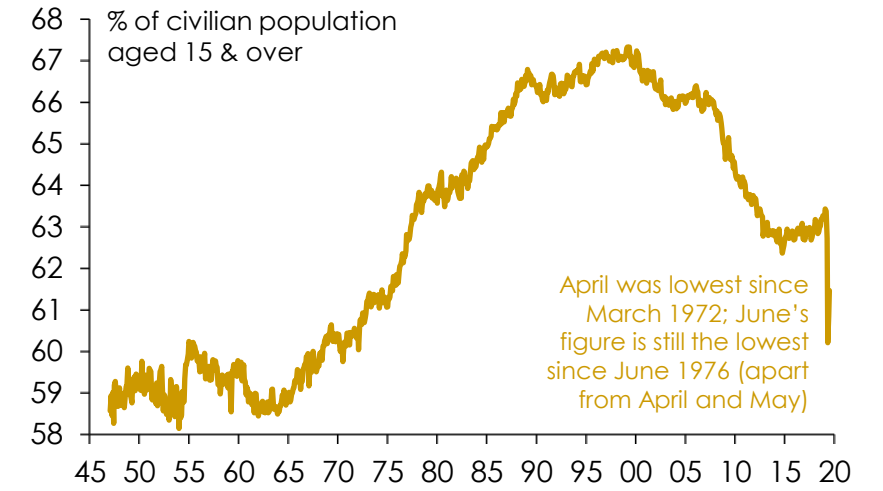
Unemployment benefit claims



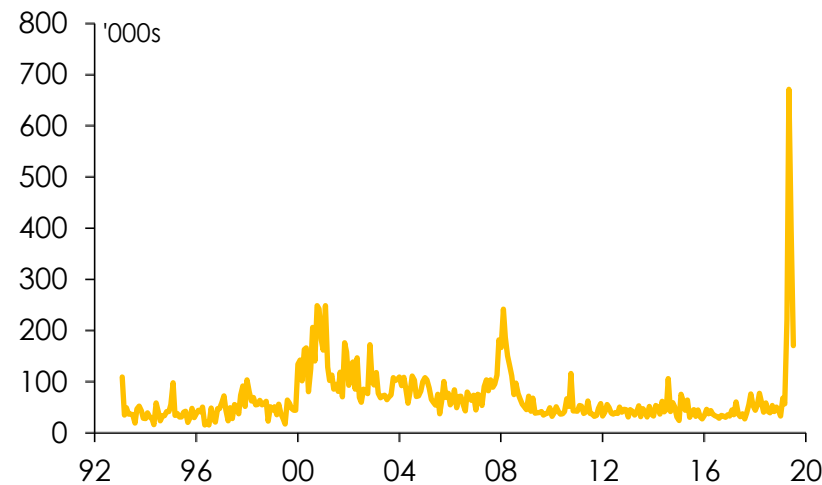
Non-farm payroll employment



Labour force participation rate



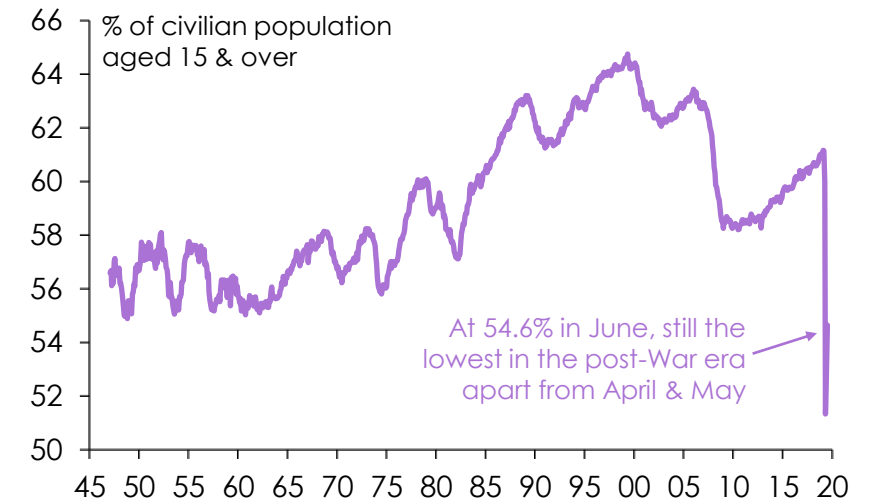
Layoff announcements



Unemployment rate



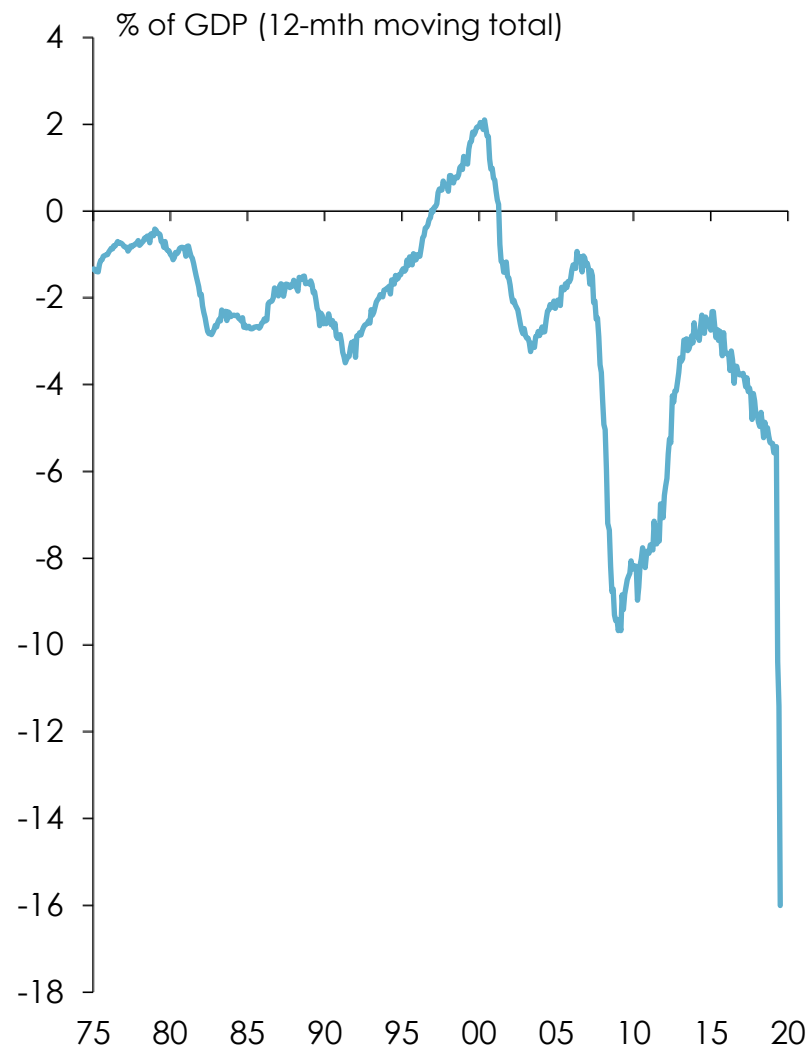
Employment to population ratio



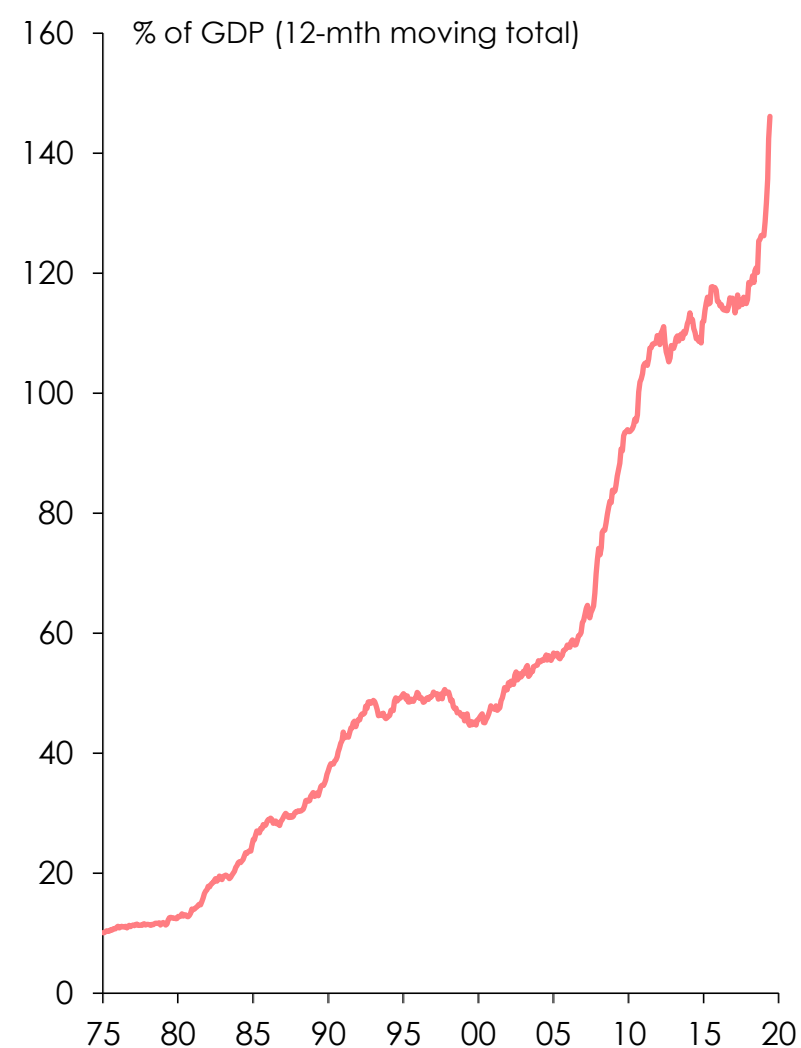
Sources: US Department of Labor; Challenger, Gray & Christmas; US Bureau of Labor Statistics; National Bureau of Economic Research Macro History database. July employment and other labour force data will be released on 7th August.

The US budget deficit has blown out dramatically since the end of March, reaching 16% of GDP in the 12 months ended June

US Federal budget deficit



US gross Federal debt

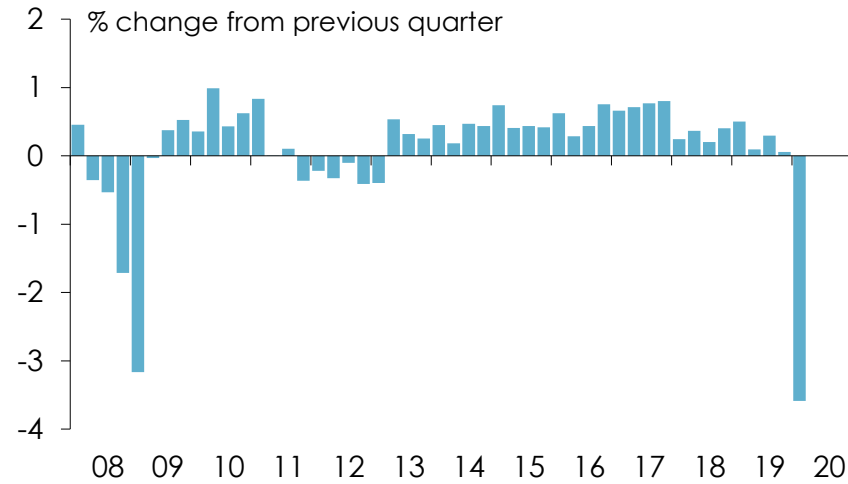


- ❑ The US federal budget deficit widened from US\$582bn (3.3% of GDP) in 2016 (Obama's last year in office) to US\$1 trn (5.4% of GDP) in 2019, while gross federal debt rose from US\$20.4 trn (115% of GDP) to \$24.1trn (126% of GDP)
- ❑ In March, the Congressional Budget Office forecast the deficit would remain above US\$1trn every year over the next decade, reaching US\$1.7 trn (5.6% of GDP) by 2030
- ❑ The budget deficit for April, May and June amounted to US\$2.0trn (reflecting the impact of Covid-19 related measures), bringing the 12-month moving total to US\$3.0 trn (16.0% of GDP), cf. a peak of 9.7% of GDP during the GFC (and the largest since 20.8% of GDP in FY 1945)
- ❑ Gross federal debt increased by US\$727 bn to US\$28.7 trn (154% of GDP)

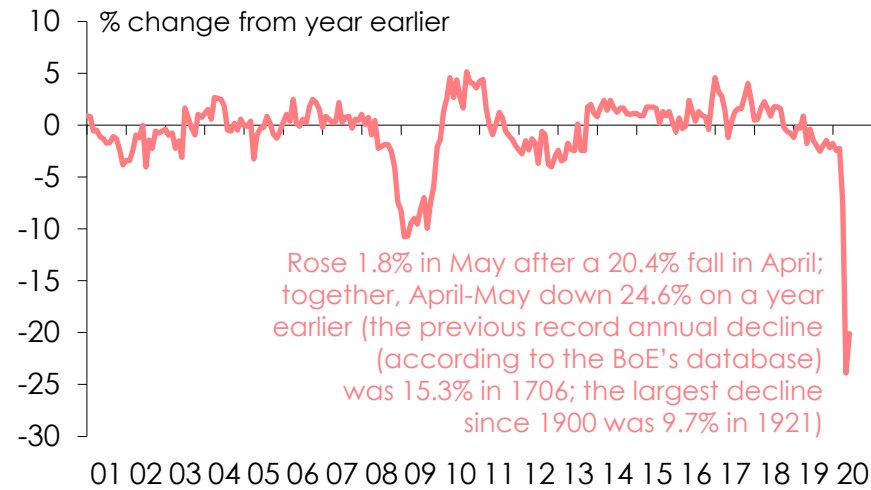
Note: The measure of US gross federal debt is at market value. Sources: US Treasury Department; Federal Reserve Bank of Dallas; US Bureau of Economic Analysis; US Congressional Budget Office; Corinna. July budget data are released on 12th August.

Europe is also experiencing a sharp downturn although unemployment probably won't rise as much as it has in the US

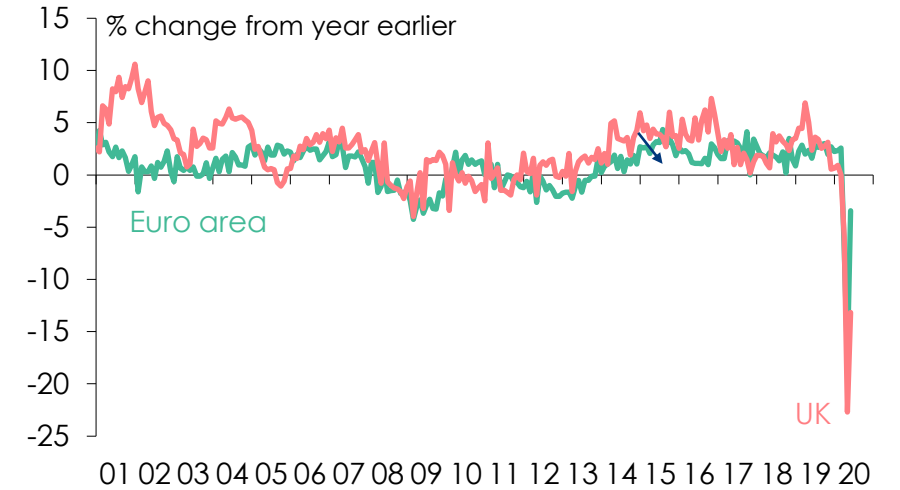
Euro area real GDP



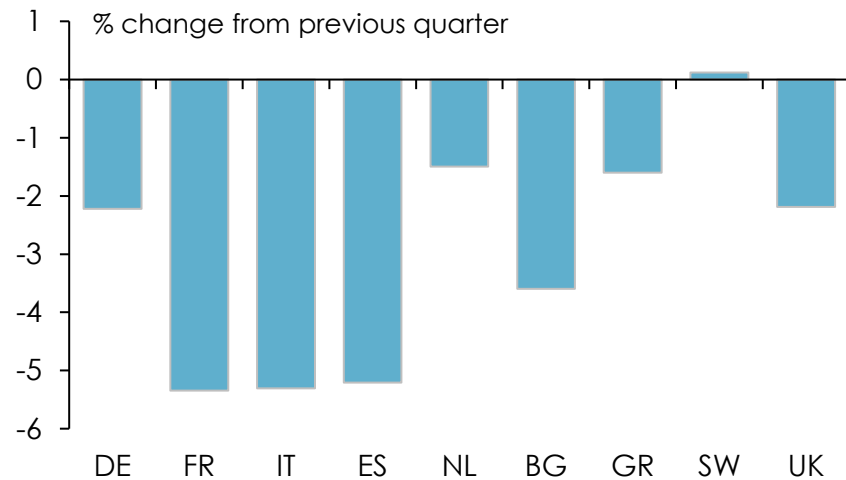
UK monthly GDP



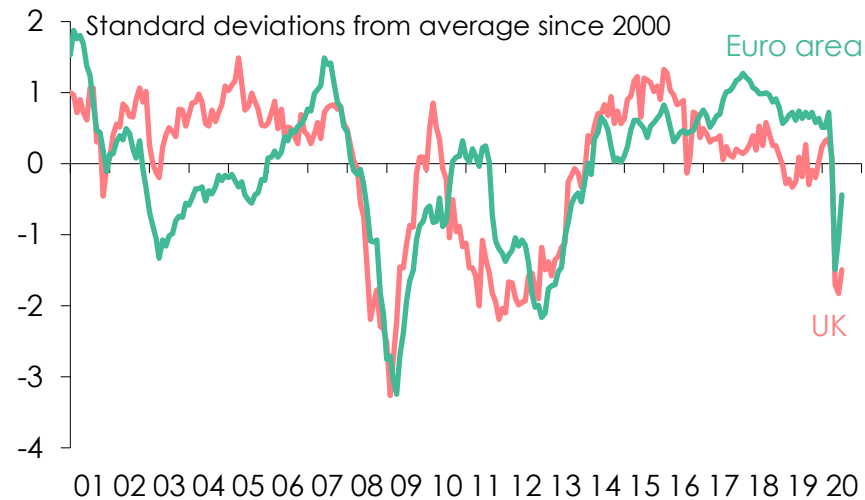
Retail sales volume



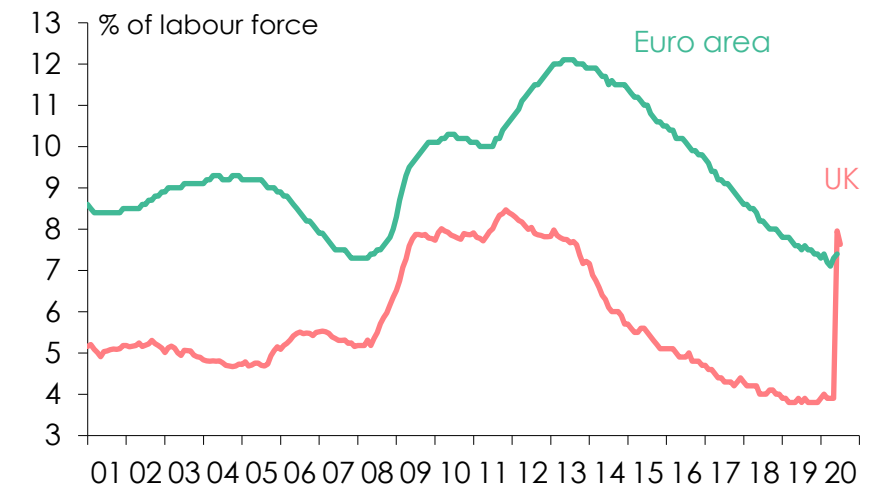
March quarter GDP by country



Consumer confidence



Unemployment

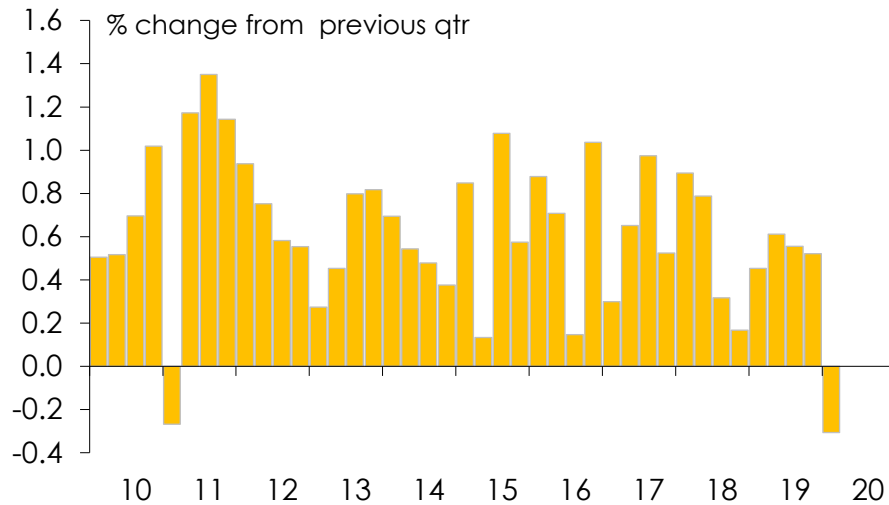


Sources: Eurostat; UK Office for National Statistics; Confederation of British Industry. The UK unemployment rate is published as a 3-month moving average; the most recent observation (for May) is derived by adding to the 'claimant count' unemployment rate the average margin between that rate and the conventionally defined unemployment rate over the preceding 12 months. Preliminary estimates of Q2 GDP for the UK and euro area will be released on 12th and 14th August respectively.

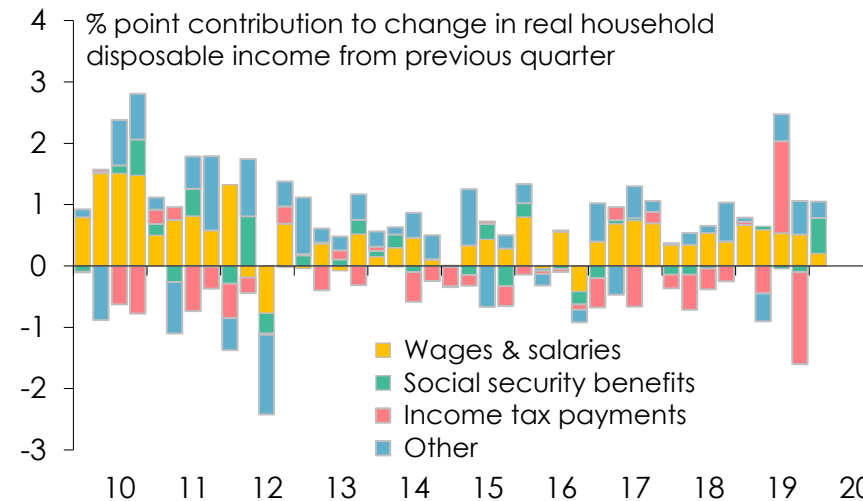
Australia

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

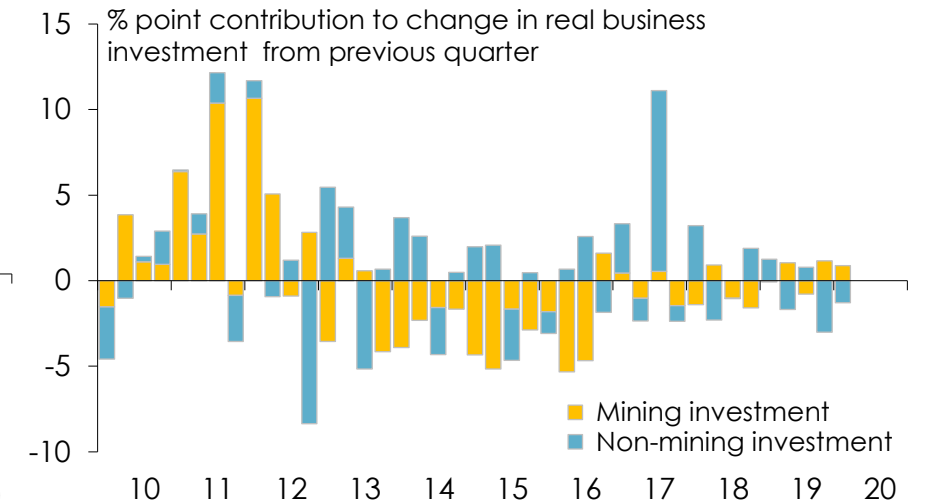
Quarterly change in real GDP



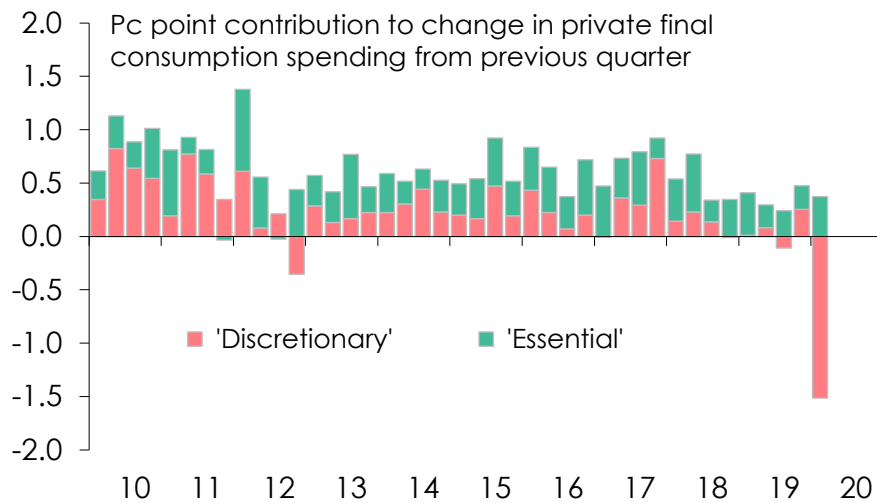
Household disposable income



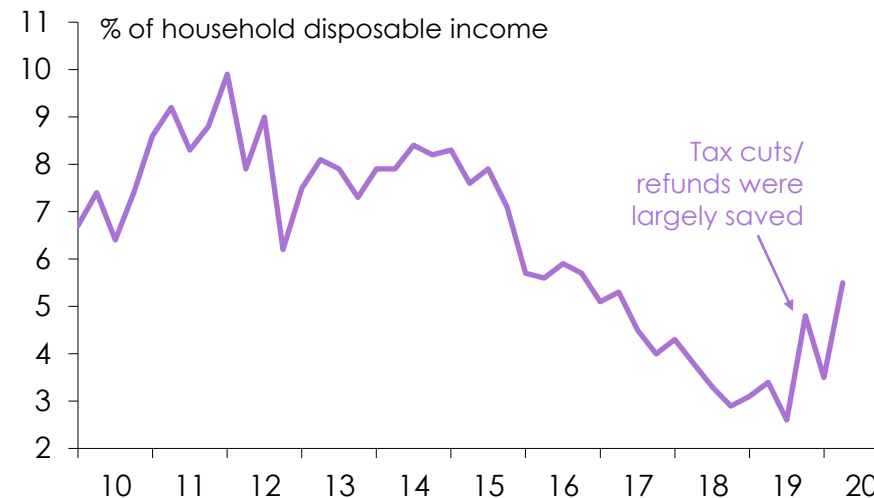
Business investment expenditure



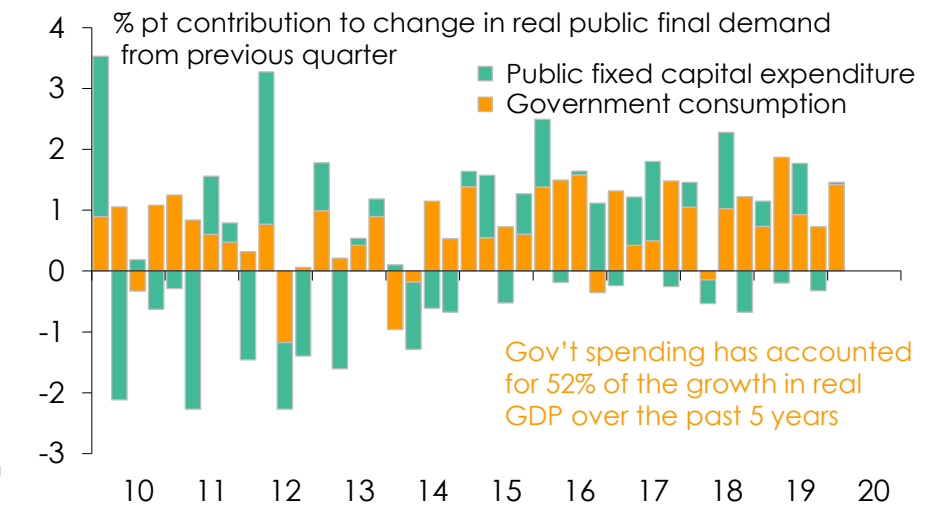
Household consumption expenditure



Household saving rate



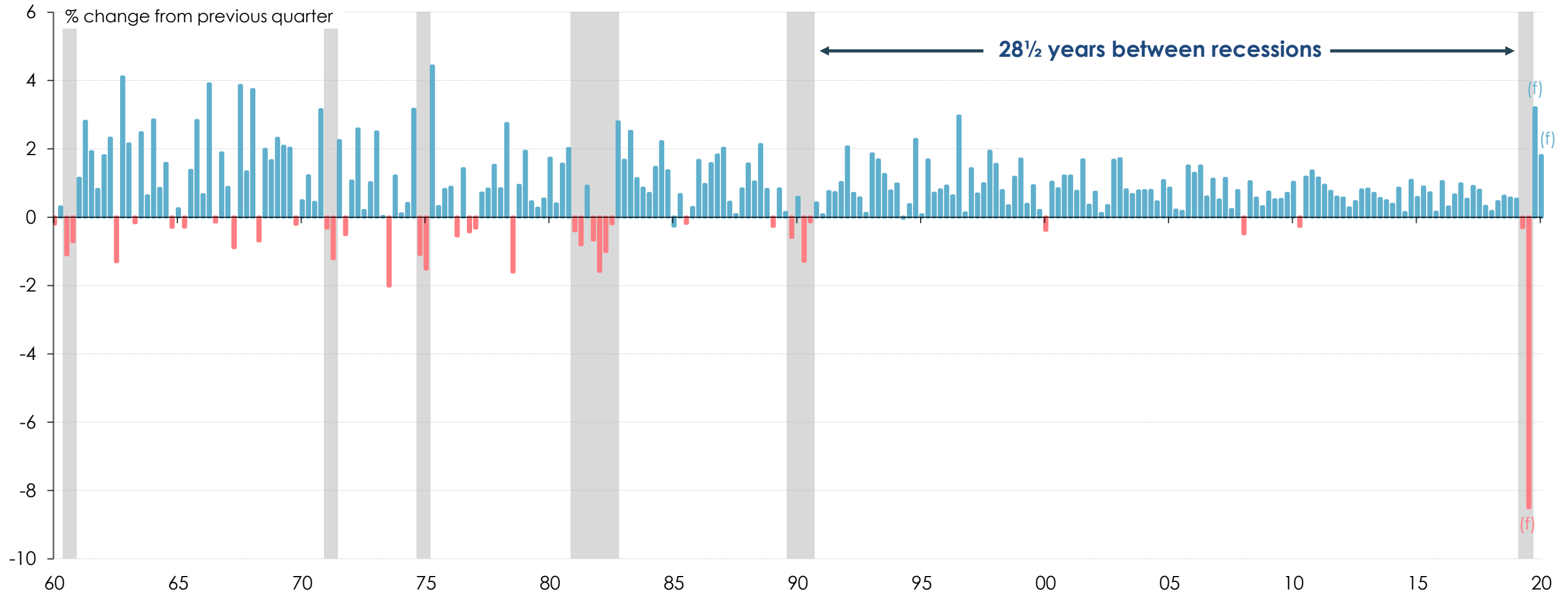
Public expenditure



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. 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

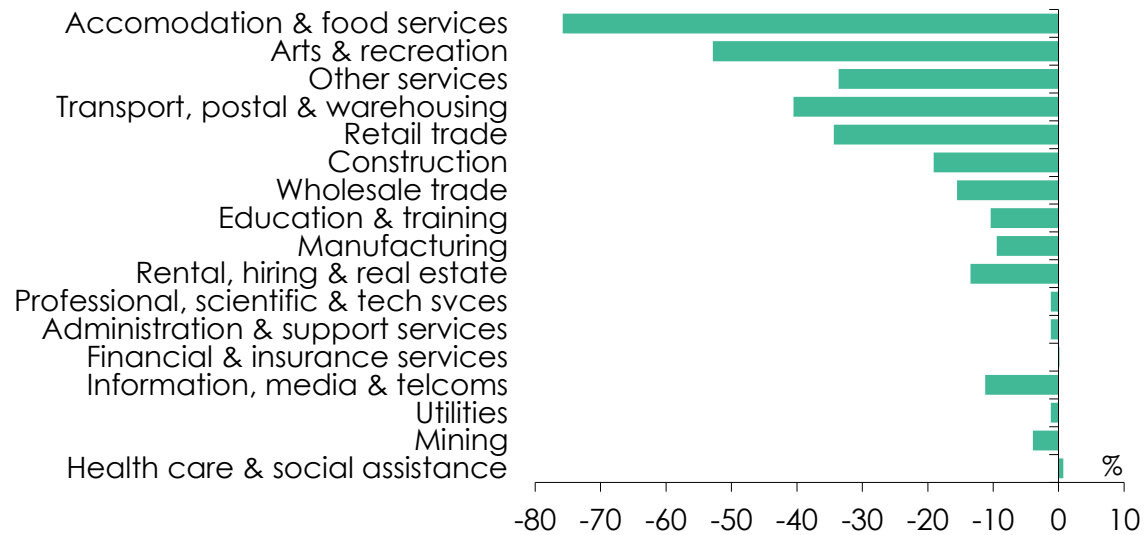
Quarterly growth in Australian real GDP, 1960-2020



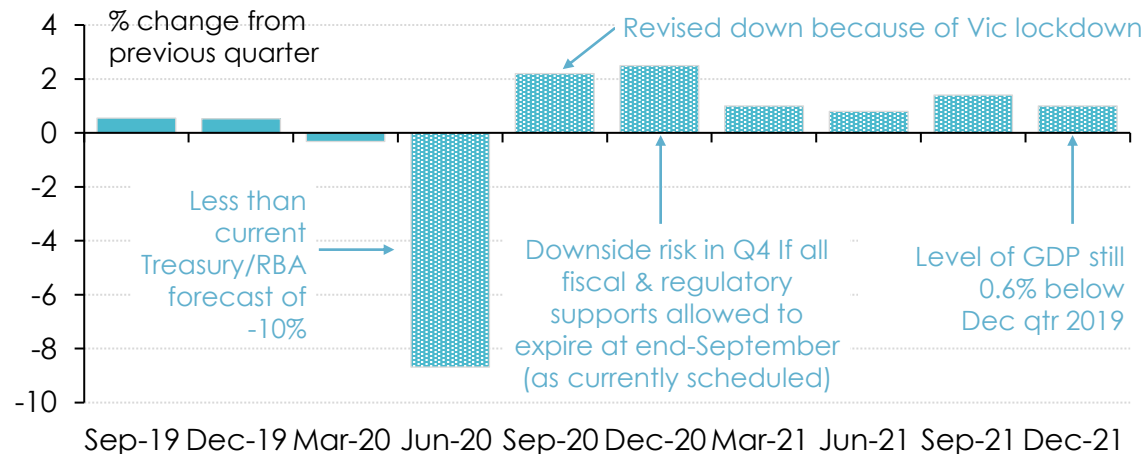
Note: Shaded areas denote recessions. Source: ABS.

Real GDP is likely to have shrunk by 8-9% in the June quarter but should increase in the September quarter – some risks in the December quarter

Projected peak-to-trough decline in output, by sector



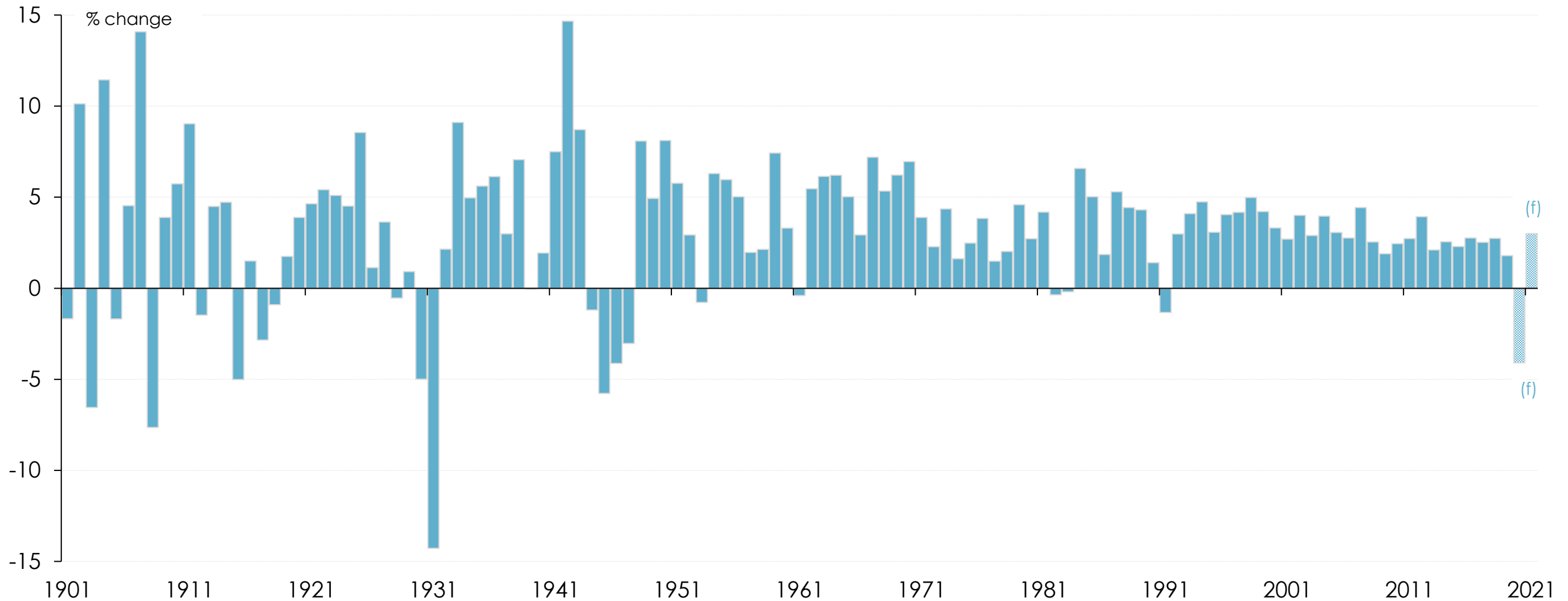
Projected quarterly real GDP profile



- ❑ GDP forecasts have been constructed using estimates of notional monthly changes in gross value added by industry, rather than the conventional approach of quarterly changes in the major expenditure components of GDP (consumption, housing & business investment, government spending, net exports etc)
- ❑ When the lock-down began, governments were indicating that restrictions would likely remain in force until the end of September
- ❑ On that basis, real GDP seemed likely to decline by at least 12 % between Dec qtr 2019 and the probable trough in Sep qtr 2020
- ❑ However with restrictions being eased (gradually) from mid-May onwards, the peak-to-trough decline in GDP may be 9% or less, with positive growth resuming in the Sep qtr
- ❑ The renewed lockdown in Greater Melbourne will likely detract 1-1¼ pc pts from national GDP growth in the Sep qtr – not enough to turn it into a 3rd consecutive negative quarter – but there will presumably be some mechanical boost to Dec qtr growth
- ❑ Assuming the end-September ‘fiscal cliff’ is tempered, the forecast now envisages year-average growth of about -¾% for FY 2019-20 and -2% for FY 2020-21; or -4½% for CY2020 and +3¼% for CY 2021
- ❑ Even with an earlier easing of restrictions, a ‘V-shaped’ recovery looks unlikely – and some additional fiscal stimulus is likely to be required to support the recovery that will occur

The contraction in real GDP in 2020 will still be the largest since the Great Depression

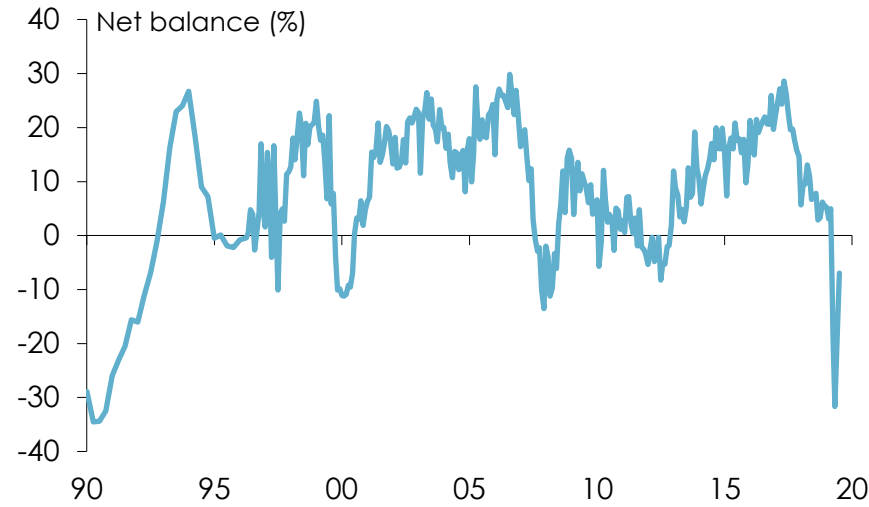
Australian real GDP growth since 1901



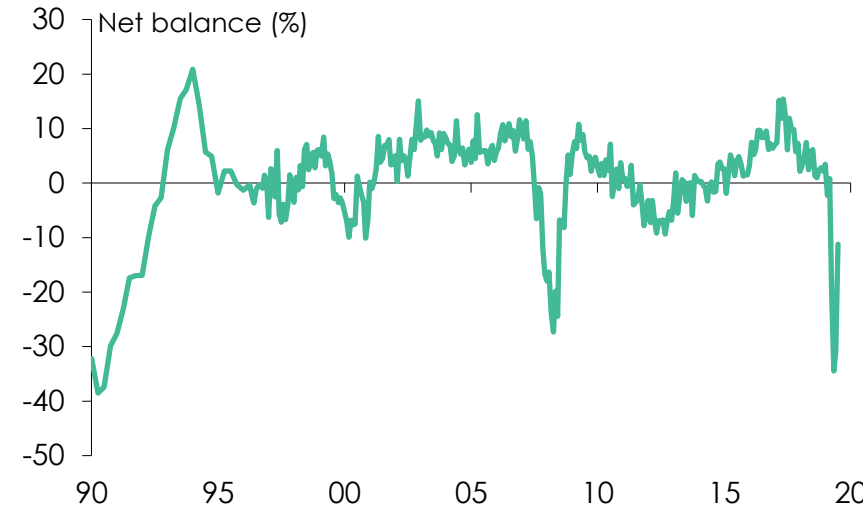
Note: From 1901 to 1960 data are for years ended 30th June; from 1961 onwards data are for years ended 31st December. Sources: ANU Source Papers in Economic History; ABS; Corinna.

All of the components of the NAB monthly survey improved substantially in June, following an initial bounce in May, but they remain negative

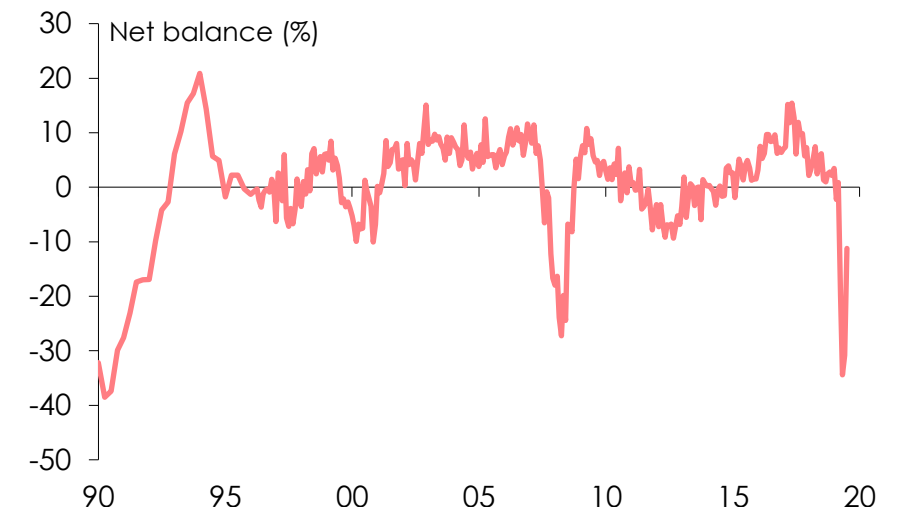
Trading conditions



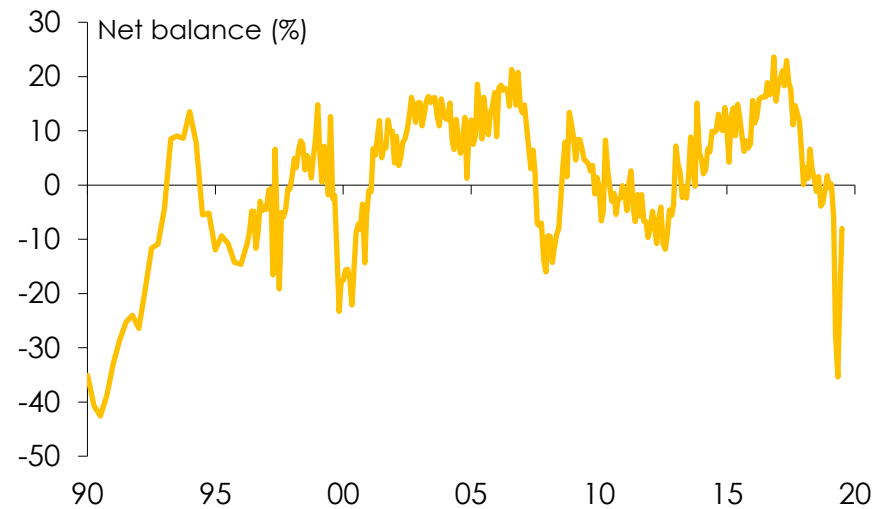
Forward orders



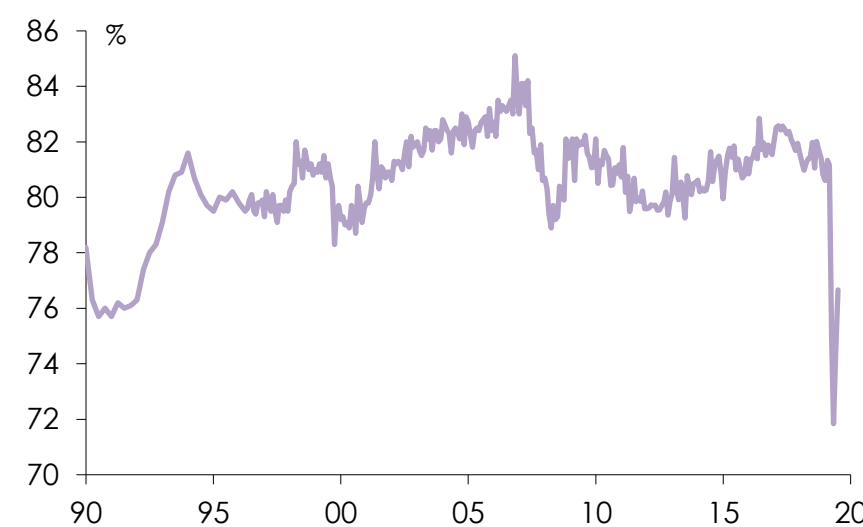
Employee hiring intentions



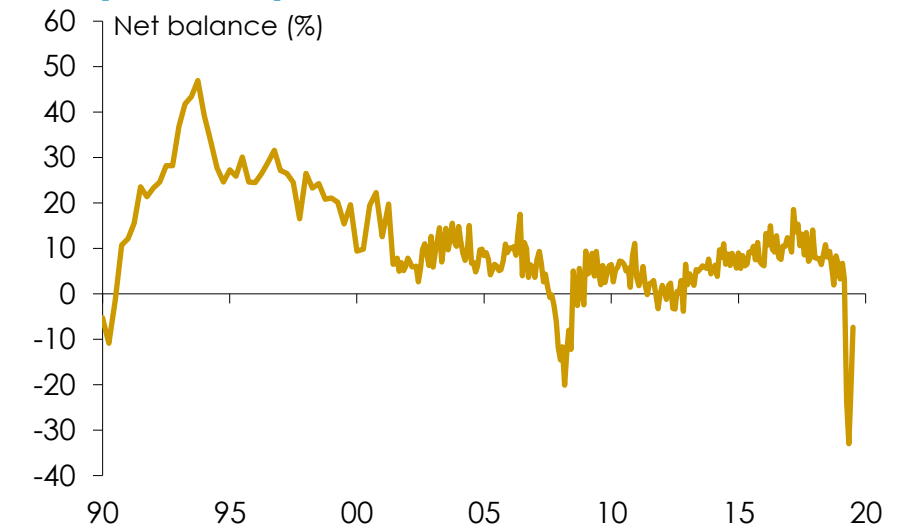
Profitability



Capacity utilization



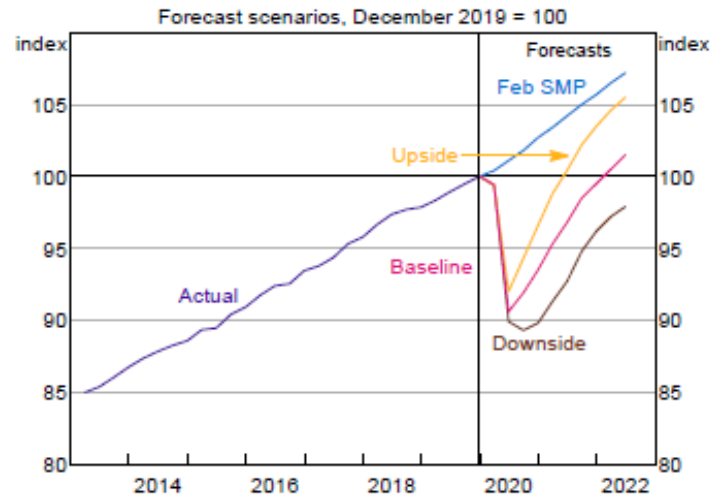
Capital expenditure intentions



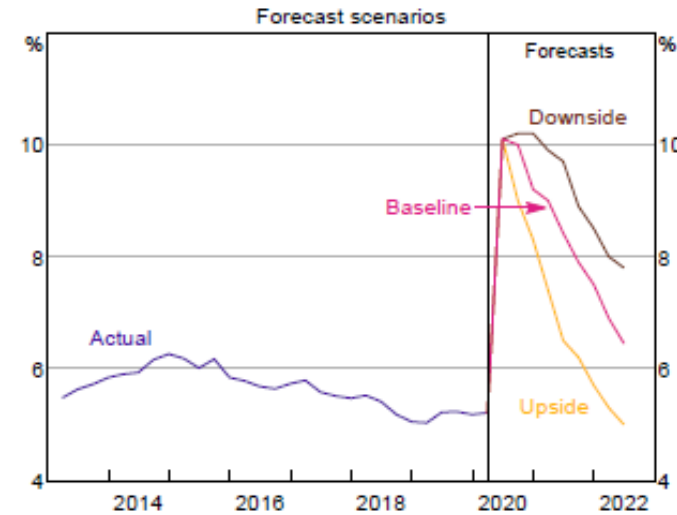
Note: Quarterly data up to March 1987 (May 2002 for capex intentions), monthly thereafter (latest data June 2020). Source: National Australia Bank (July survey results will be released on 12th August).

The RBA's most recent Monetary Policy Statement presented three alternative scenarios

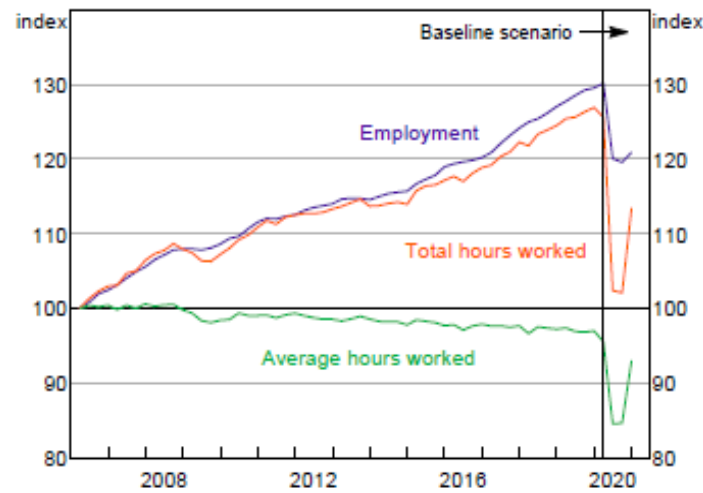
GDP



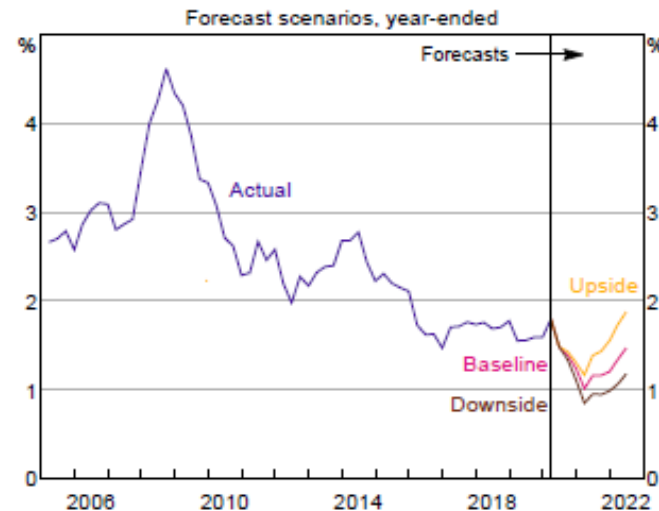
Unemployment



Employment



'Underlying' inflation



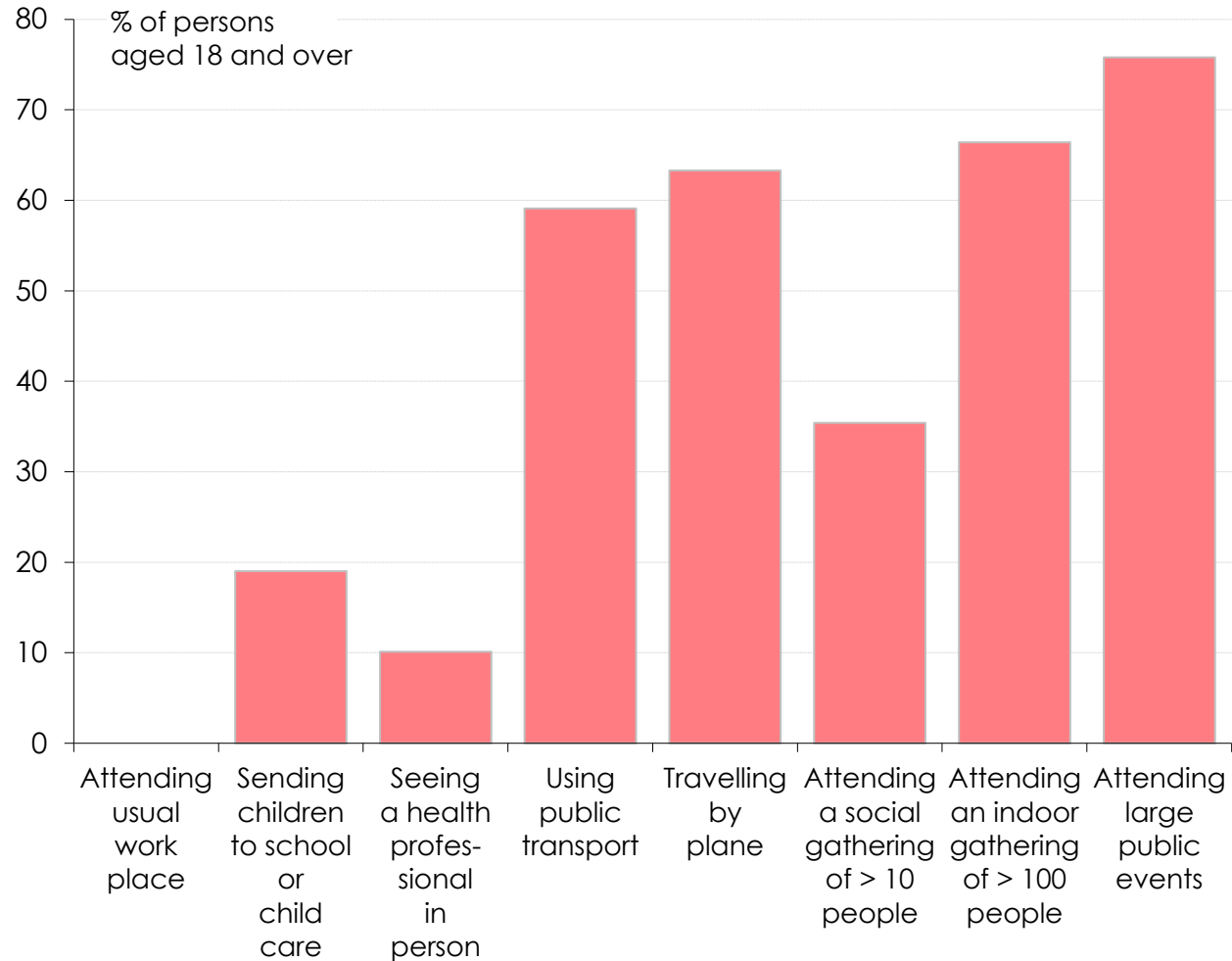
- ❑ The RBA's 'baseline' scenario assumes that most 'social distancing' restrictions are lifted by the end of the September quarter, apart from those on large public gatherings and events, and international borders (which aren't opened until early 2021)
- ❑ In this scenario real GDP declines by 5% in 2020 but rebounds by 4% in 2021, while unemployment peaks at around 10% in the current (June quarter) and declines to 6½% by Dec qtr 2021
- ❑ The RBA's 'upside' scenario assumes most restrictions are phased out over coming months (which is more in line with the Government's "Three Step Plan" announced on 9th May)
- ❑ Under this scenario most of the initial decline in real GDP is reversed by mid-2021, while unemployment could be back to 5¼% by mid-2022
- ❑ The 'downside' scenario assumes restrictions are retained for longer or need to be reimposed
- ❑ In this scenario GDP would remain close to its trough through end-2020, and unemployment would remain close to 10% until 'well into 2021'

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

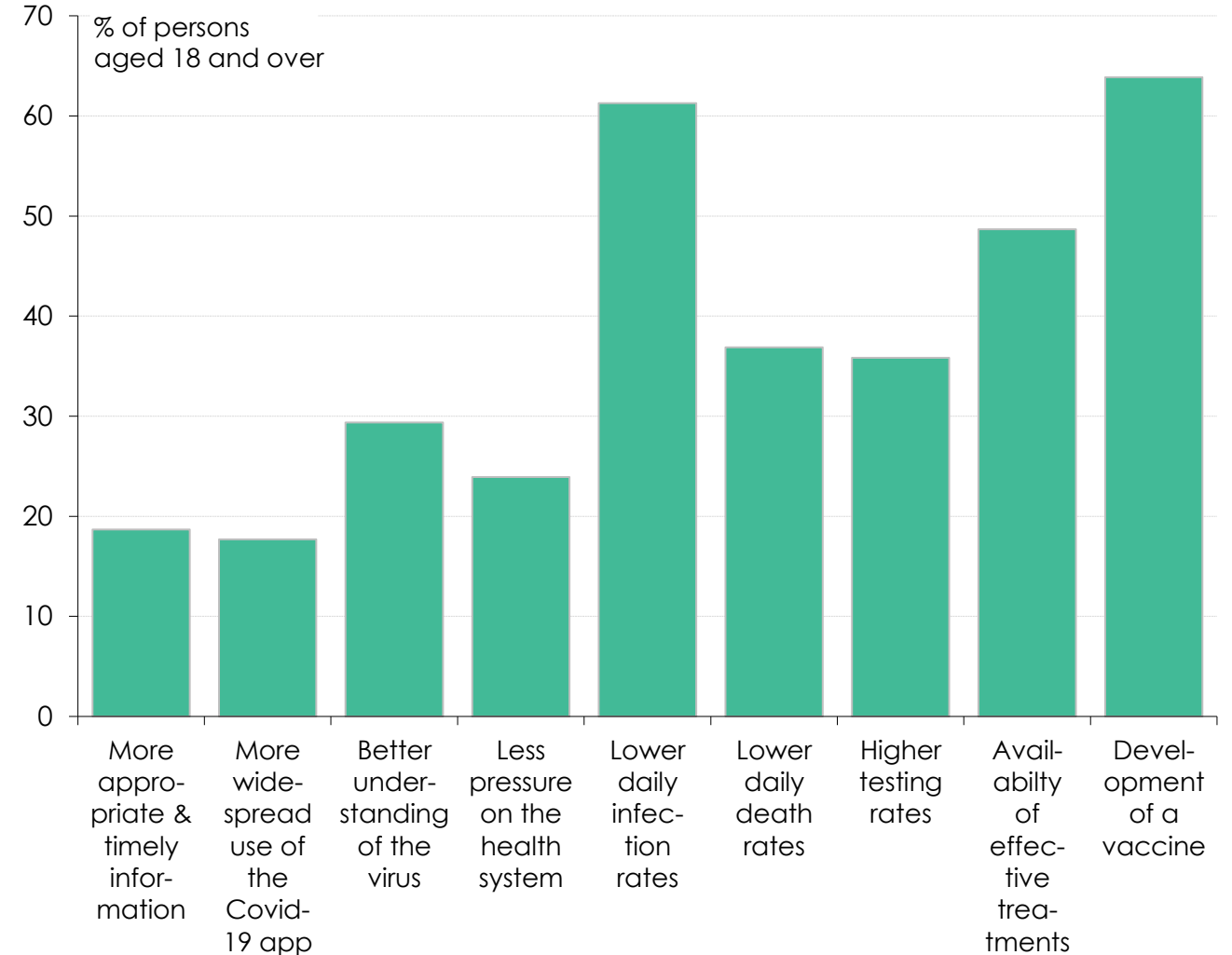
- ❑ **'Social distancing' requirements will be relaxed gradually rather than 'all at once'**
 - new health and safety regulations will likely limit the number of employees and customers who can be 'on premises' (which may make it uneconomic for some businesses to re-open until restrictions are relaxed)
 - and many people may remain wary of exercising all of their newly-regained 'freedoms'

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



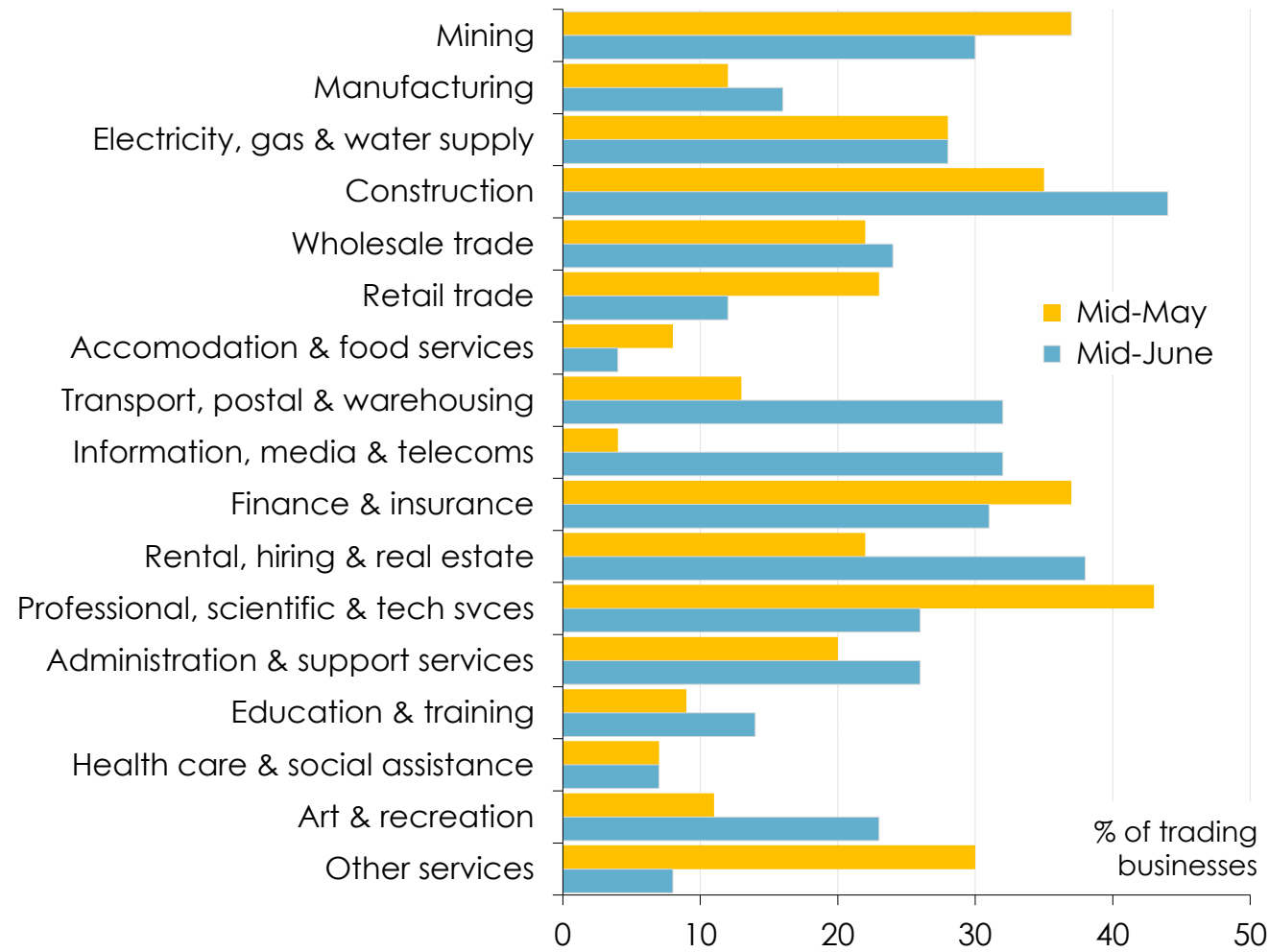
Source: ABS, Household Impacts of Covid-19 Survey, 26th-29th May (published 15th June).

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

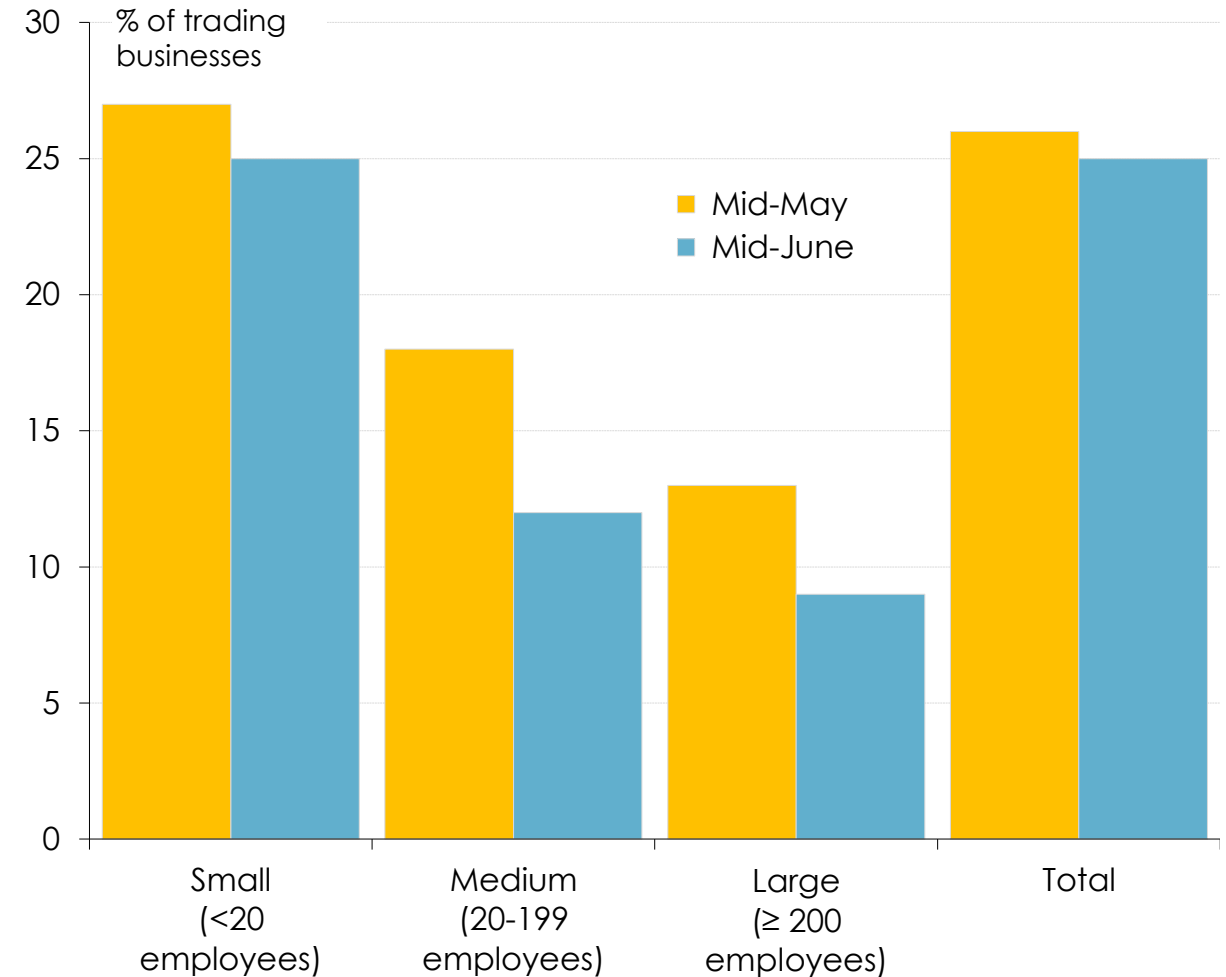
- ❑ **‘Social distancing’ requirements will be relaxed gradually rather than ‘all at once’**
 - new health and safety regulations will likely limit the number of employees and customers who can be ‘on premises’ (which may make it uneconomic for some businesses to re-open until restrictions are relaxed)
 - and many people may remain wary of exercising all of their newly-regained ‘freedoms’
- ❑ **‘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
- ❑ **There is some risk of a ‘setback’ when government support programs come to an end (nearly all of them at the end of September), or if restrictions on the movement or gathering of people have to be re-imposed**
- ❑ **International borders (except perhaps 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)**

Three-quarters of businesses are still operating under 'modified conditions' – with fewer large business operating as 'normal' than small ones

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



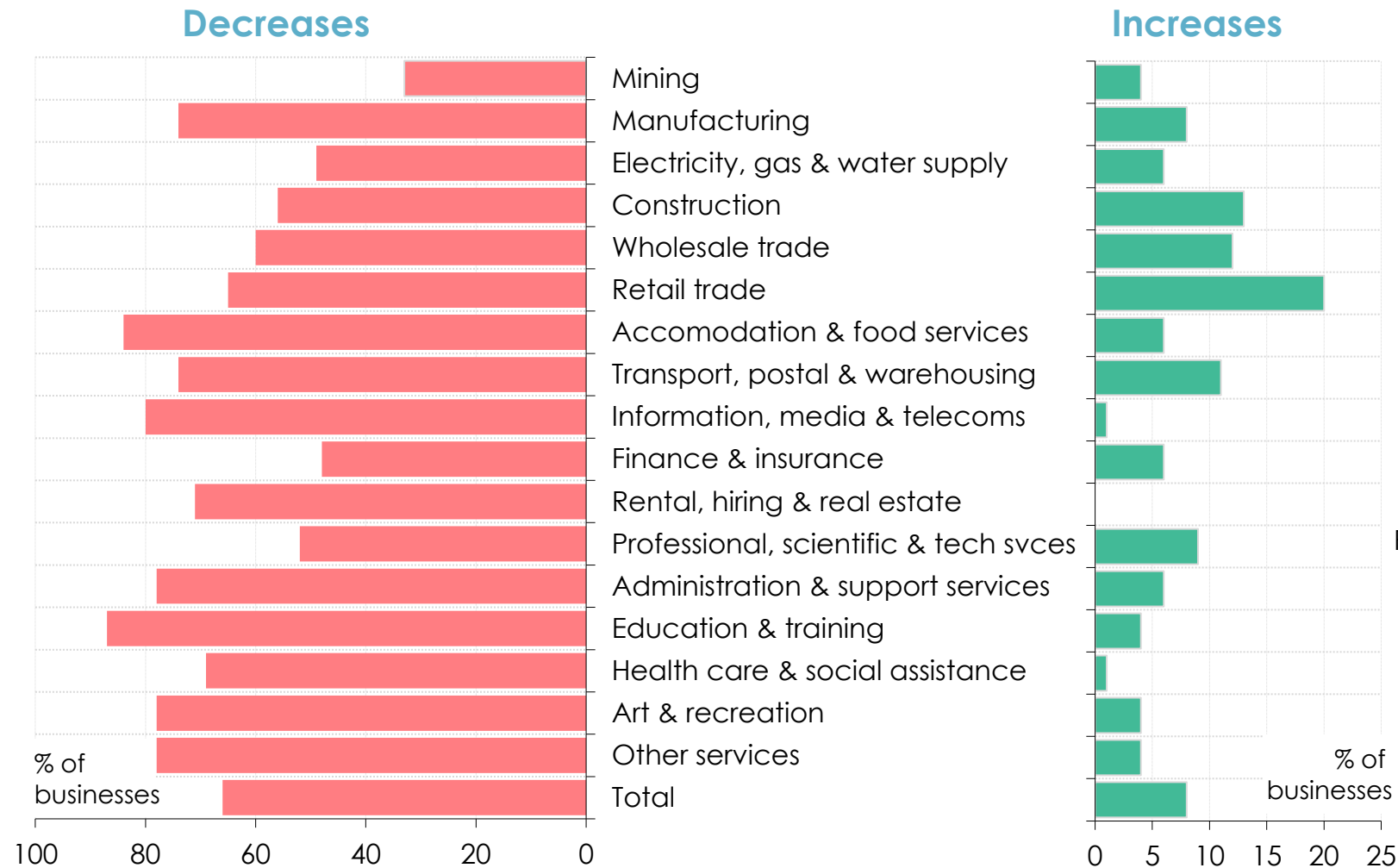
Proportion of 'trading businesses' which are operating 'as normal' – by size



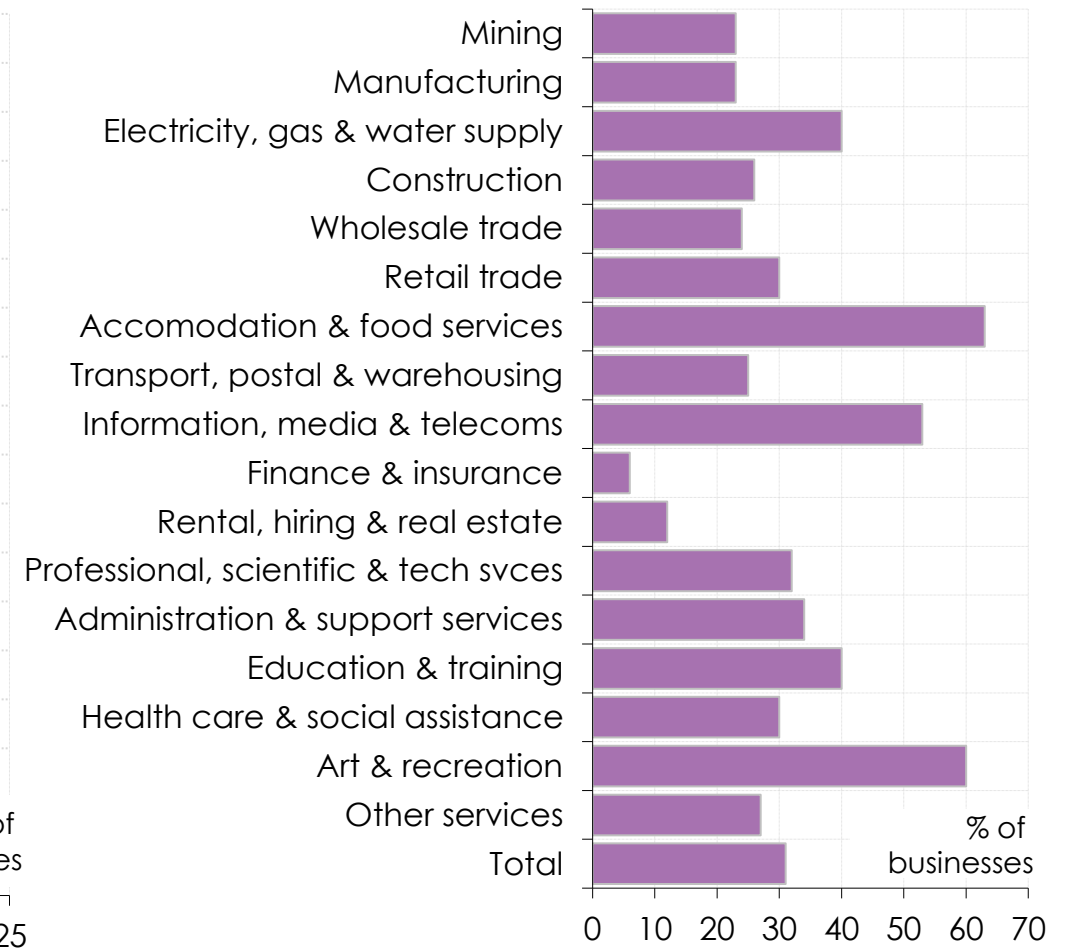
Source: ABS Business Indicators, Business Impacts of COVID-19, May 2020 (based on survey conducted between 13th and 22nd May) and June 2020 (based on survey conducted between 10th and 17th June).

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



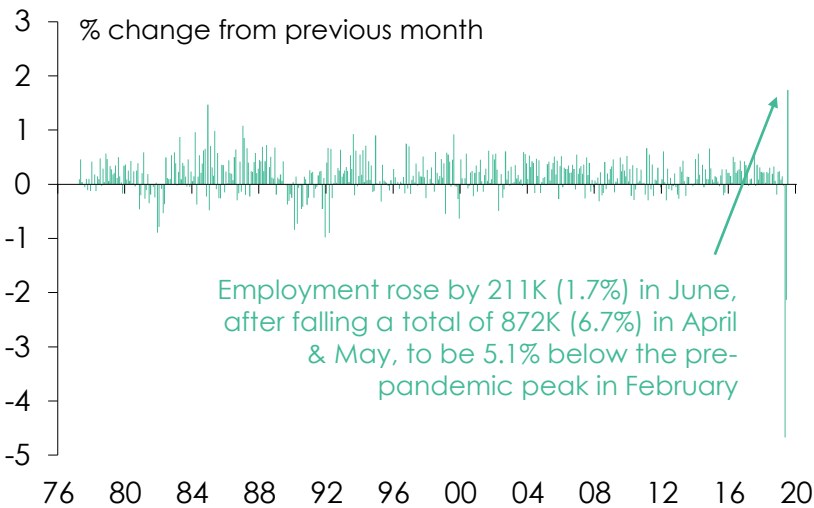
Businesses with revenue decreases of 50% or more in June cf. June last year, as a pc of businesses with lower revenue



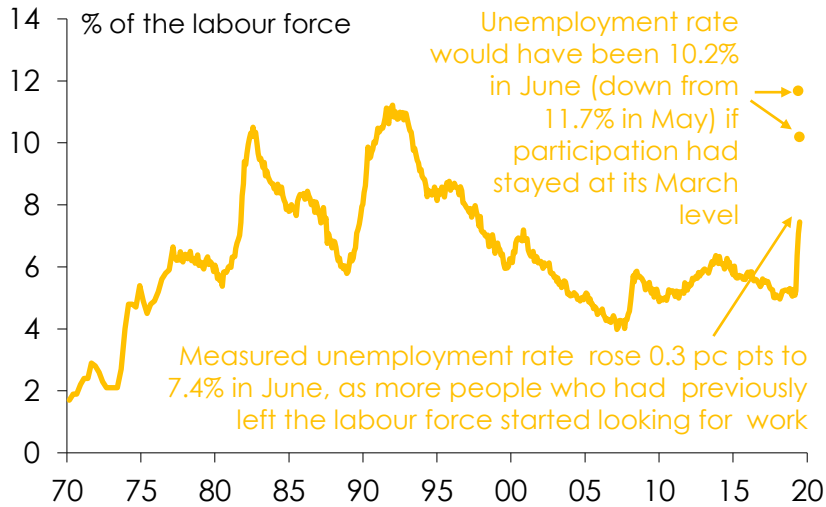
Source: ABS Business Indicators, Business Impacts of COVID-19, June 2020 (based on survey conducted between 10th and 17th June).

211,000 (24%) of those who lost their jobs in March-April are now back at work, while another 70,000 started looking for work

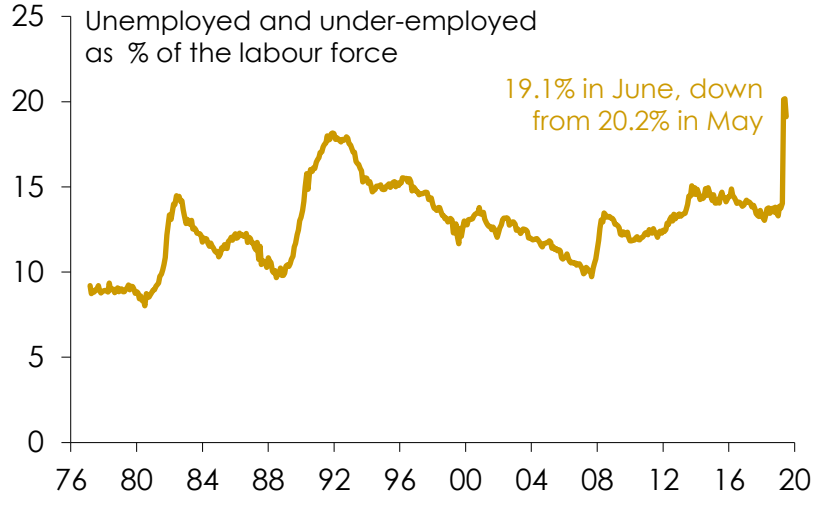
Employment



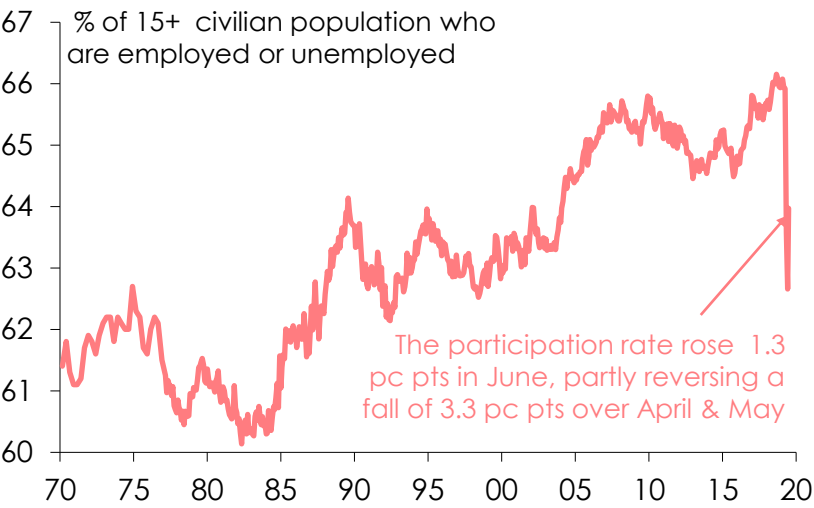
Unemployment rate



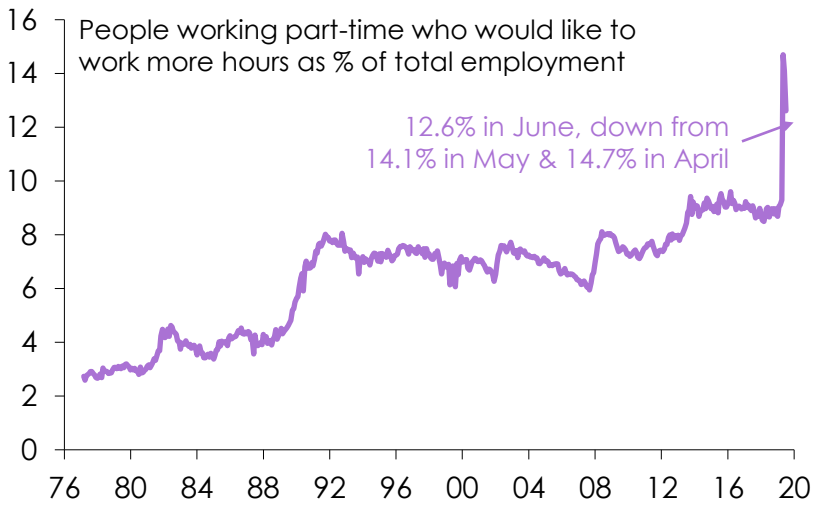
'Under-utilization' rate



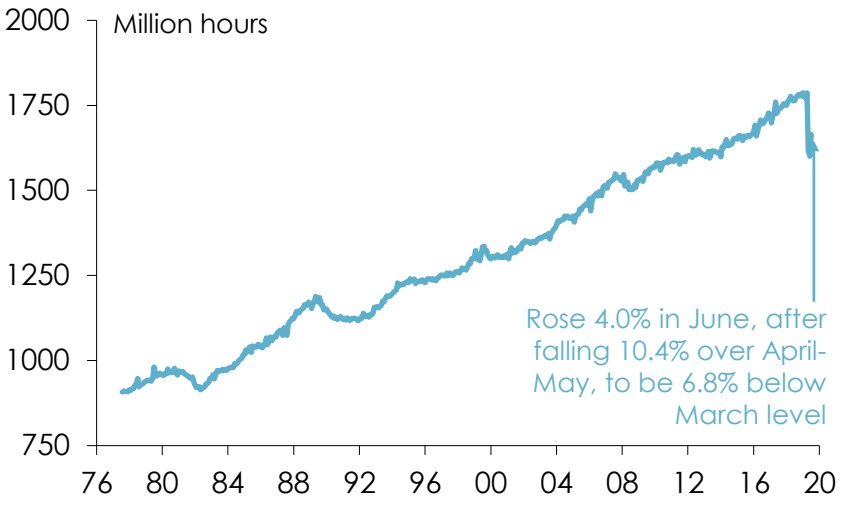
Labour force participation rate



Under-employment ratio



Total hours worked



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. July data will be released on 13th August.

The June unemployment rate would have been 11½% if people working zero hours and those who dropped out of the labour force were counted

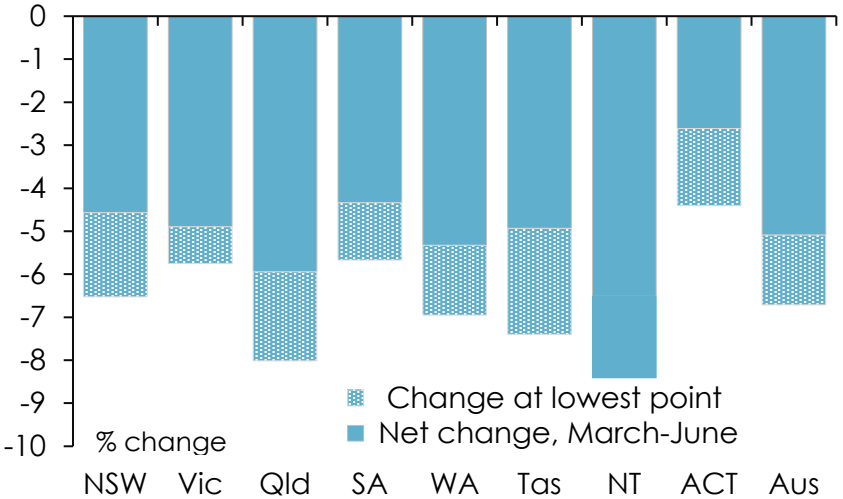
Alternative measures of unemployment



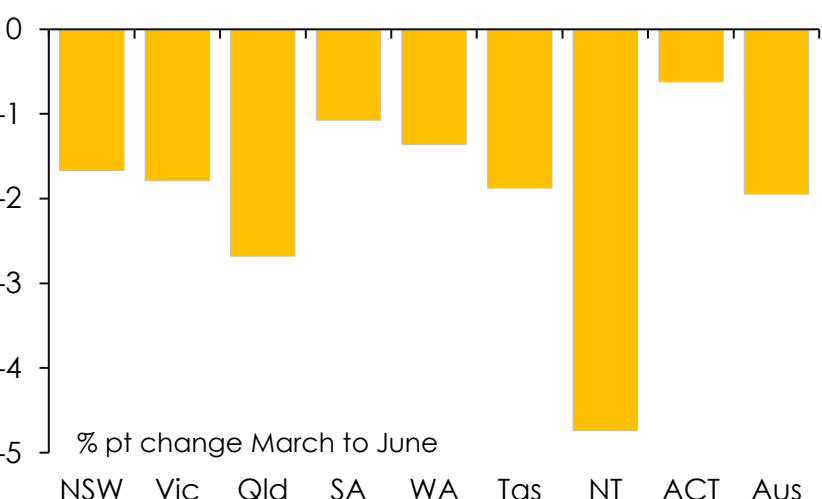
- ❑ The Government's JobKeeper program pays eligible employers a subsidy of \$1500 per fortnight for each eligible employee kept on the payroll between 30 March and 27 September
- ❑ Eligible employers are those with
 - annual turnover of <\$1bn whose turnover has fallen by >30%
 - annual turnover of >\$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 June would have been 11.5% - down from 14.0% in May and 14.9% in April

Tasmania, Queensland & NSW had the strongest recoveries in employment in June, while the NT has continued to shed jobs

Employment



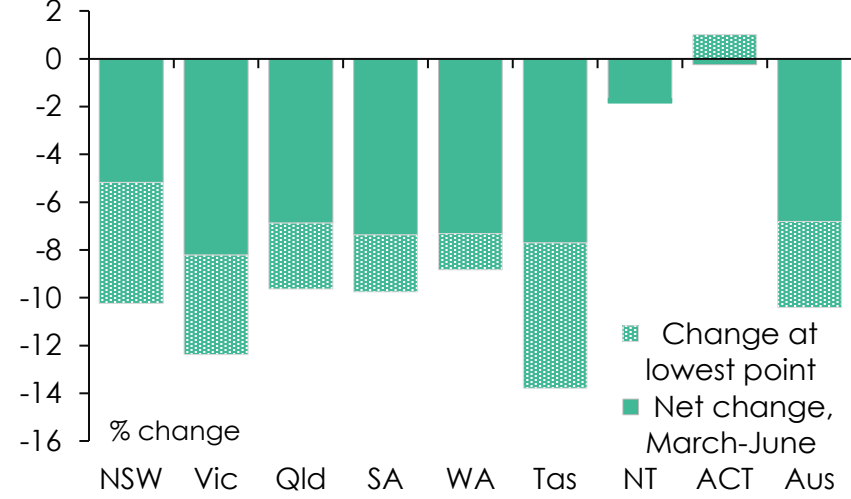
Labour force participation rate



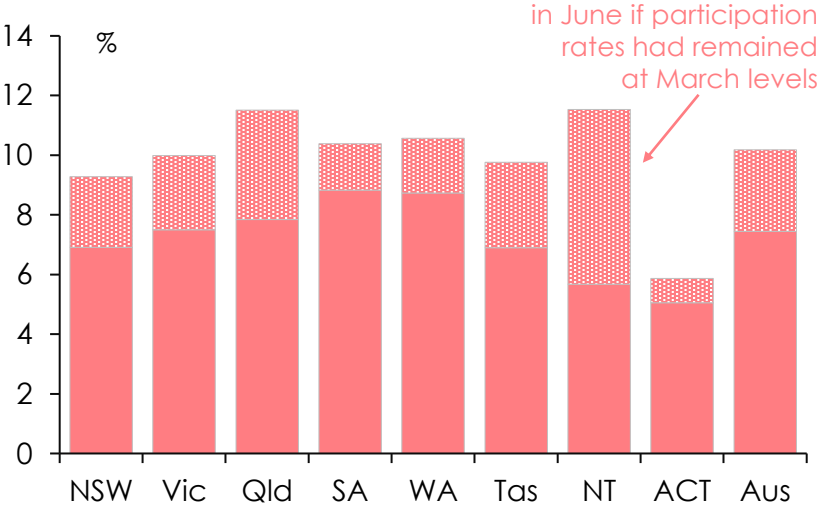
Under-employment ratio



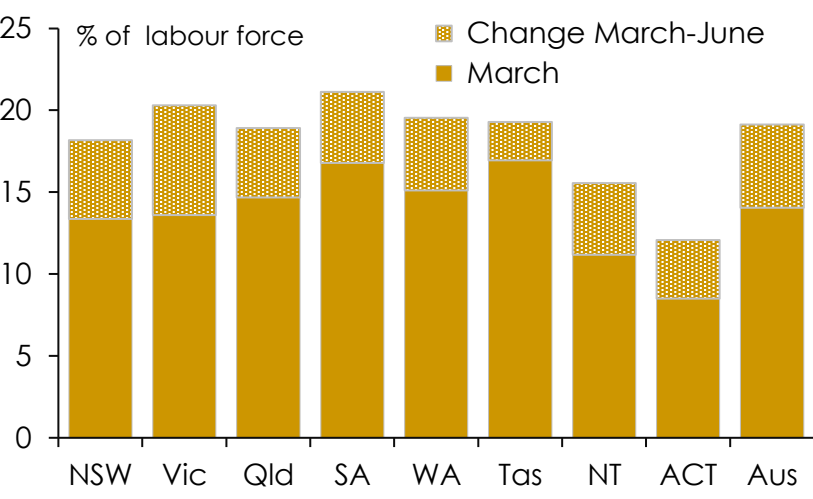
Total hours worked



Unemployment rate



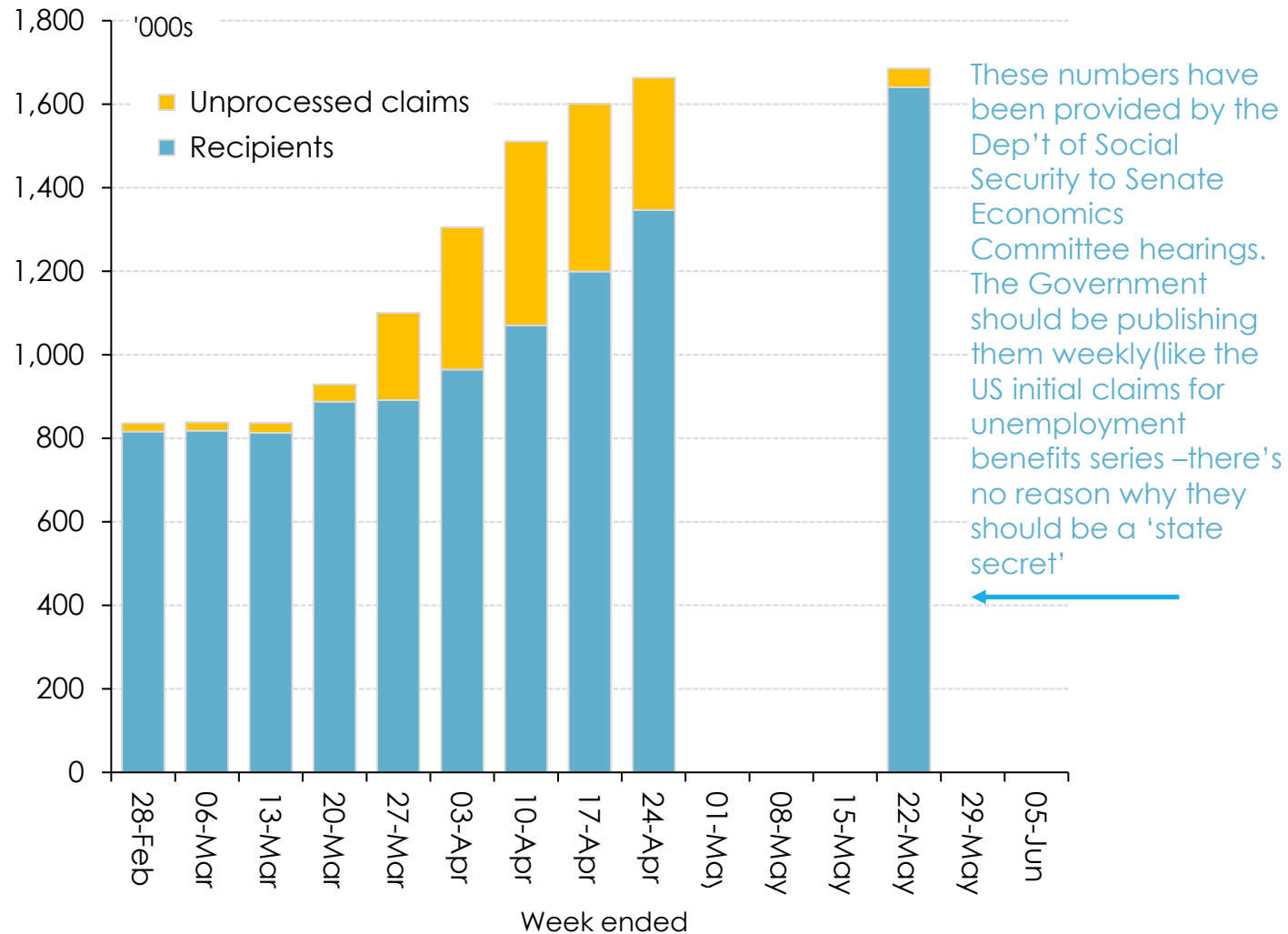
'Under-utilization' rate



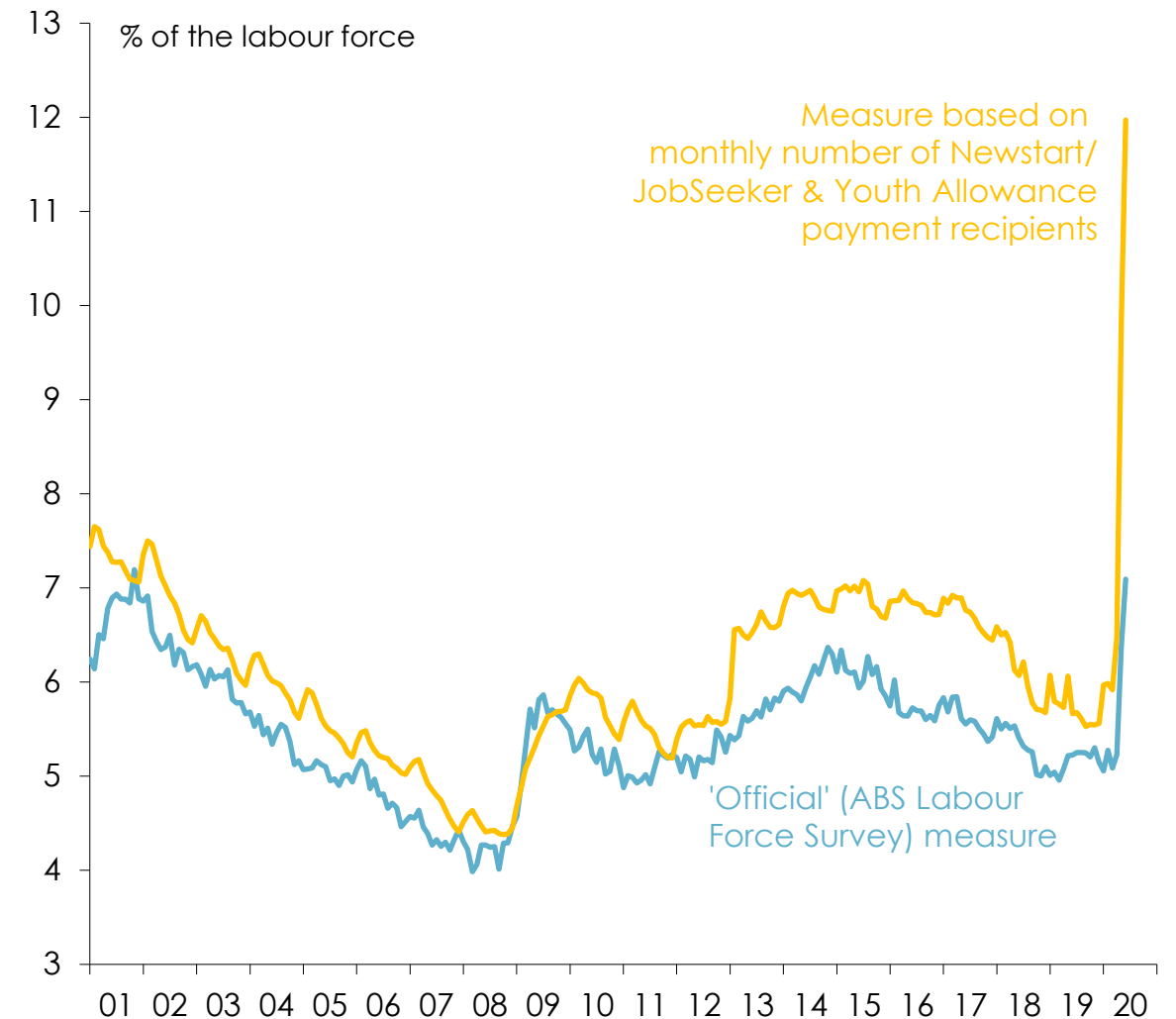
Note: The 'under-employment ratio' is the percentage of employed persons who are working fewer hours than they are willing and able to work. The 'under-utilization rate' is the proportion of the labour force who are unemployed or underemployed. Source: ABS (July data will be released this Thursday, 13th August).

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

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



Alternative measures of the 'unemployment rate'

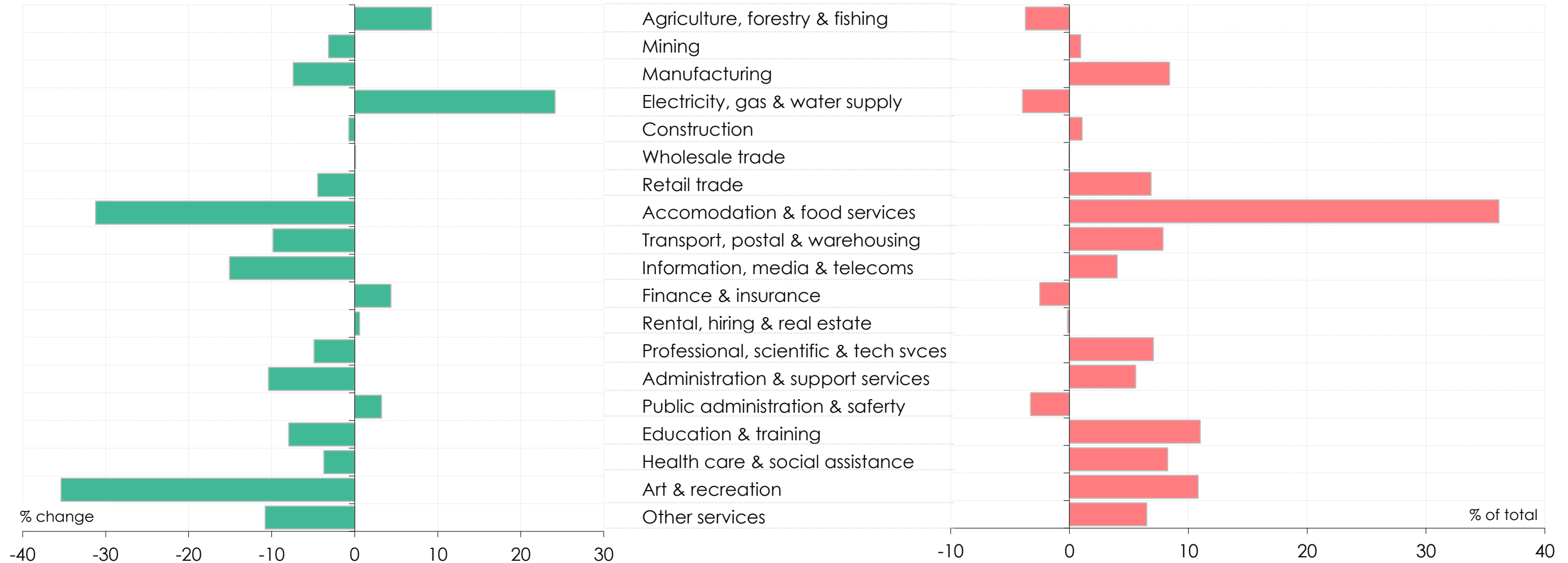


Sources: Department of Social Security; ABS. Note: Youth Allowance recipients excludes full-time students. Number of Newstart/JobSeeker and Youth Allowance recipients is not seasonally adjusted.

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

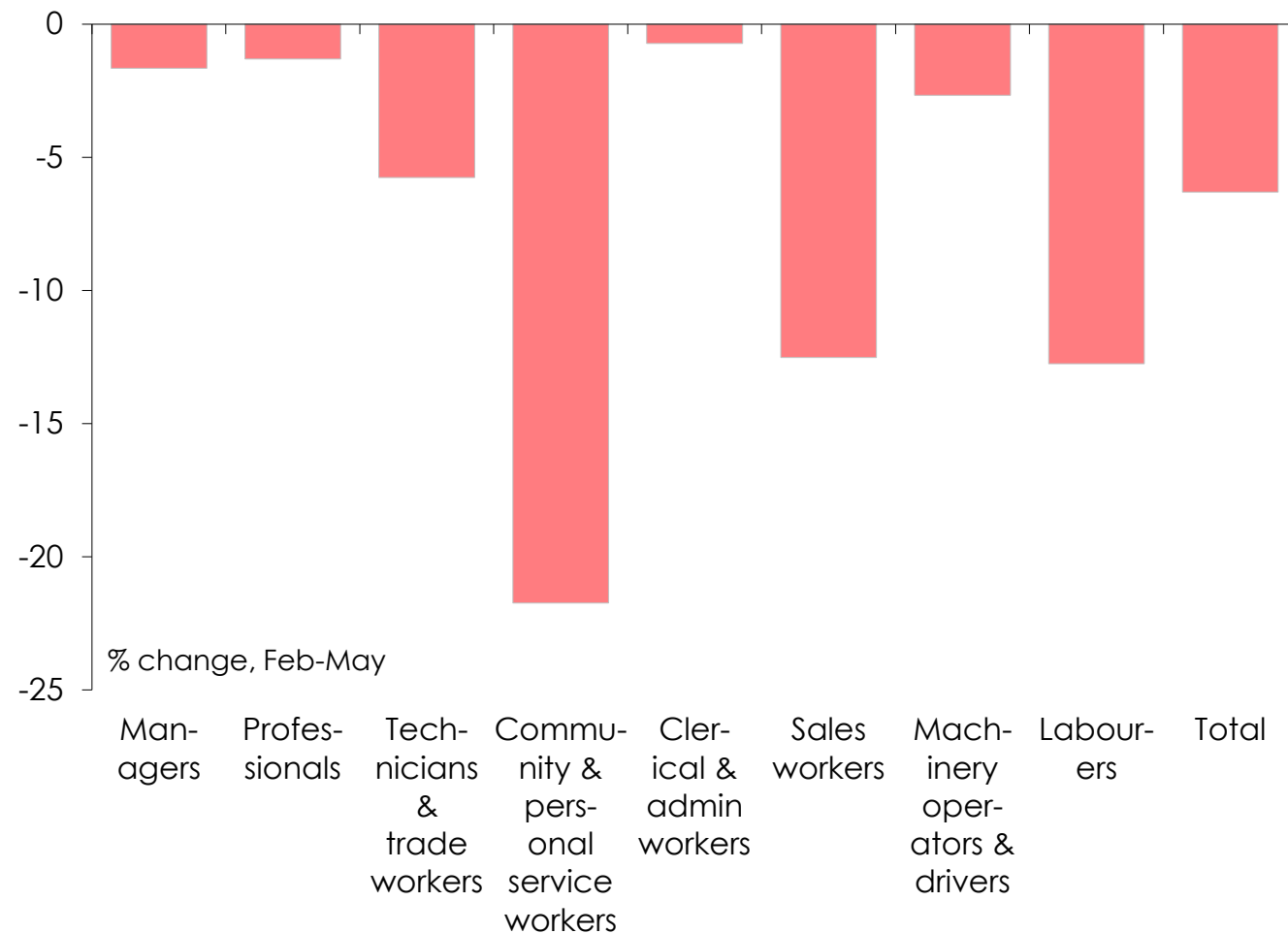


Note: The accommodation & food services, education & training, and arts & recreation services sectors accounted for 15% of total employment in February.

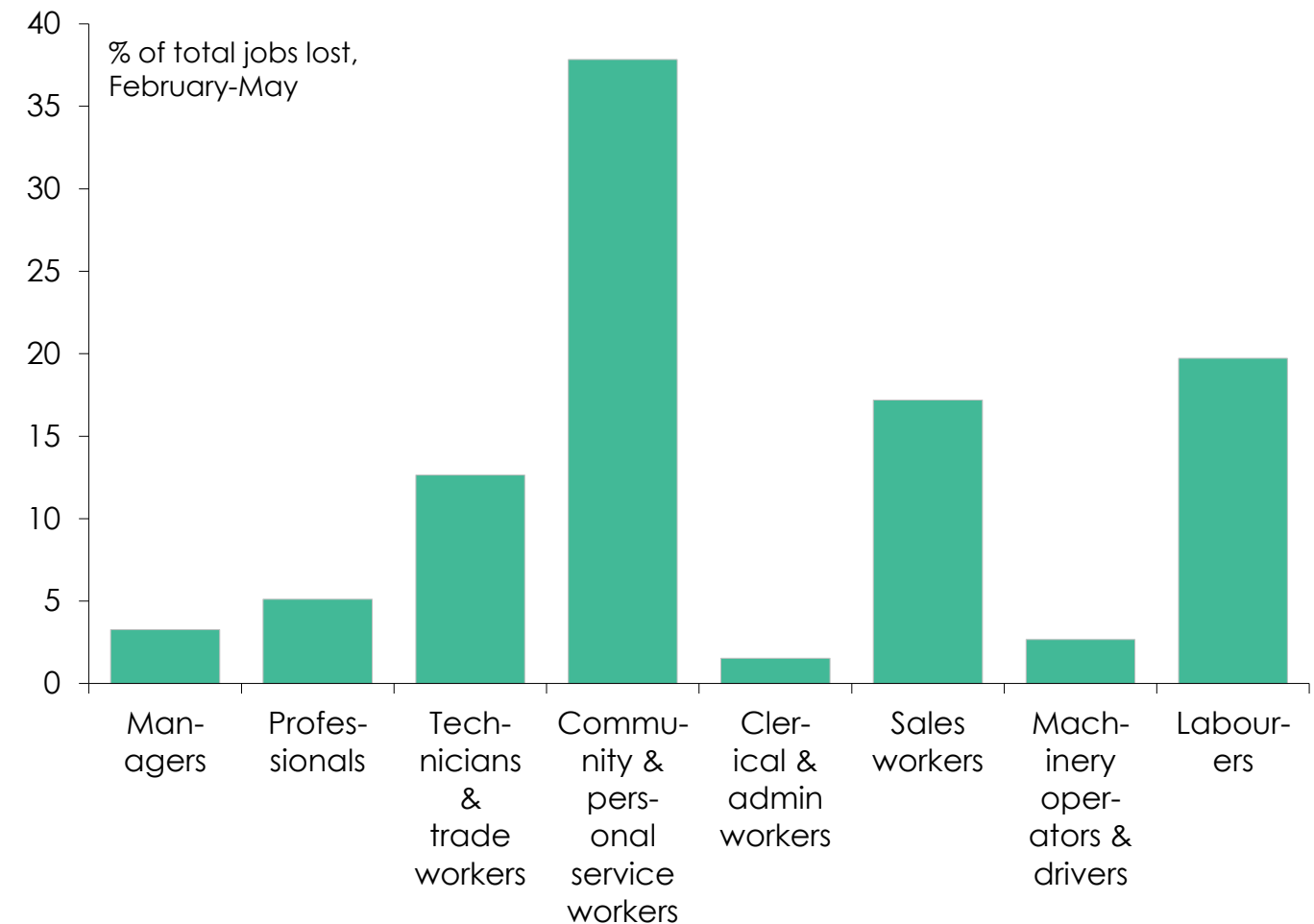
Source: ABS, Detailed quarterly labour force data, May 2020. August data will be released on 24th September.

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 have borne 53% of the job losses since February, partly because they tend to 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

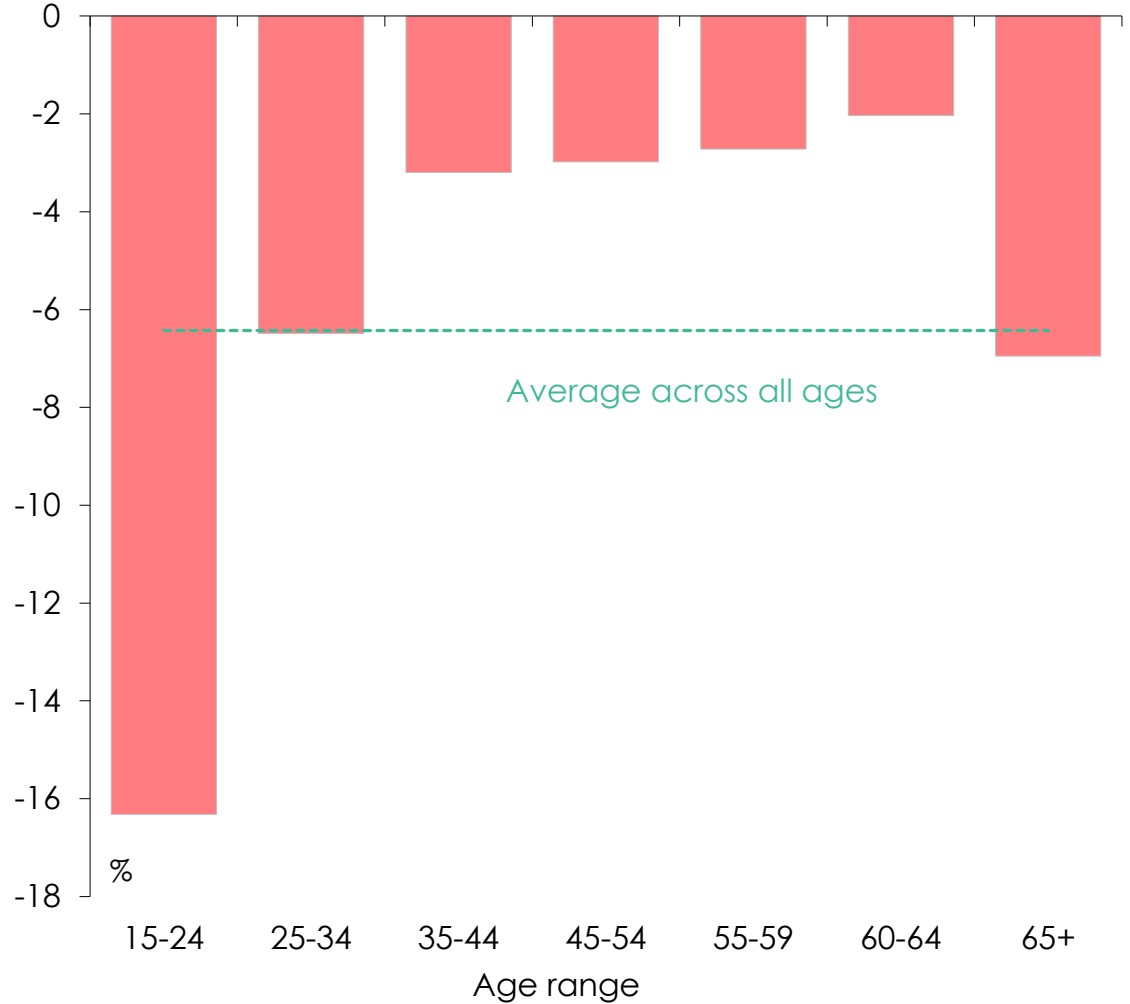


Note: Data depicted in these charts are not seasonally adjust. "nm" = "not meaningful", because employment of women in the industry thus marked either increased between February and May 2020; or fell despite total employment in that industry rising between February and May.

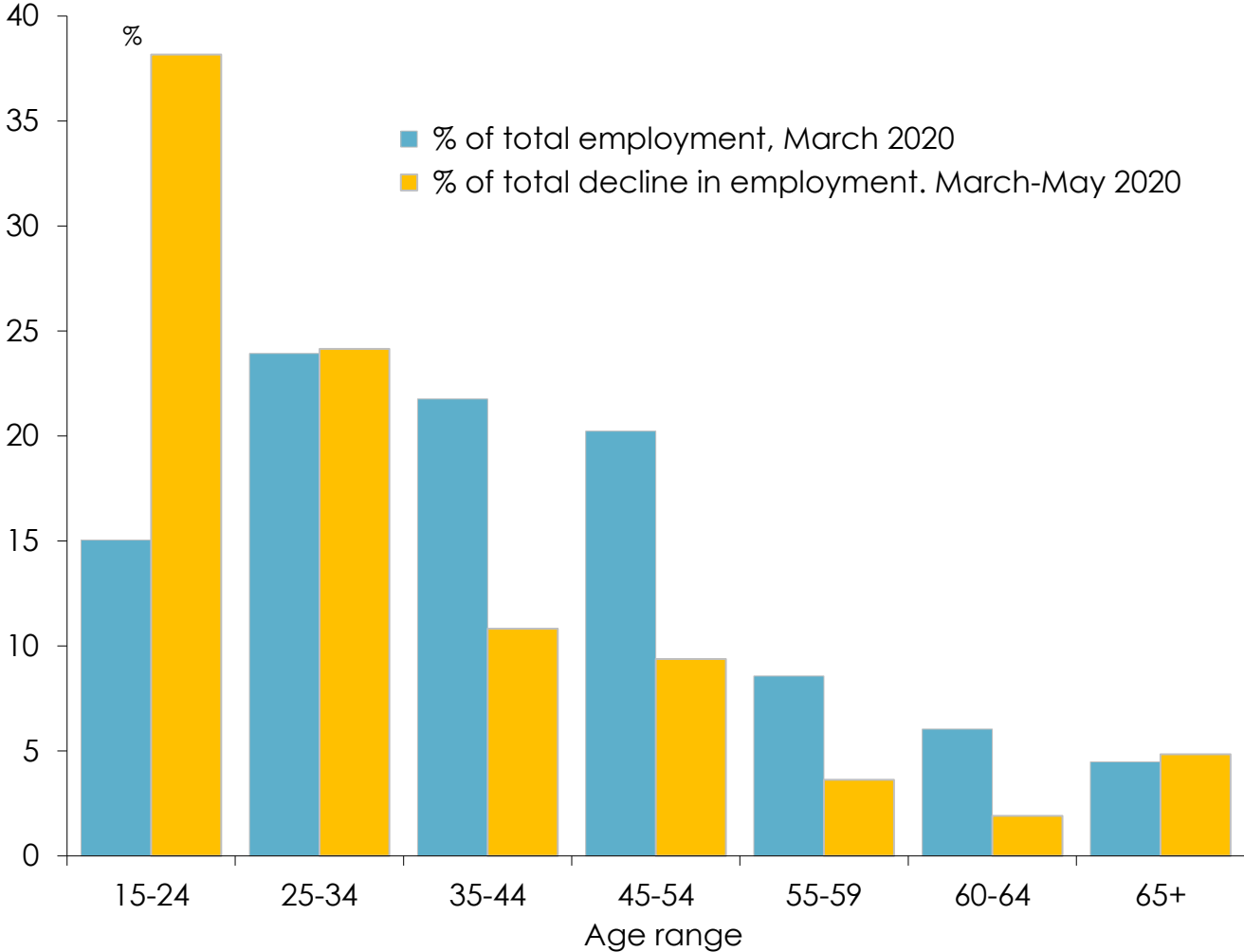
Source: ABS, Detailed quarterly labour force data, May 2020. August data will be released on 24th September.

People aged 15-24 accounted for 15% of total pre-pandemic employment but have experienced 38% of the jobs lost since March

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



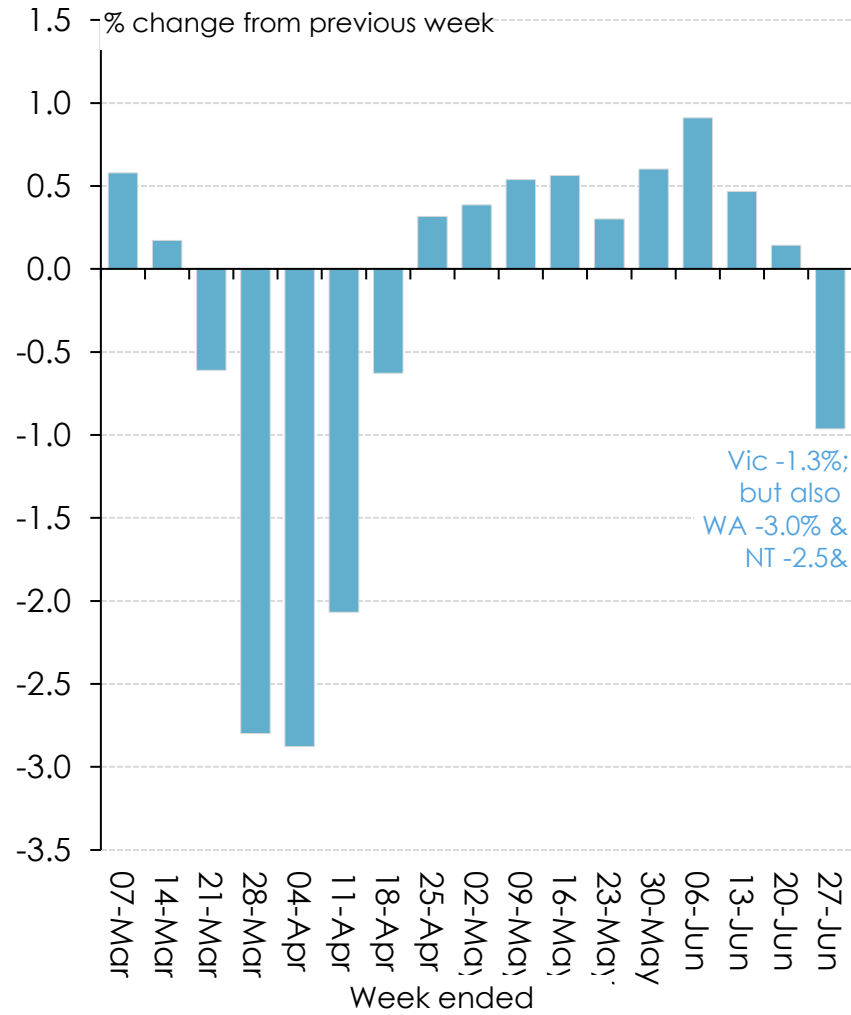
Share of total job losses between March and May 2020 and share of total employment in March, by age group



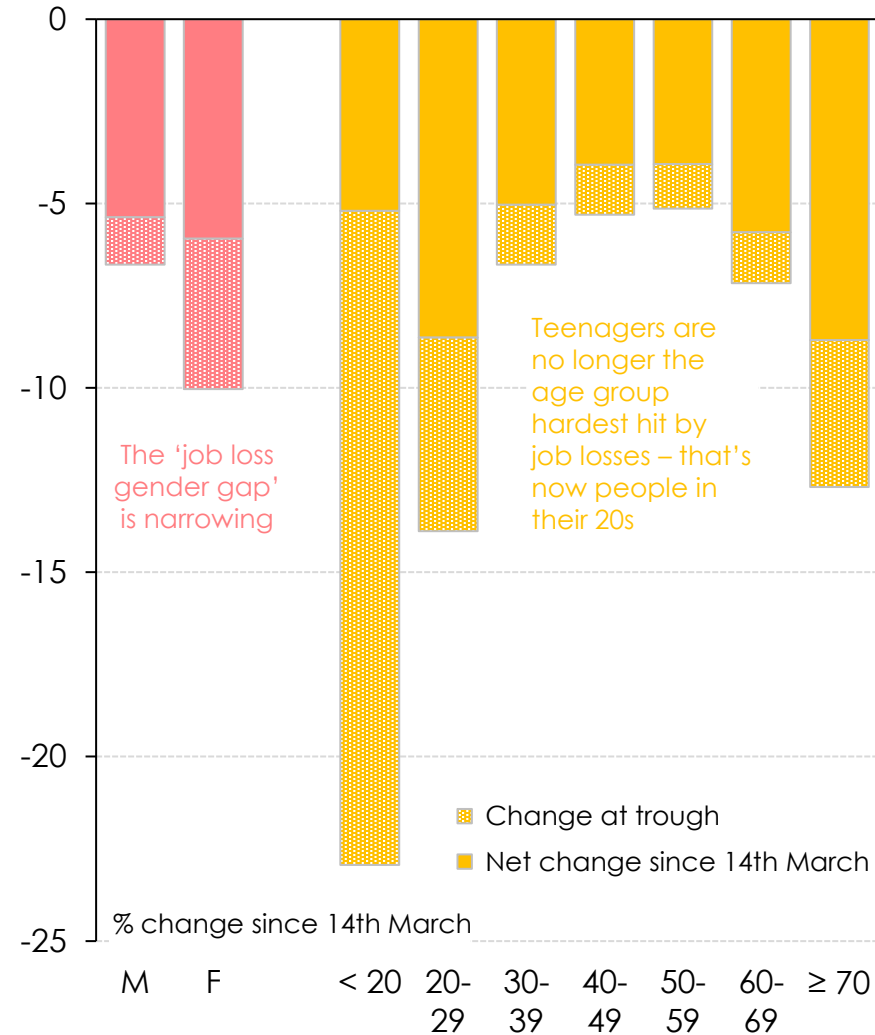
Source: ABS detailed monthly labour force data, May 2020; Corinna. August data will be released on 24th September.

The recovery in payroll employment stalled and went into reverse in the second half of June – and not just because of Victoria

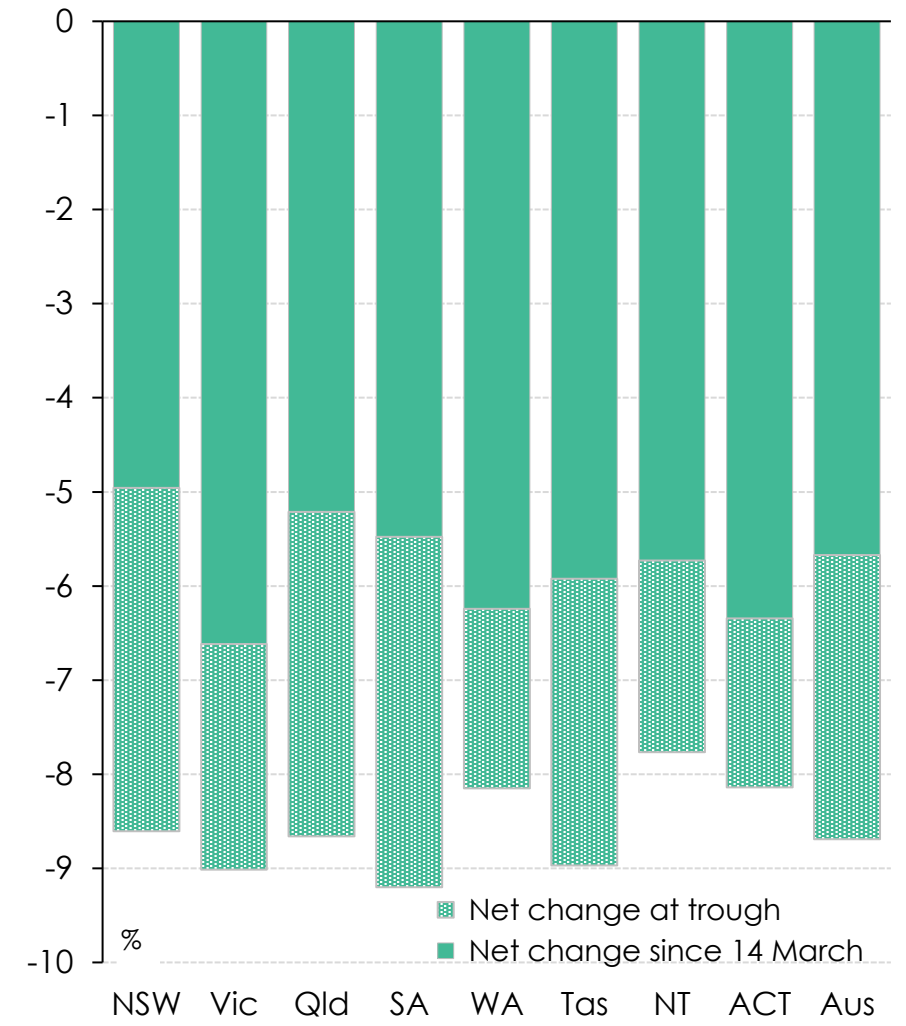
Weekly change in number of payroll jobs



Change in payroll jobs by age & gender



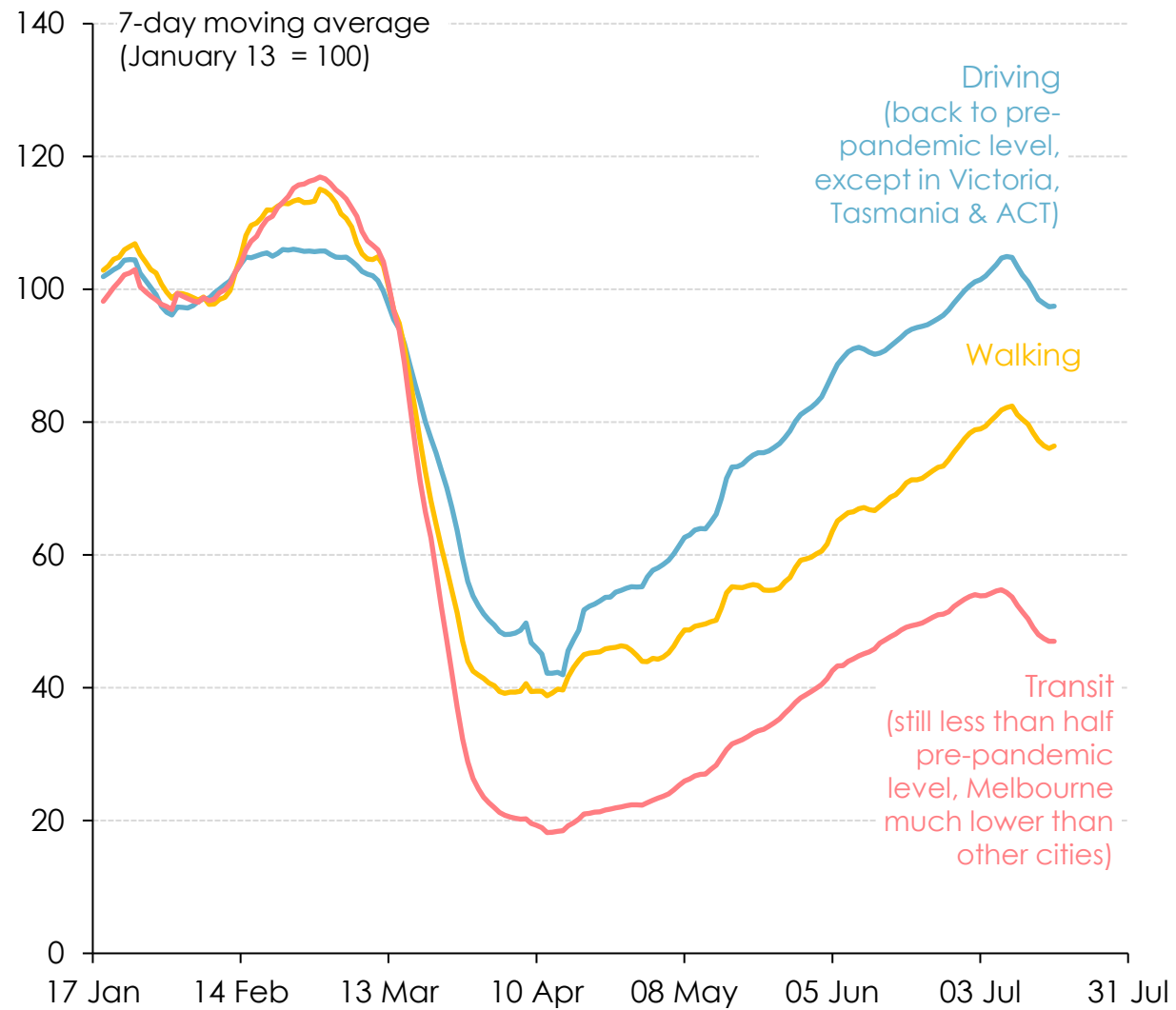
Change in payroll jobs by State & Territory



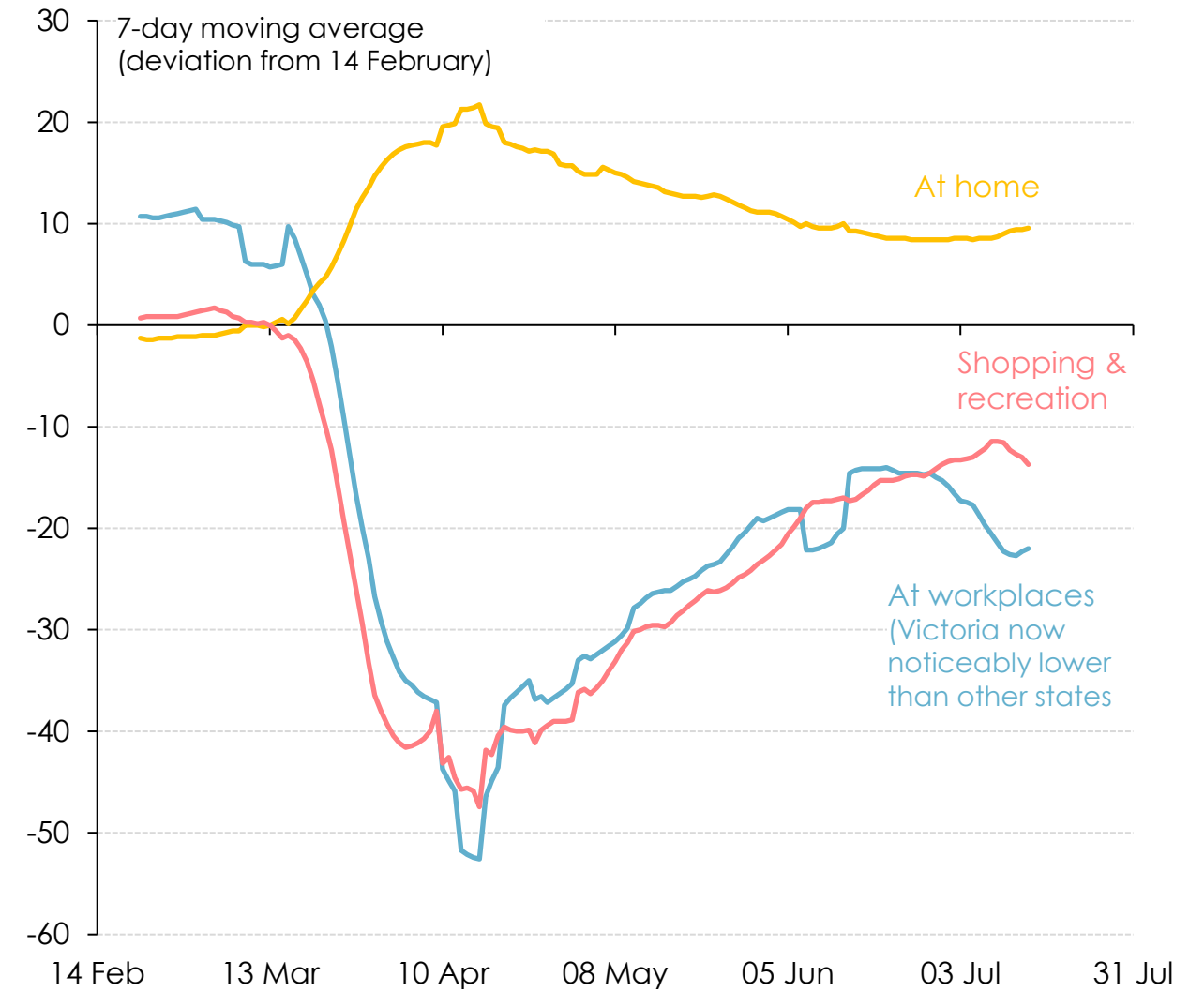
Source: ABS. Data refers to the number of payroll jobs at businesses participating in the Australian Taxation Office's Single Touch Payroll system, which covers 99% of employers with 20 or more employees and about 71% of smaller employees. People with two or more jobs (about 6% of the total) are counted more than once. Data are not seasonally adjusted. Data for weeks up to week ended 11th July will be released on 28th July.

Australians are starting to get out and about again as restrictions ease, but many people are avoiding public transport

Time spent driving, walking and in transit



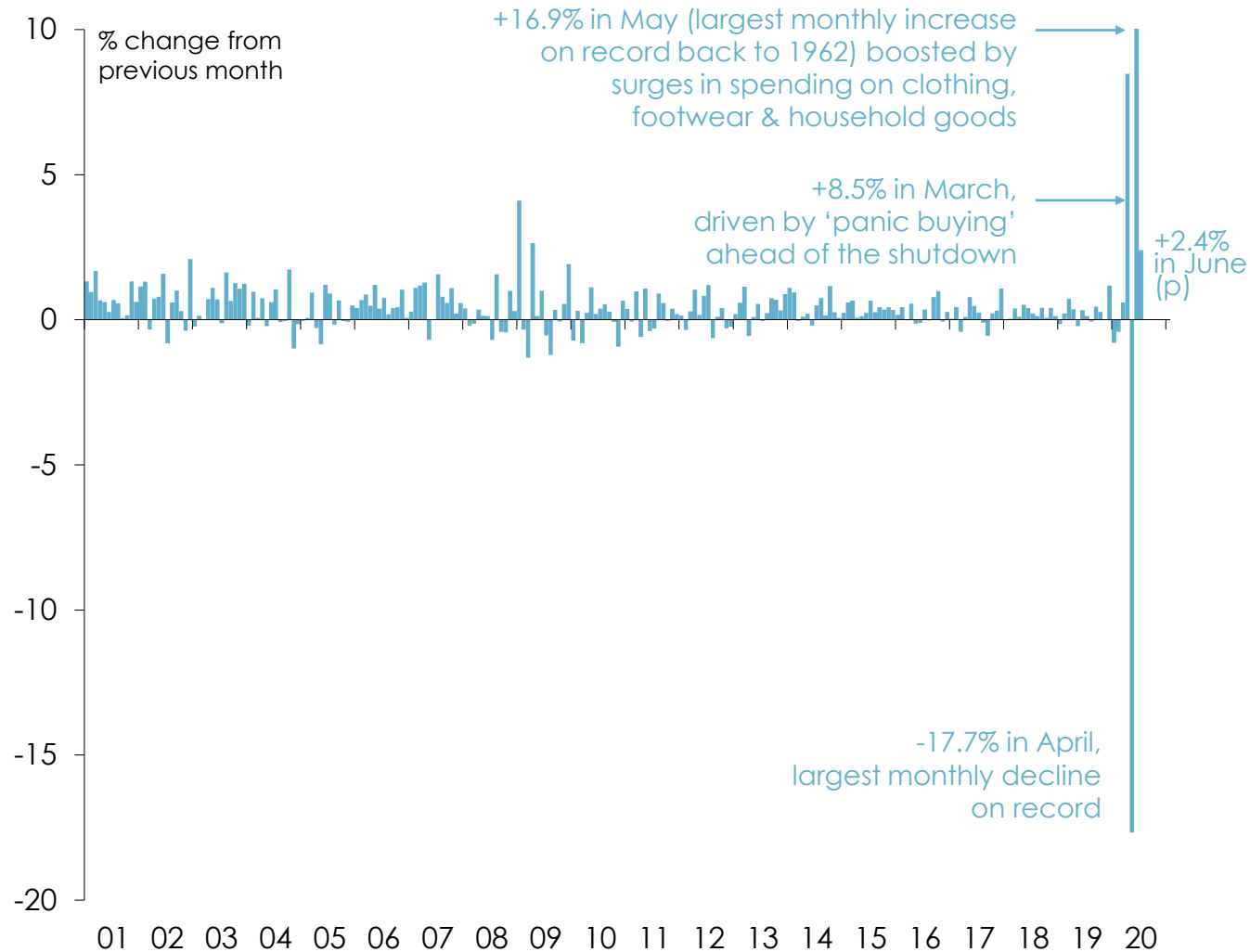
Time spent working, at home, shopping & playing



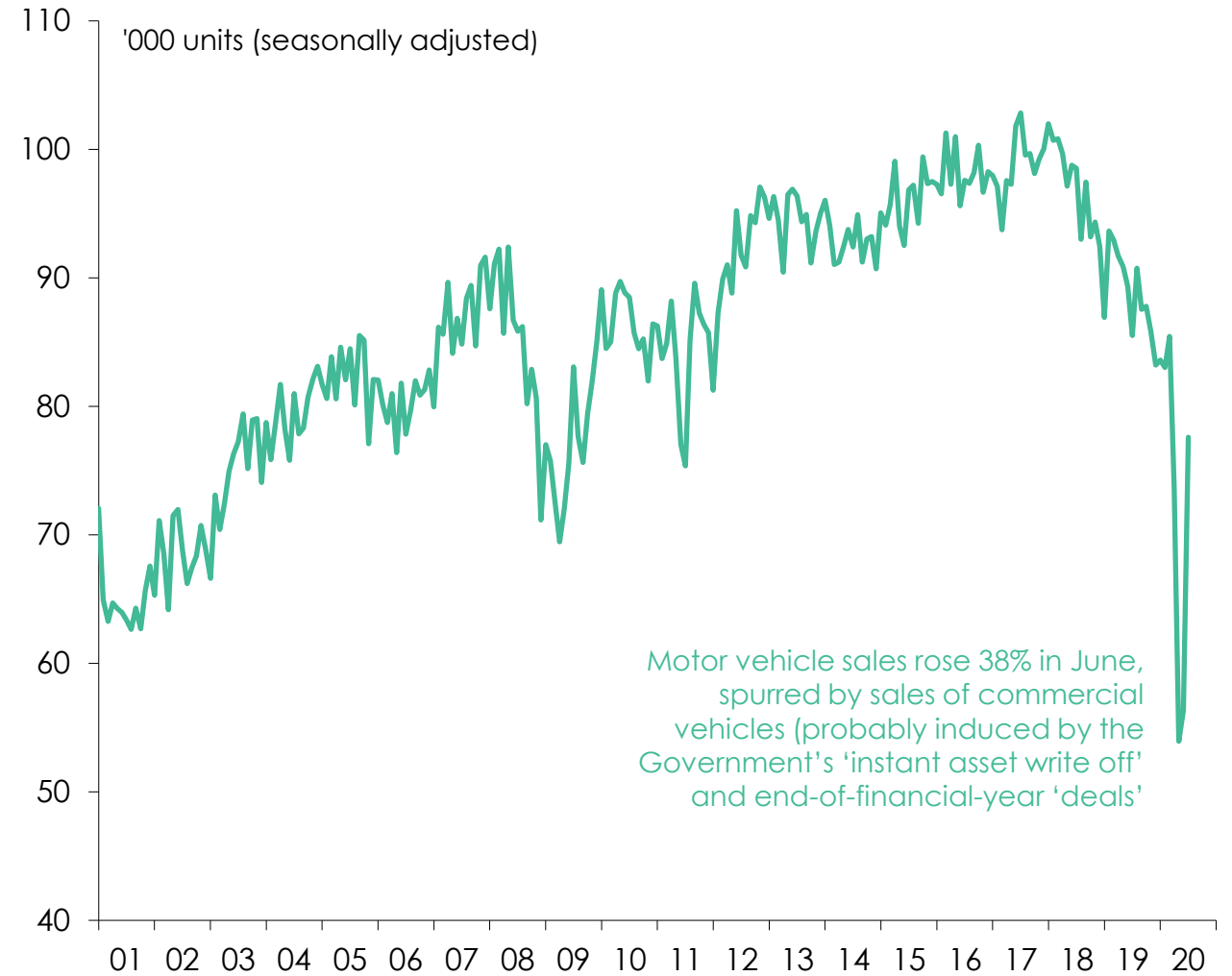
Note: 'transit' means using public transport. Sources: Apple Mobility Trends Reports (data up to 17th July); Google Covid-19 Community Mobility Reports (data up to 14th July). For state-level data see slide 91.

Retail sales rose another 2.3% in June after a 17% rebound in May; while vehicle sales surged in June (though still well below year-earlier levels)

Retail sales



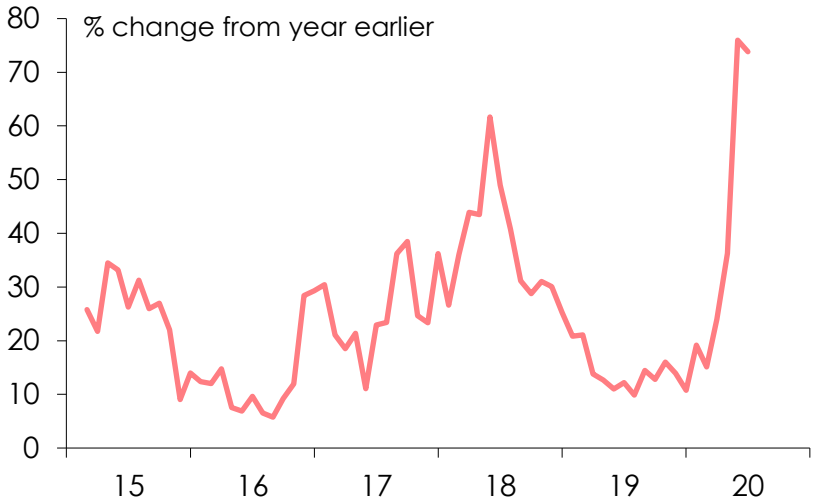
Motor vehicle sales



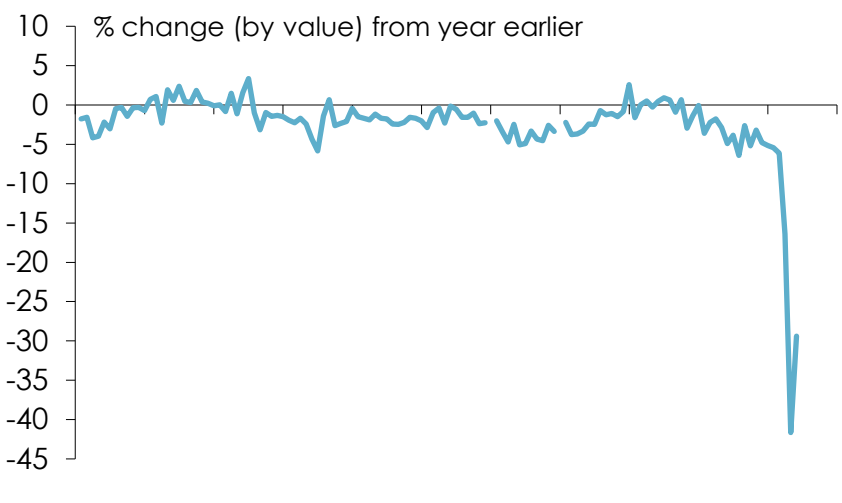
Sources: ABS; Federal Chamber of Automotive Industries VFACTS (seasonal adjustment of FCAI data by Corinna). Final (and detailed) retail sales data for June will be released on 4th August.

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

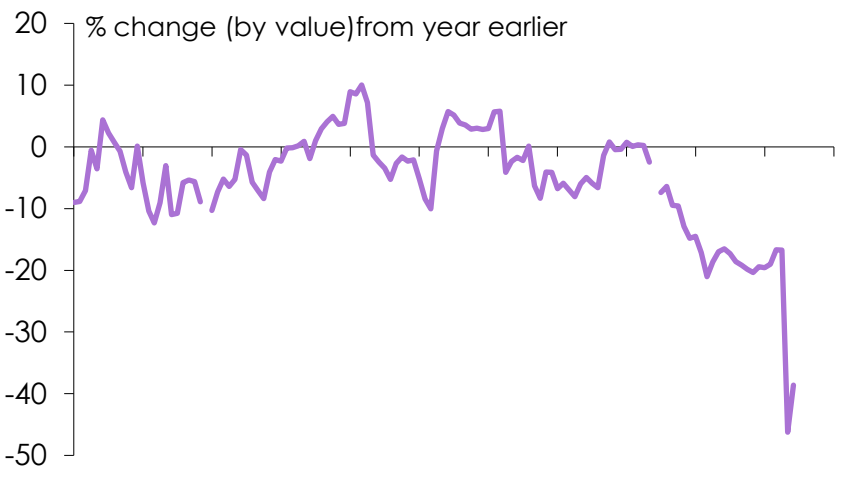
Growth in online retail sales



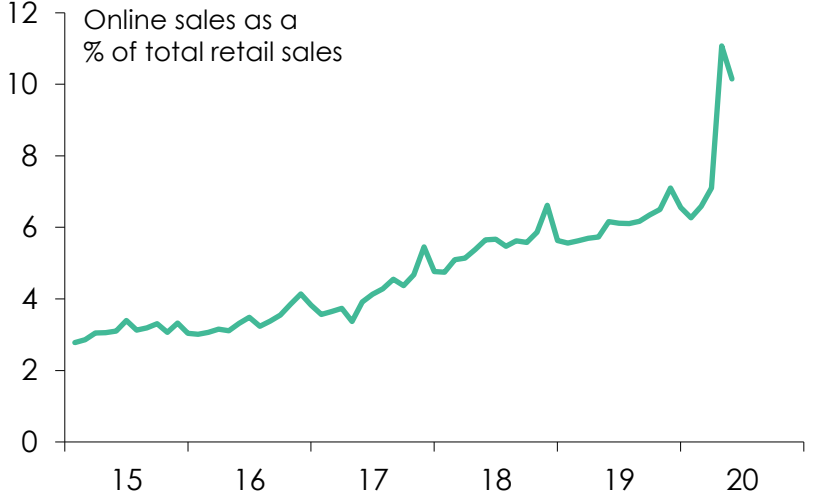
ATM cash withdrawals



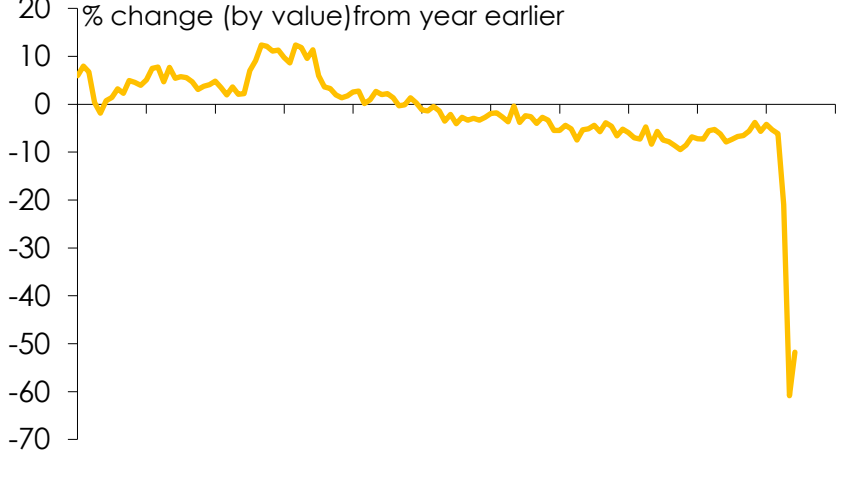
Credit card cash advances



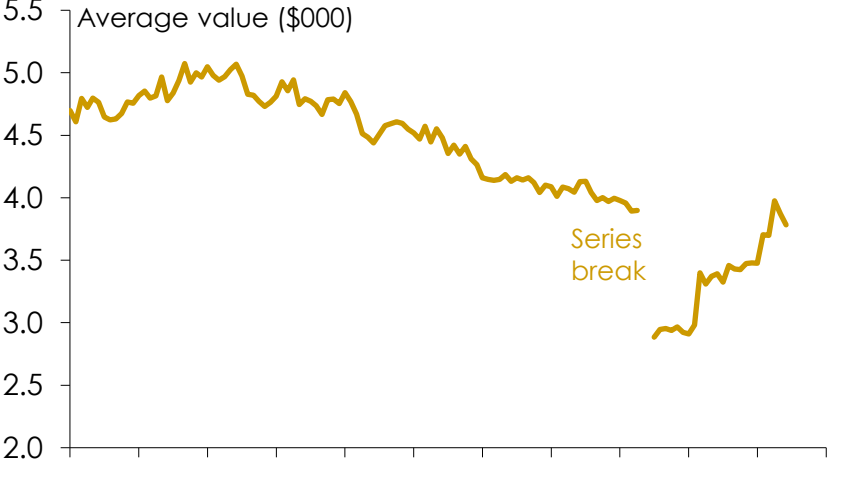
Online retail 'market share'



Debit card cash-outs



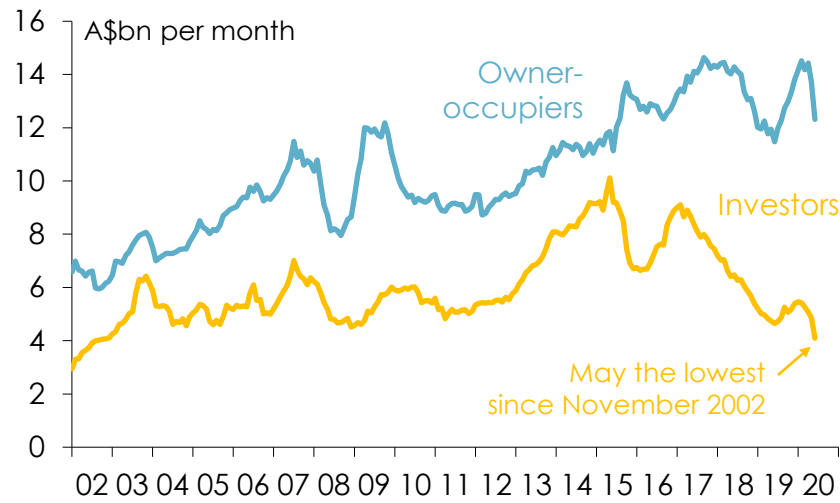
Direct entry payments



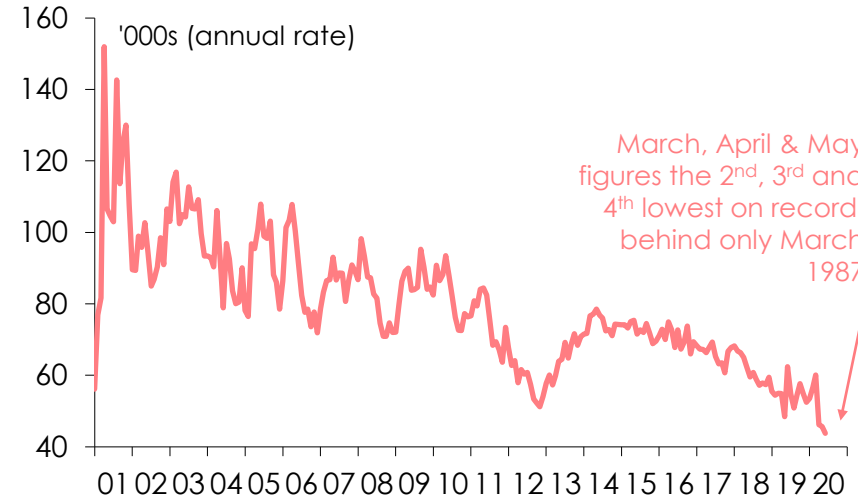
Sources: ABS; RBA. Latest data are for June: online retail sales data for July will be released on 4th August and payments system data on 10th August.

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

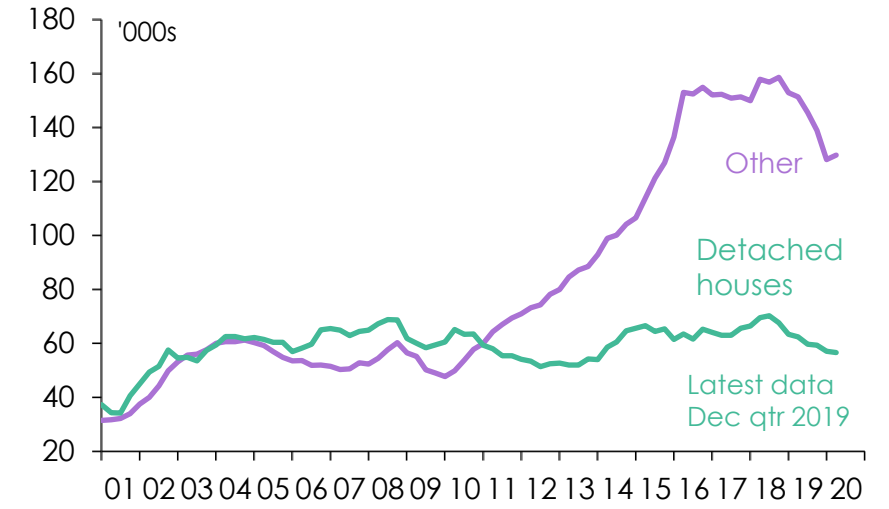
Housing finance commitments



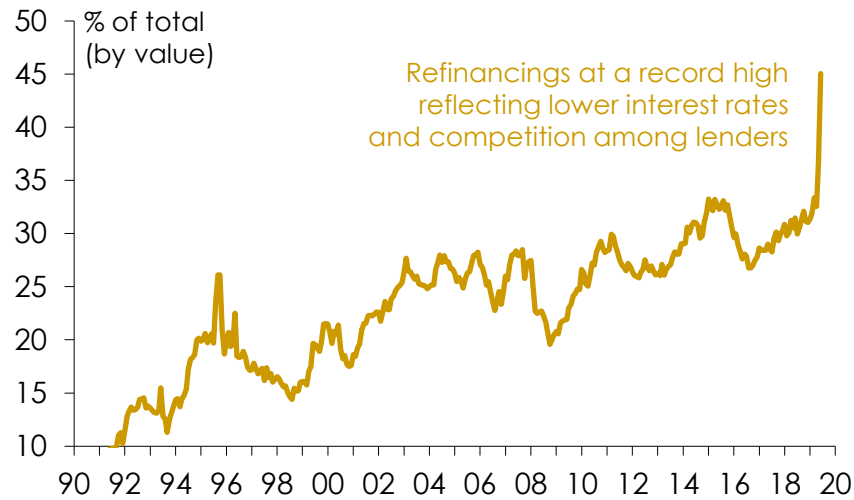
Large builders' new home sales



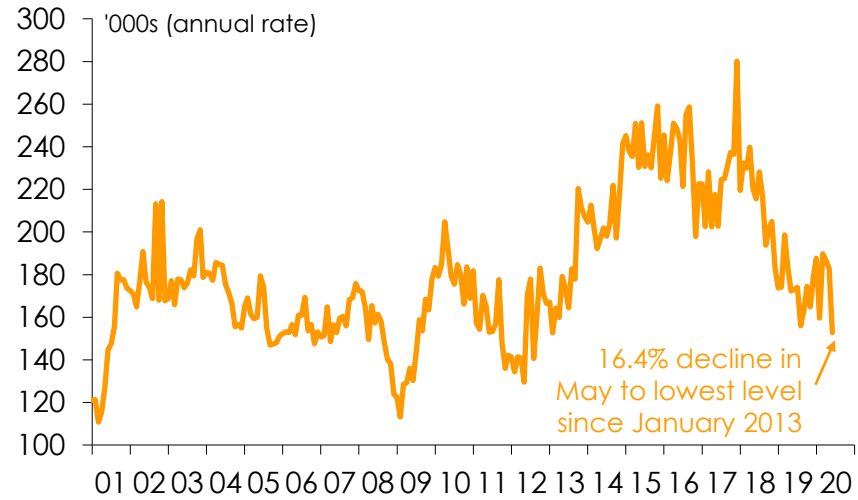
Dwellings under construction



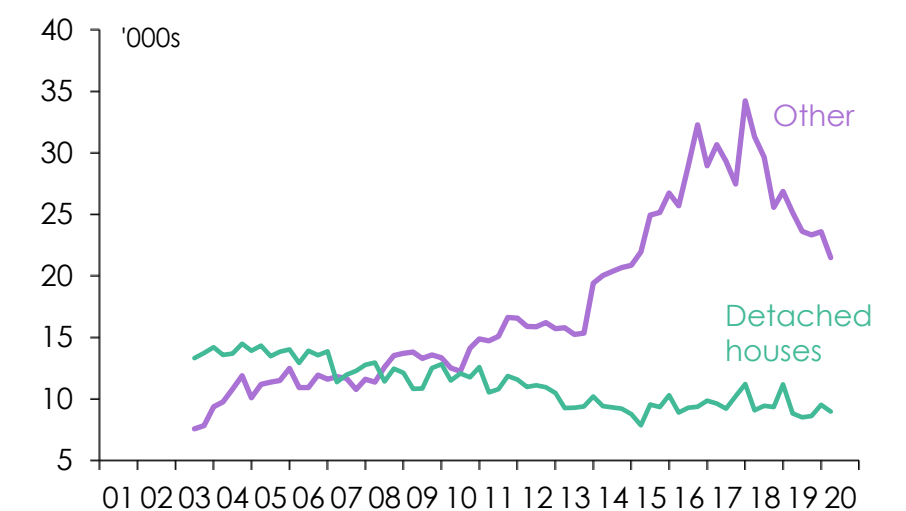
Refinancings as pc of total



Residential building approvals



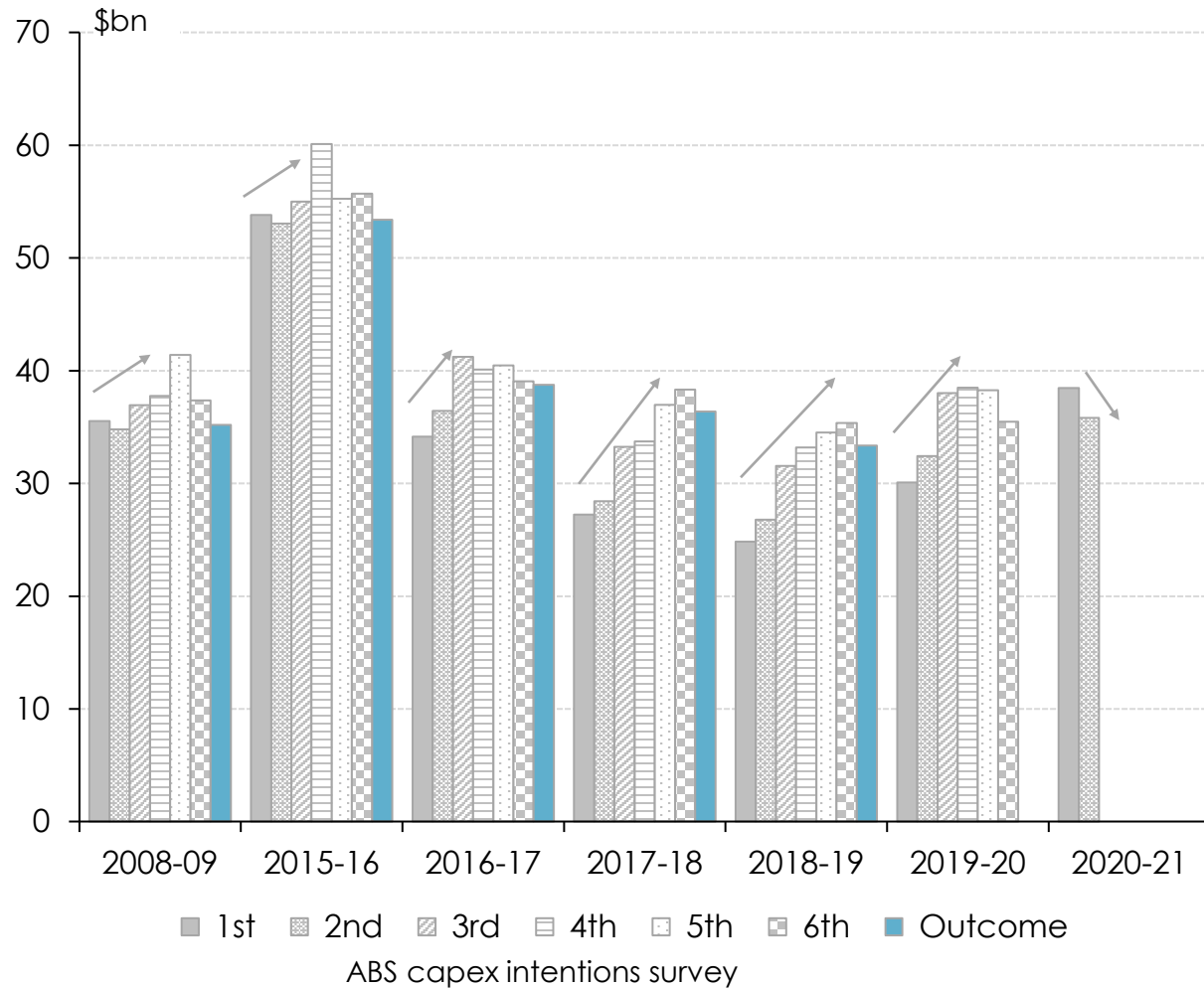
'Pipeline' of work yet to be done



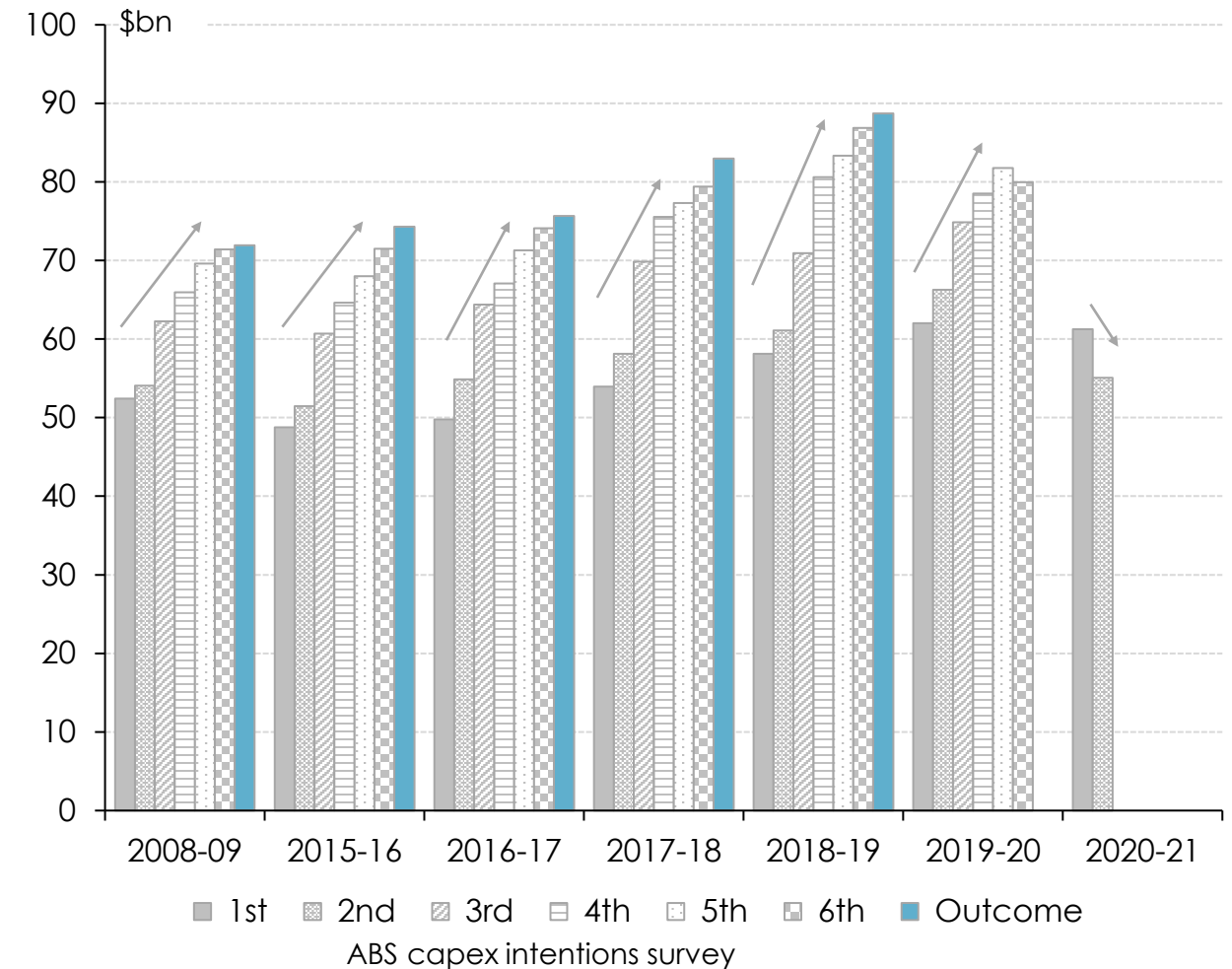
Note: 'New home sales' are of detached dwellings only and exclude small-scale builders. Sources: ABS; Housing Industry Association. Dwellings under construction and 'pipeline' data for March quarter will be released on 15th July; June building approvals on 30th July; June housing finance on 7th August.

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

Capital expenditure intentions - mining

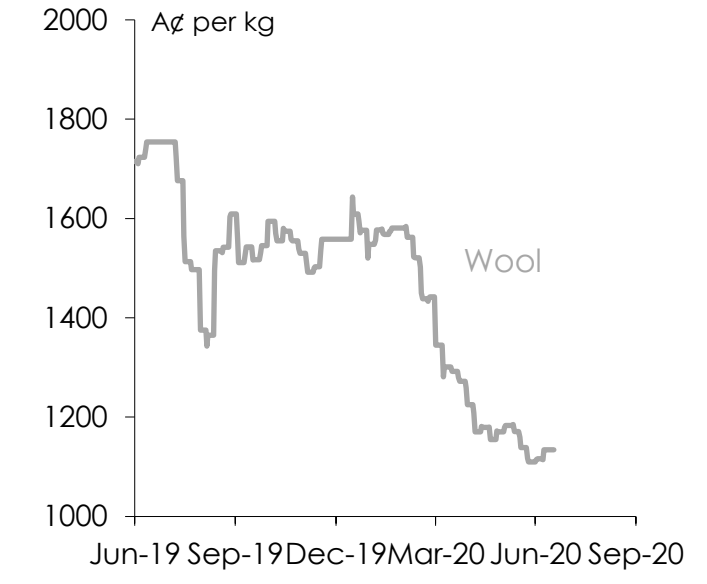
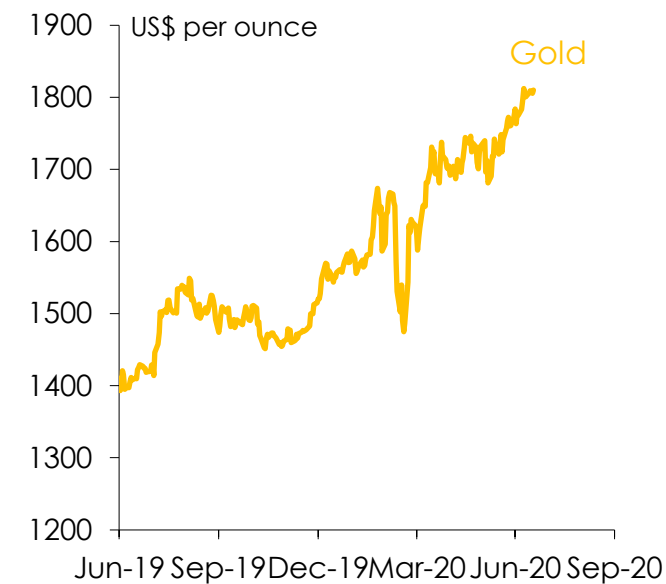
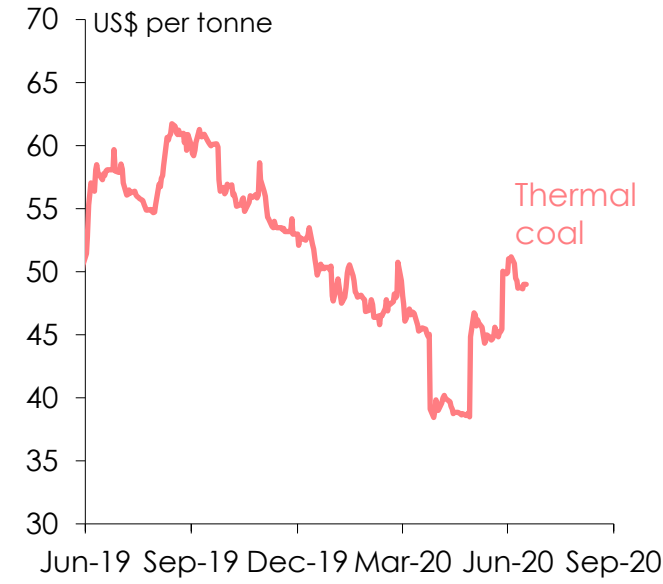
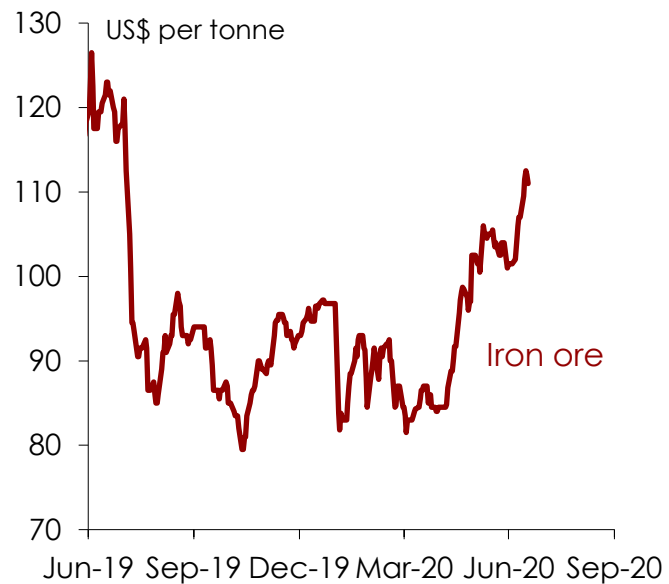
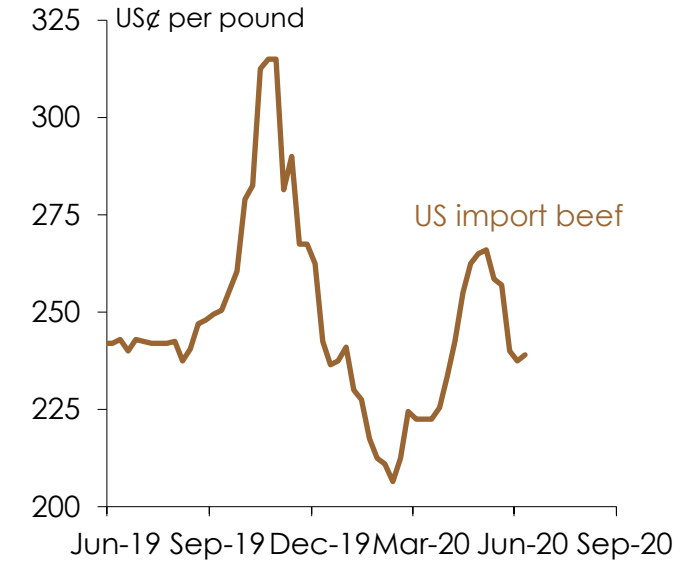
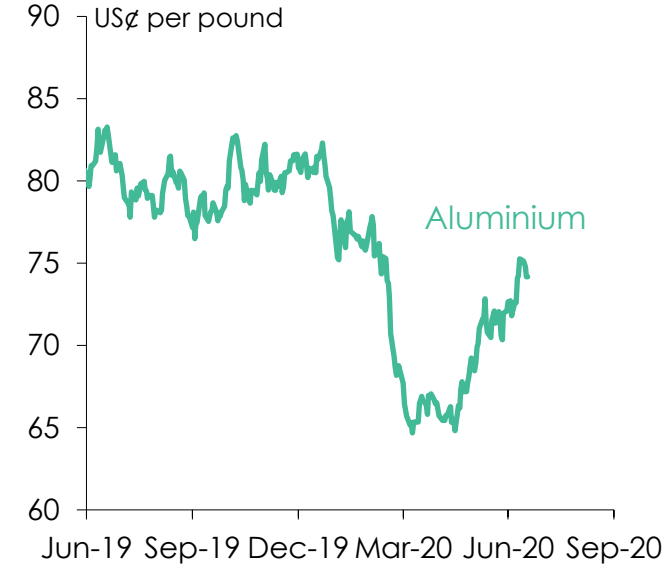
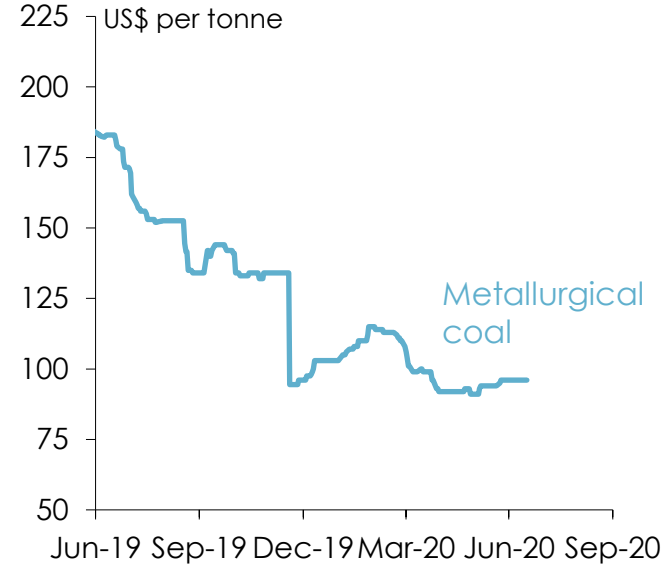
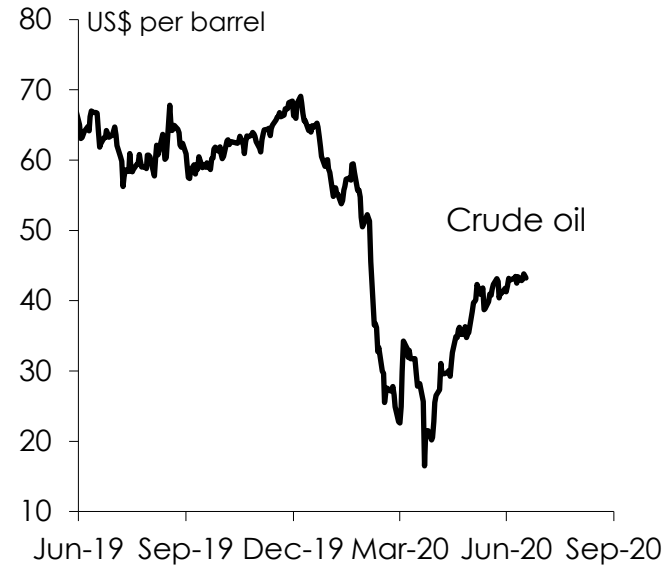


Capital expenditure intentions – non-mining



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).

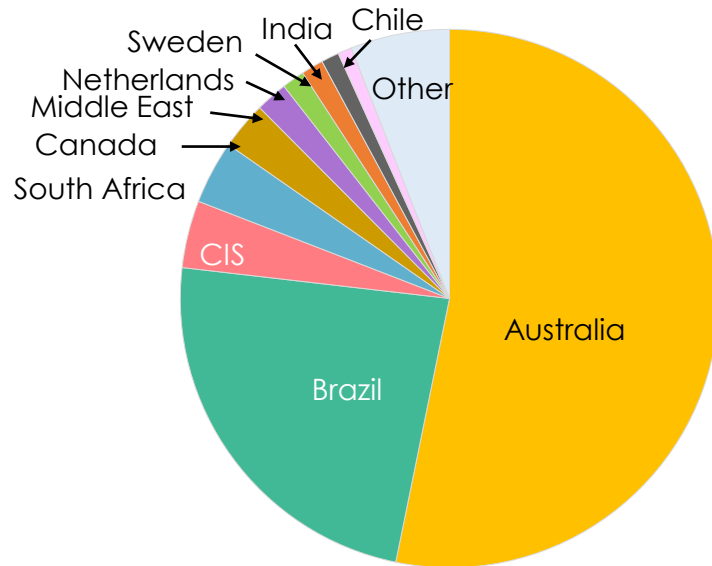
Resources and energy prices have continued to strengthen in recent weeks, but agricultural commodities have been trending down



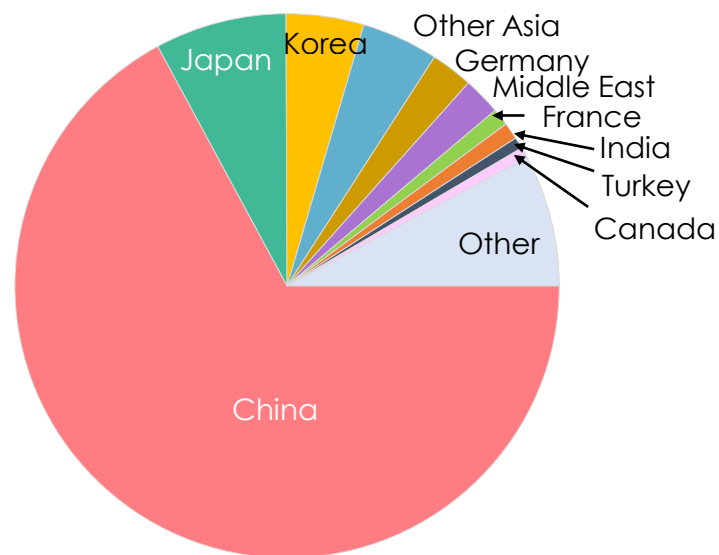
Sources: Refintiv Datastream; Meat & Livestock Australia; Australian Wool Innovation. Data up to 17th July.

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

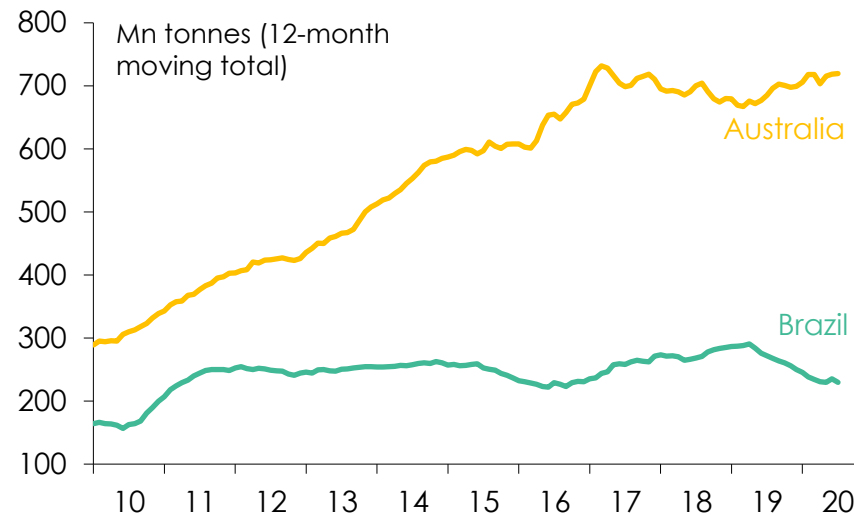
Iron ore exports, 2018



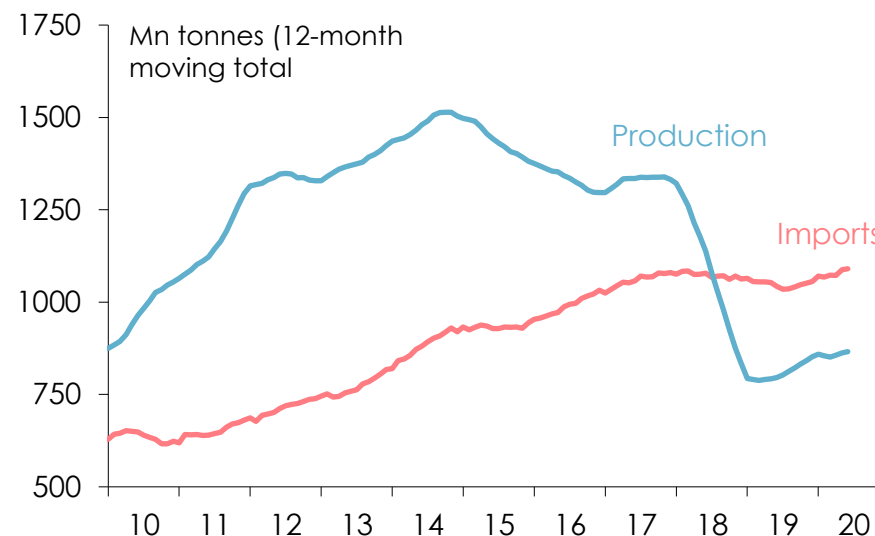
Iron ore imports, 2018



Australia & Brazil iron ore exports



China iron ore production & imports

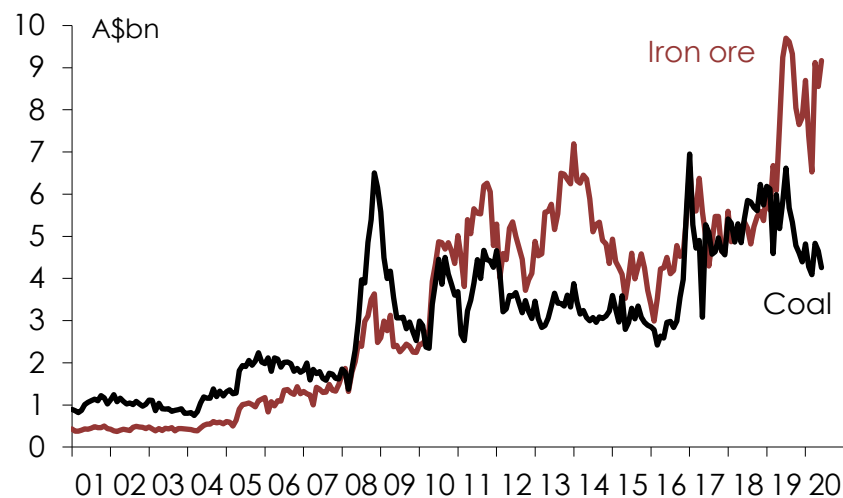


- ❑ The global seaborne iron ore trade is dominated by shipments from Australia & Brazil to China (which accounts for 53% of global steel production and 51% of steel use)
- ❑ Chinese iron ore production has fallen by more than 34% since 2017, largely because of rapidly declining quality – forcing Chinese steel mills to become more dependent on imports in response to increased demand driven by stimulus measures
- ❑ Meanwhile 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 especially in West Africa but this is a slow process

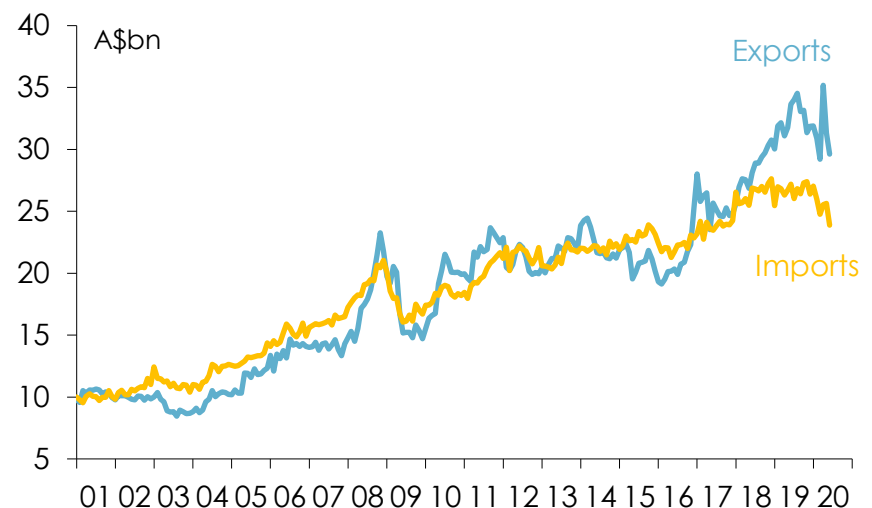
Note: Export volume data for Australia and Brazil derived by dividing export values (in US\$) from ABS and IGBE by the average US\$ price of Chinese iron ore imports.
Sources: World Steel Association; China National Bureau of Statistics; China General Administration of Customs; Refinitiv Datastream;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

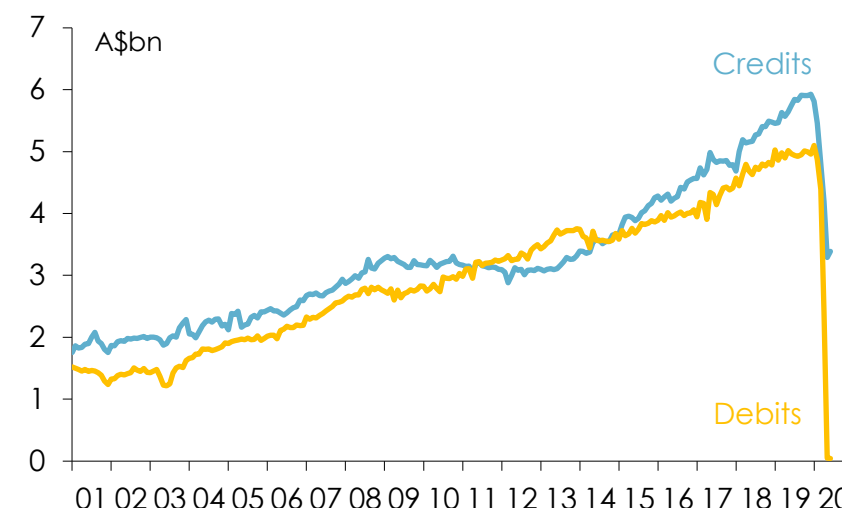
Iron ore and coal exports



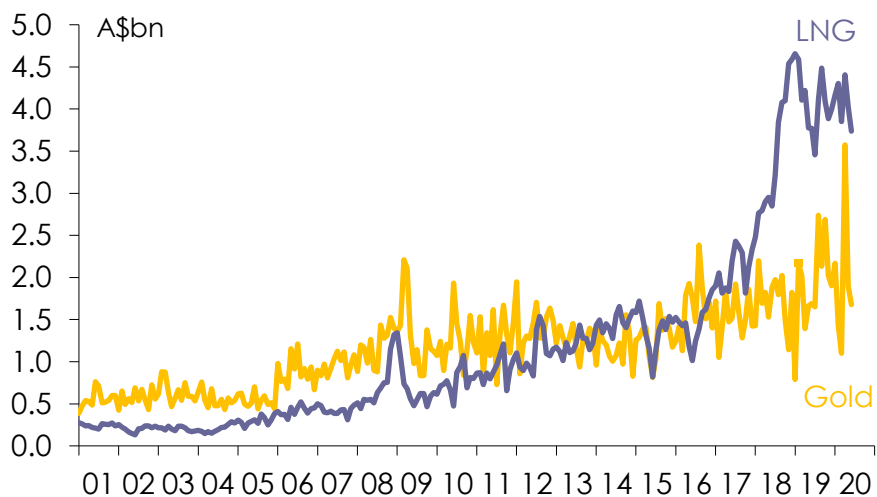
Merchandise exports and imports



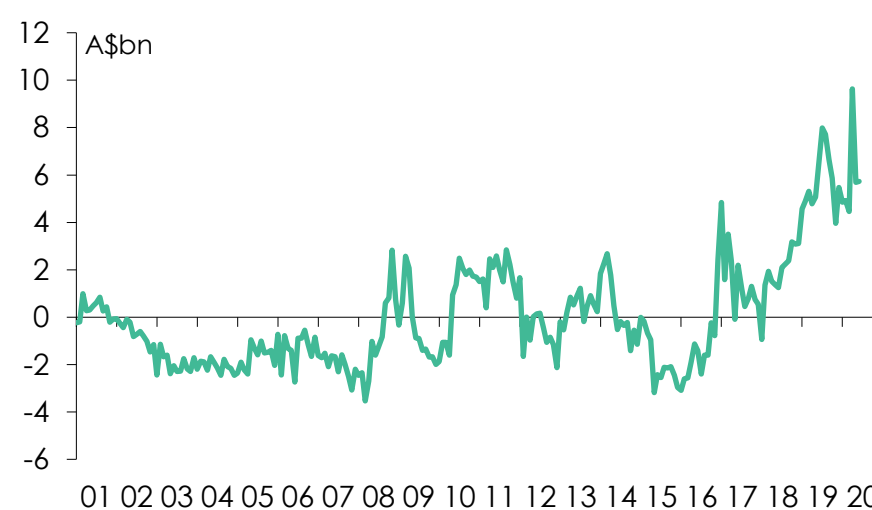
Tourism-related services trade



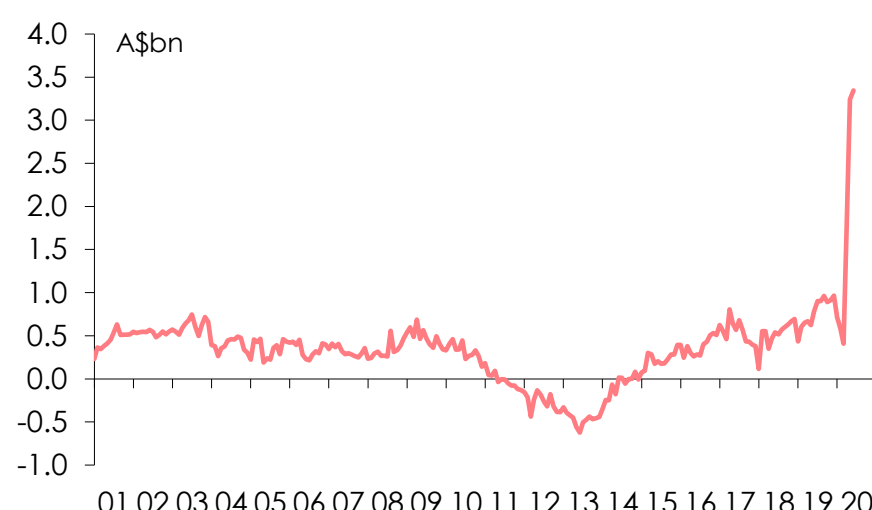
LNG and gold exports



Merchandise trade balance



Tourism services trade balance



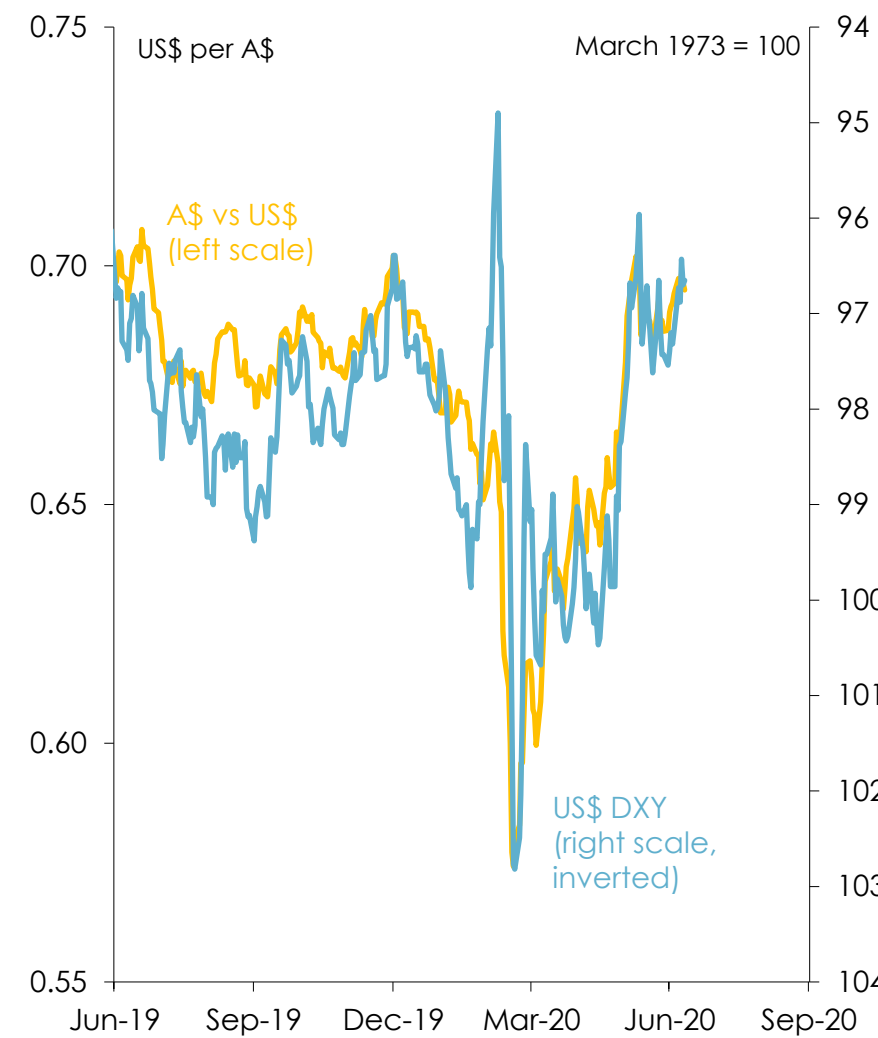
Source: ABS. Latest data are for May; June data will be released on 4th August.

The A\$ plunged during the market turmoil of late March, but has recouped most of those losses helped by higher iron ore prices

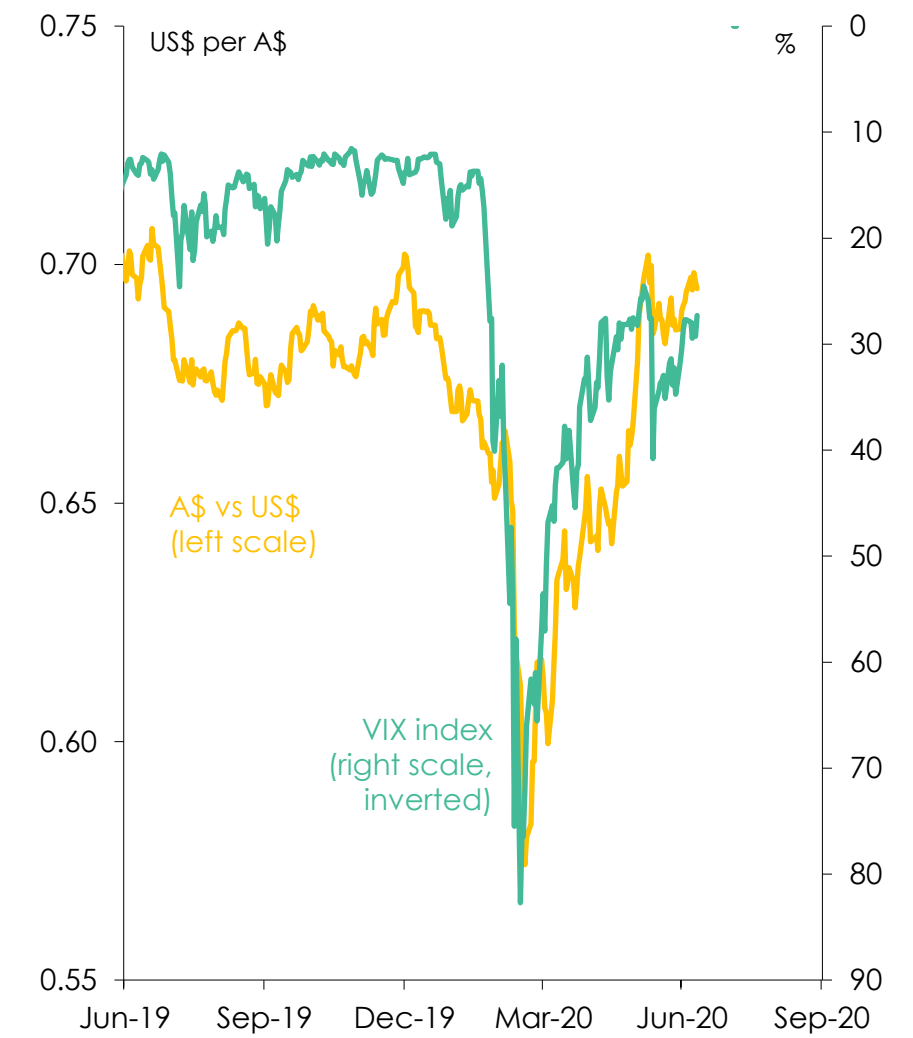
A\$-US\$ and spot iron ore prices



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



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

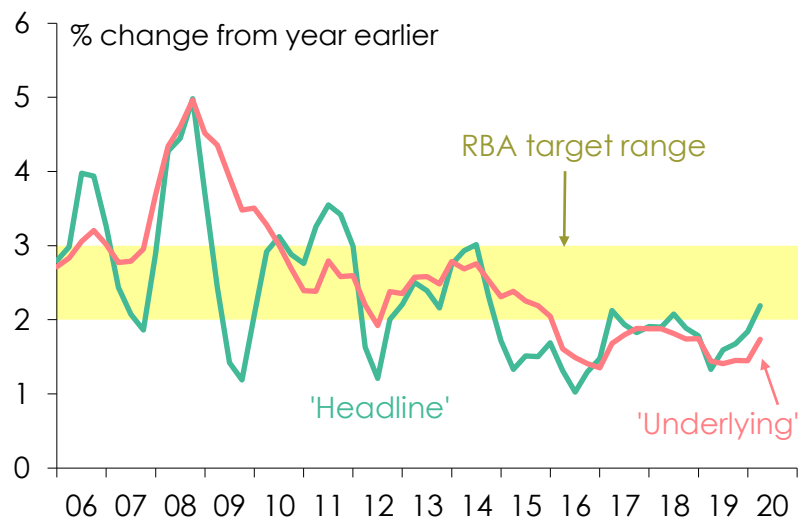


Note: The VIX index is a measure of the implied volatility of S&P500 options and is widely interpreted as an indicator of investor risk appetite or aversion.

Source: Refinitiv Datastream. Data up to 10th July.

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

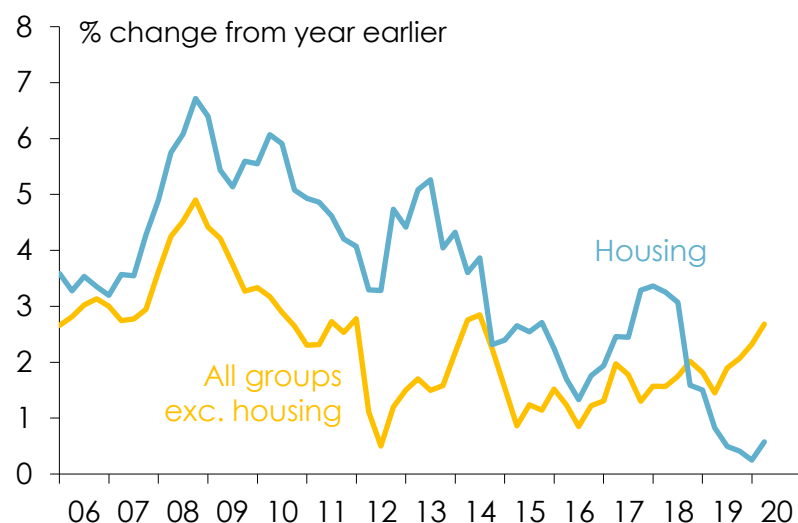
Consumer prices



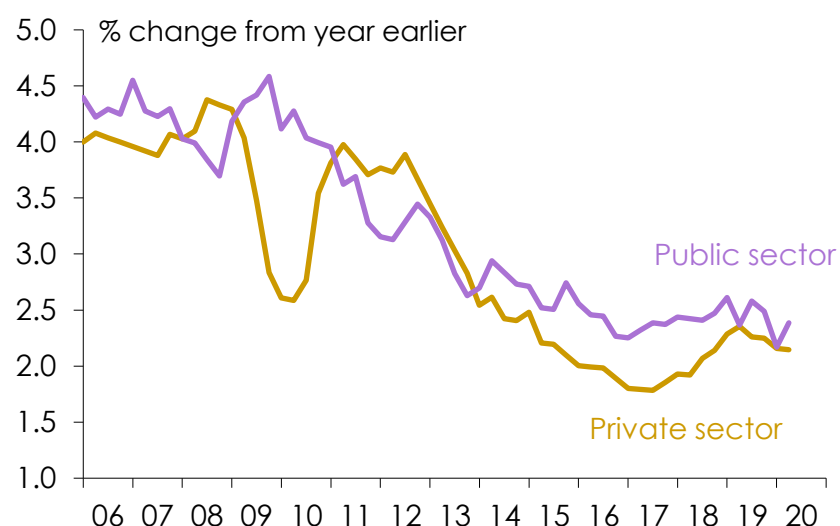
Retail petrol prices



Housing costs in the CPI



Wage price index



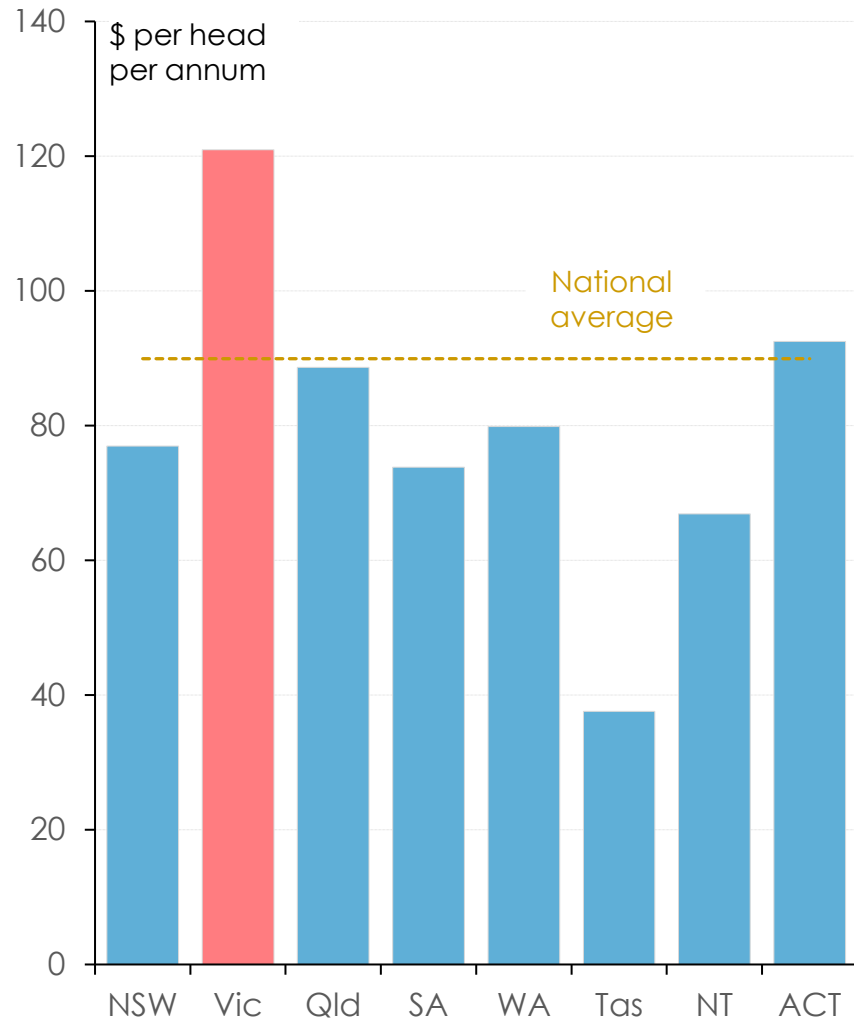
- ❑ The RBA has undershot its 2-3% target for 'underlying' inflation for four years in a row
- ❑ Q2 inflation will likely be negative (both qoq and yoy) as a result of lower petrol prices (down 21% on average in the quarter) and the Government's provision of free child care during the shutdown
- ❑ Conversely the removal of free child care from 12th July and the rebound in petrol prices will boost the CPI in Q3
- ❑ Freezes on utilities charges in some states will detract from inflation in Q3
- ❑ House prices and rents will continue to exert downward pressure on inflation over at least the next 6-12 months
- ❑ Wages haven't been a source of price pressure for the past six years, and are unlikely to be in the next 1-2 years either

Note: 'Underlying' inflation is the average of the weighted median and trimmed mean CPIs. Wage price indices exclude houses.
Sources: ABS (June quarter CPI will be released on 29th July); Australian Institute of Petroleum.

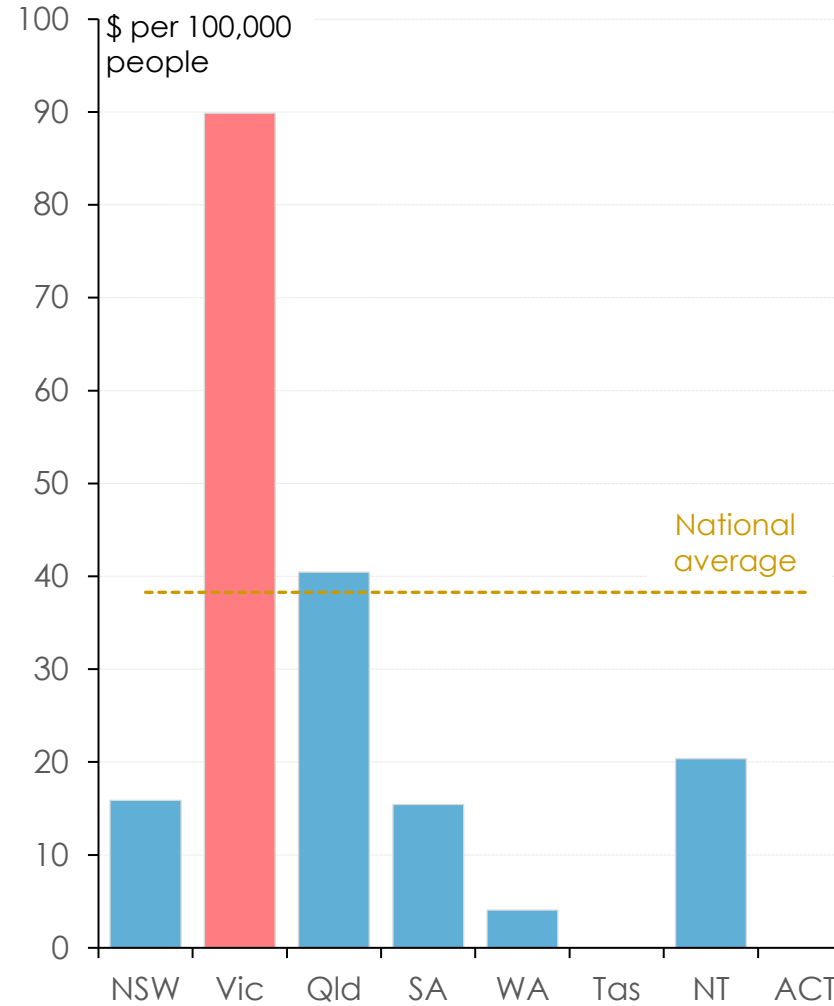
The problem with Victoria

Victoria has always been more vigilant in fining its citizens than other states – but that authoritarian approach hasn't helped it fight Covid-19

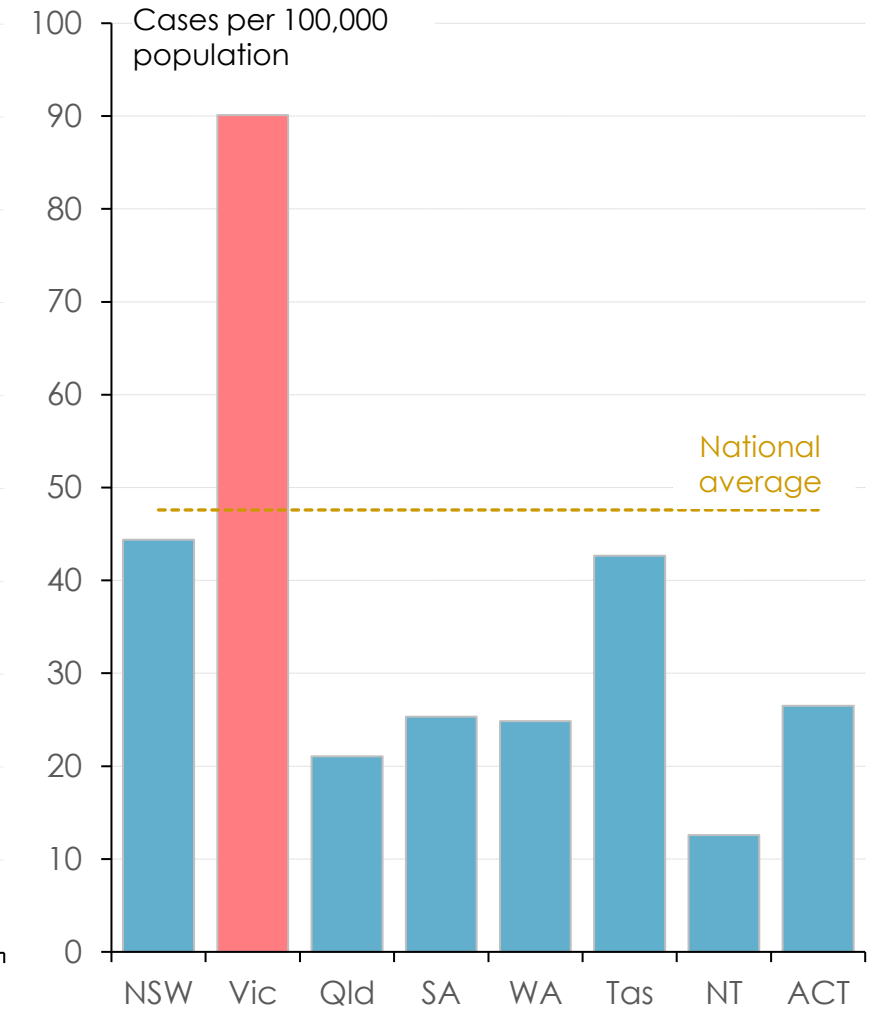
Revenue from fines per head of population, 2014-15 to 2018-19



Fines for breaches of lockdown regulations, per head



Infection rates, states and territories, as at 20th July 2020

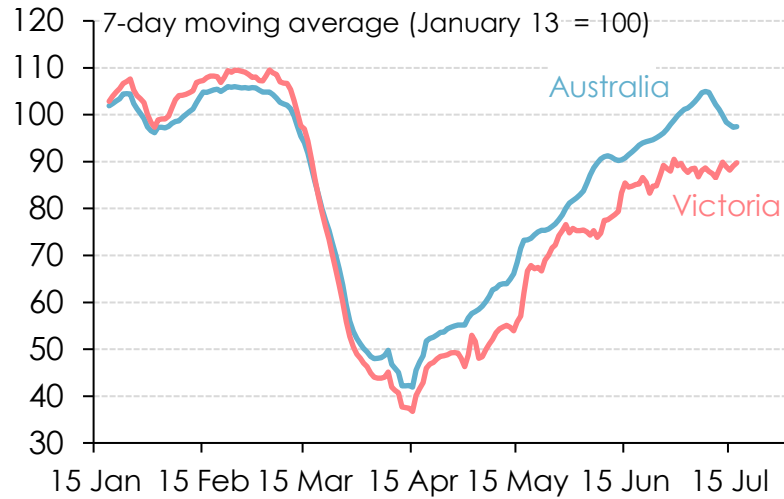


Note: fines for breaches of Covid-19 regulations are for the period between when 'stage 3' lockdowns started in late March to the last week of May.

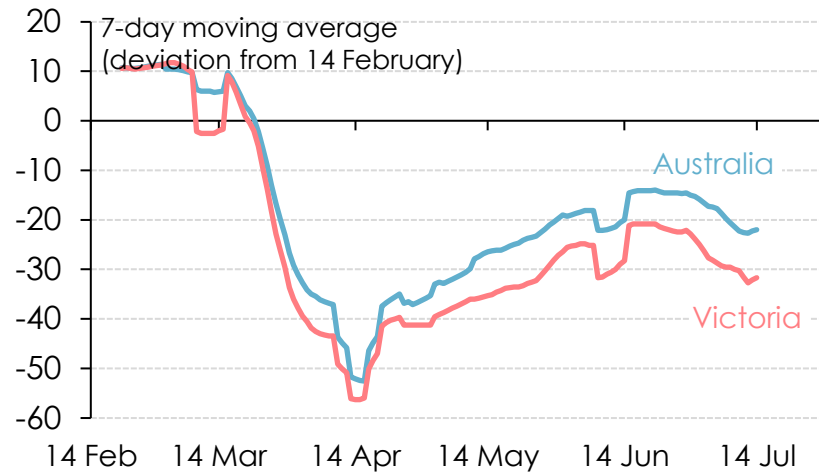
Sources: State and Territory annual financial reports and 2019-20 Mid-Year Budget Reviews; *The Age*, 28th May 2020; covid-19.com.au.

Victoria has been lagging the rest of Australia in emerging from lockdown – this divergence will widen over the next six weeks

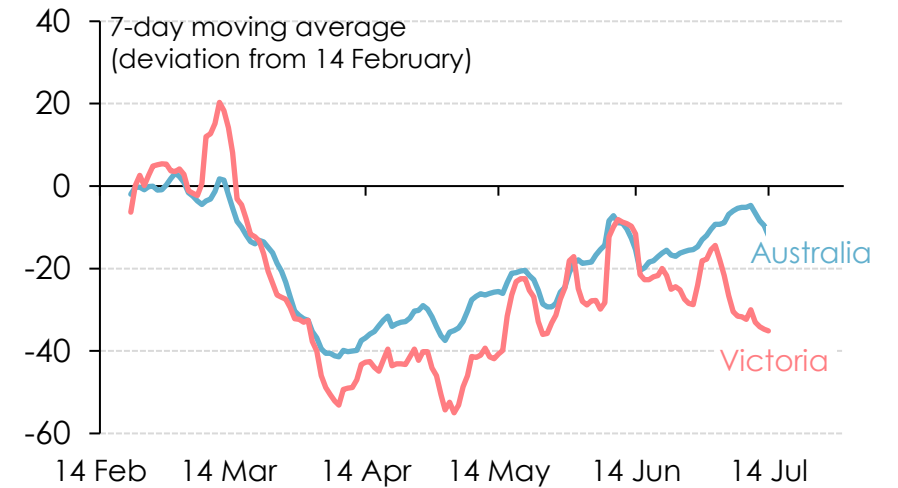
Time spent driving



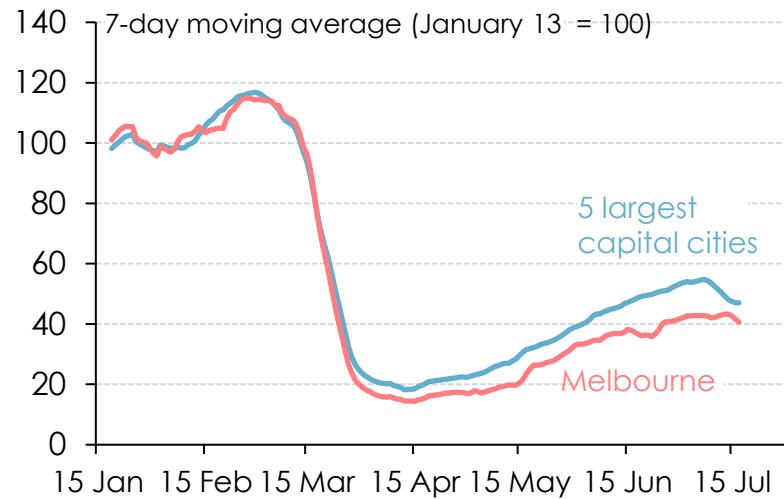
Time spent in work places



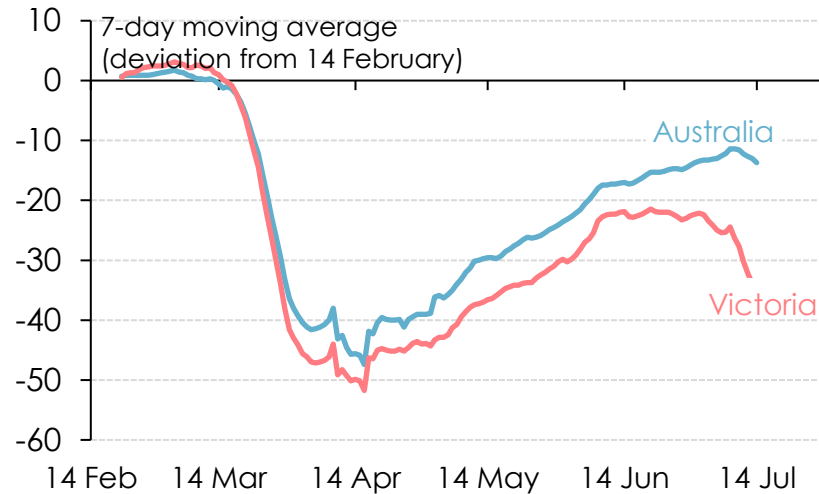
Time spent in parks



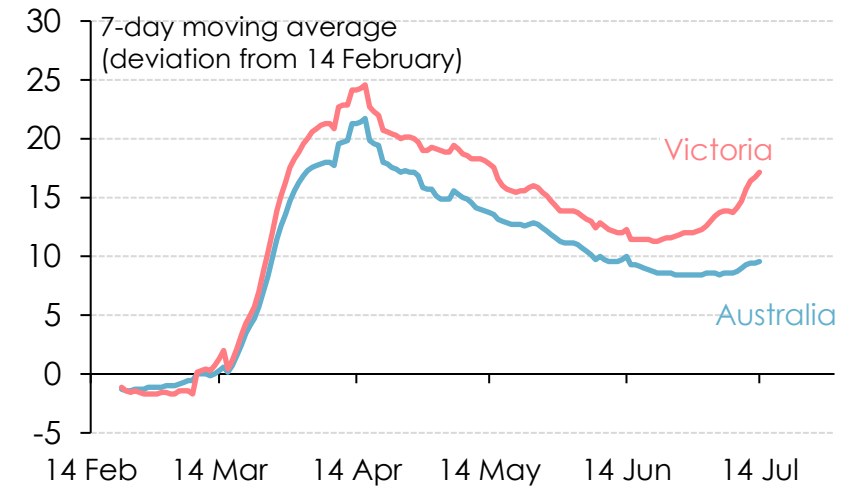
Time spent in transit



Time spent shopping

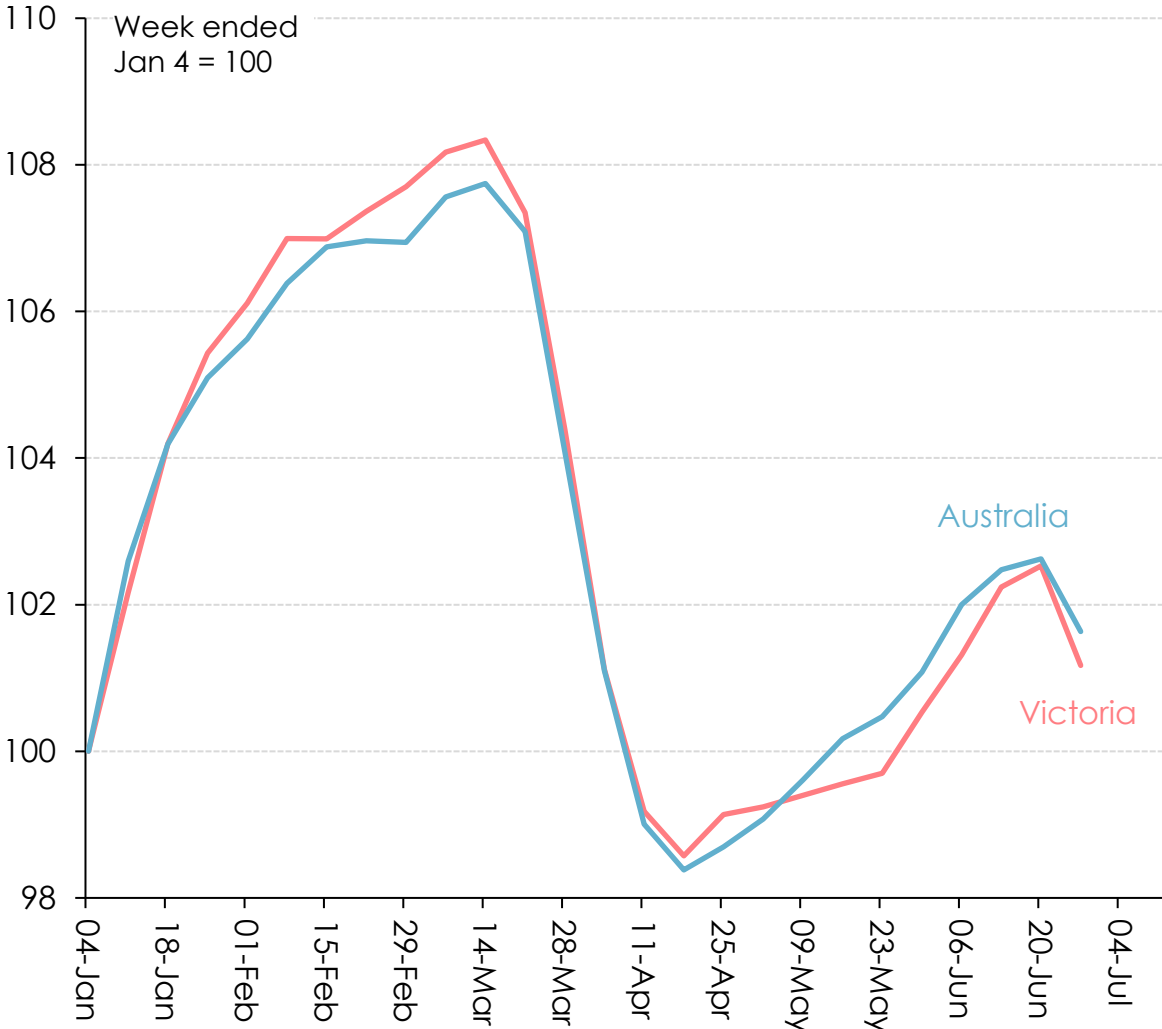


Time spent at home

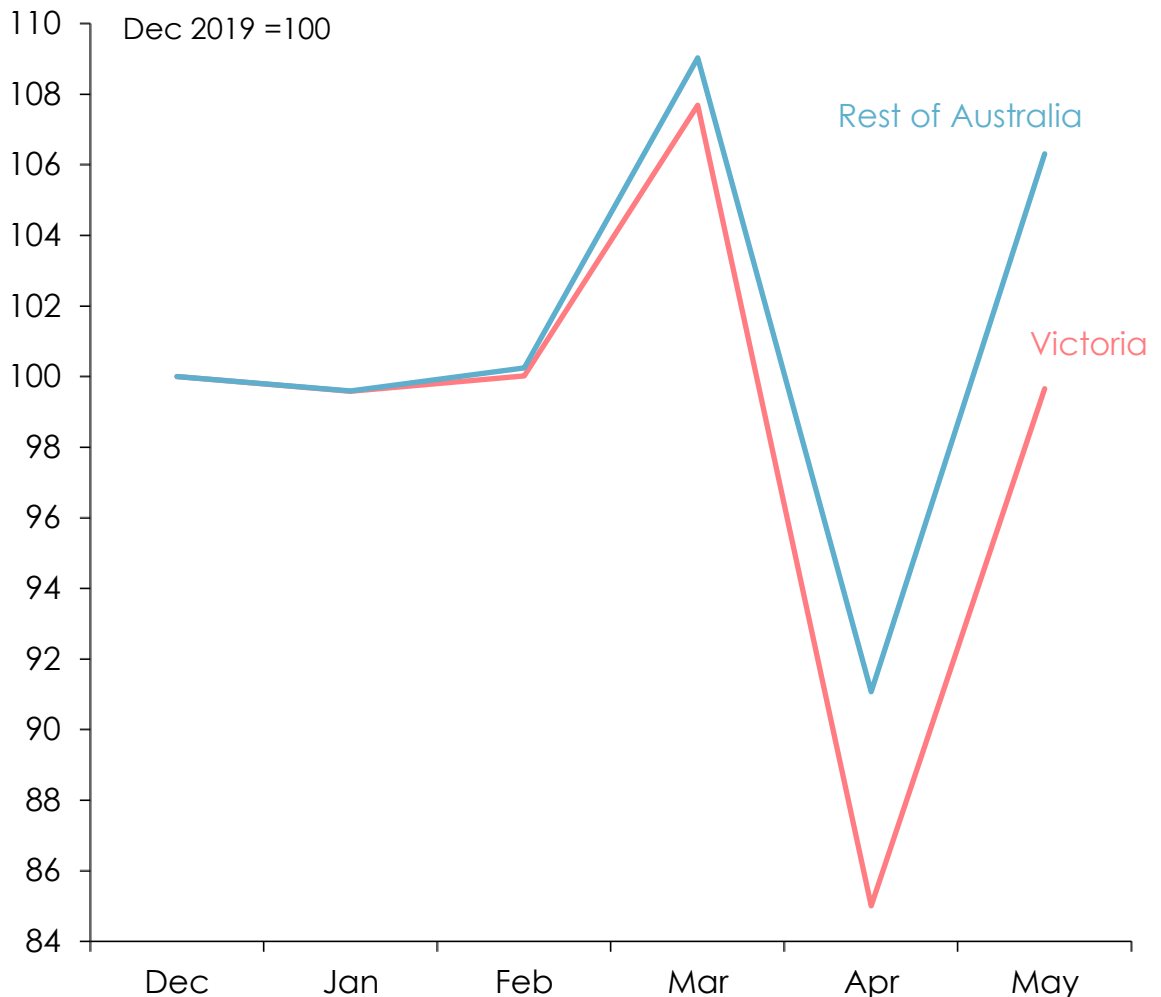


Victoria's recovery in both employment and spending has lagged that of the rest of Australia

Payroll jobs, Victoria and Australia



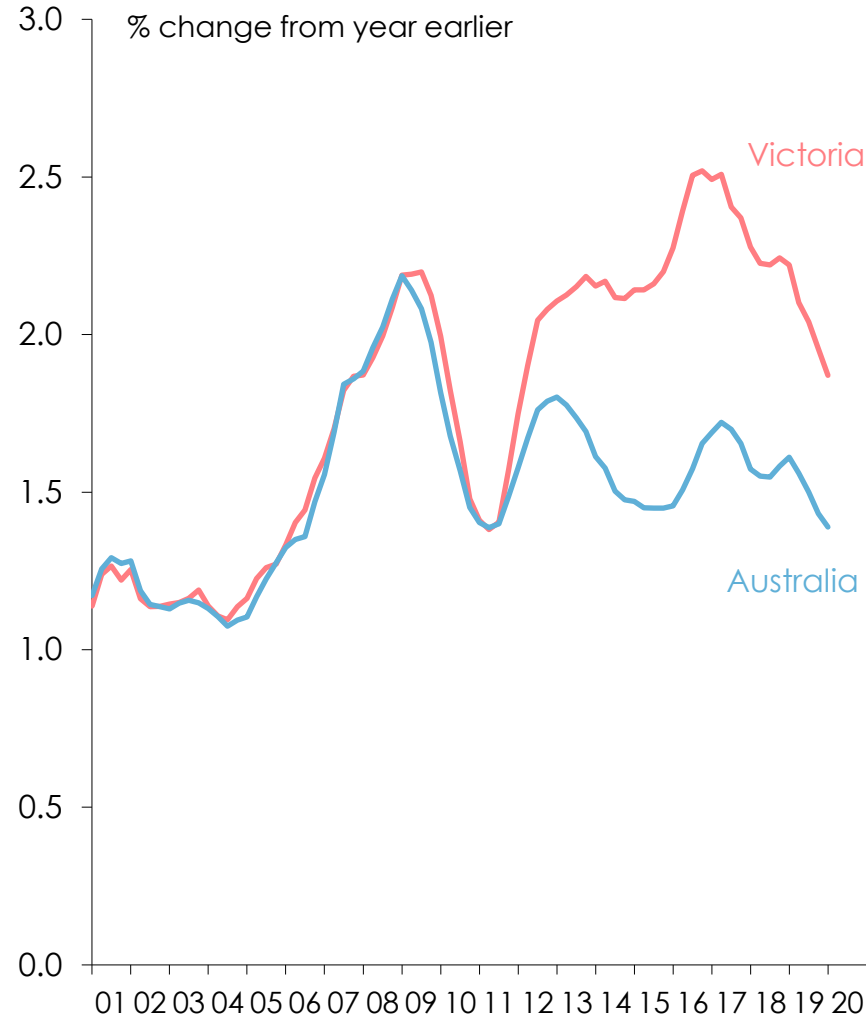
Retail sales, Victoria and the rest of Australia



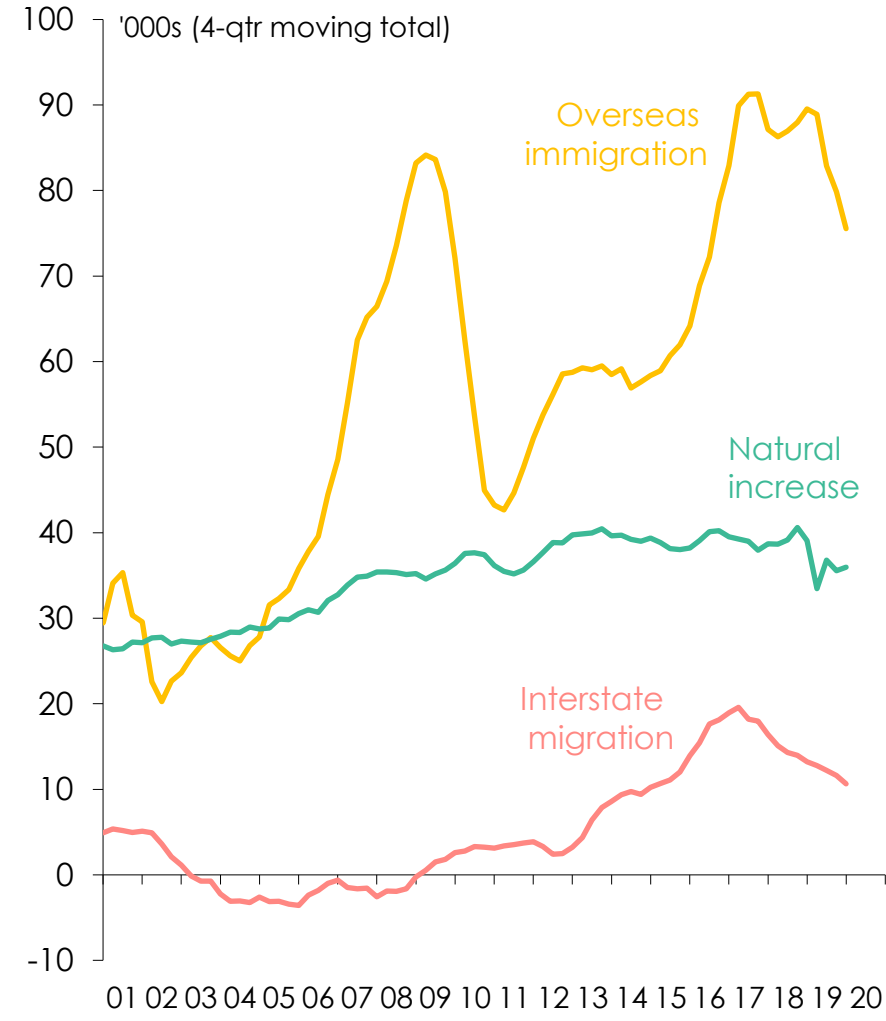
Sources: ABS; Corinna.

Over the past decade Victoria's economy has become increasingly dependent on population growth, through immigration ...

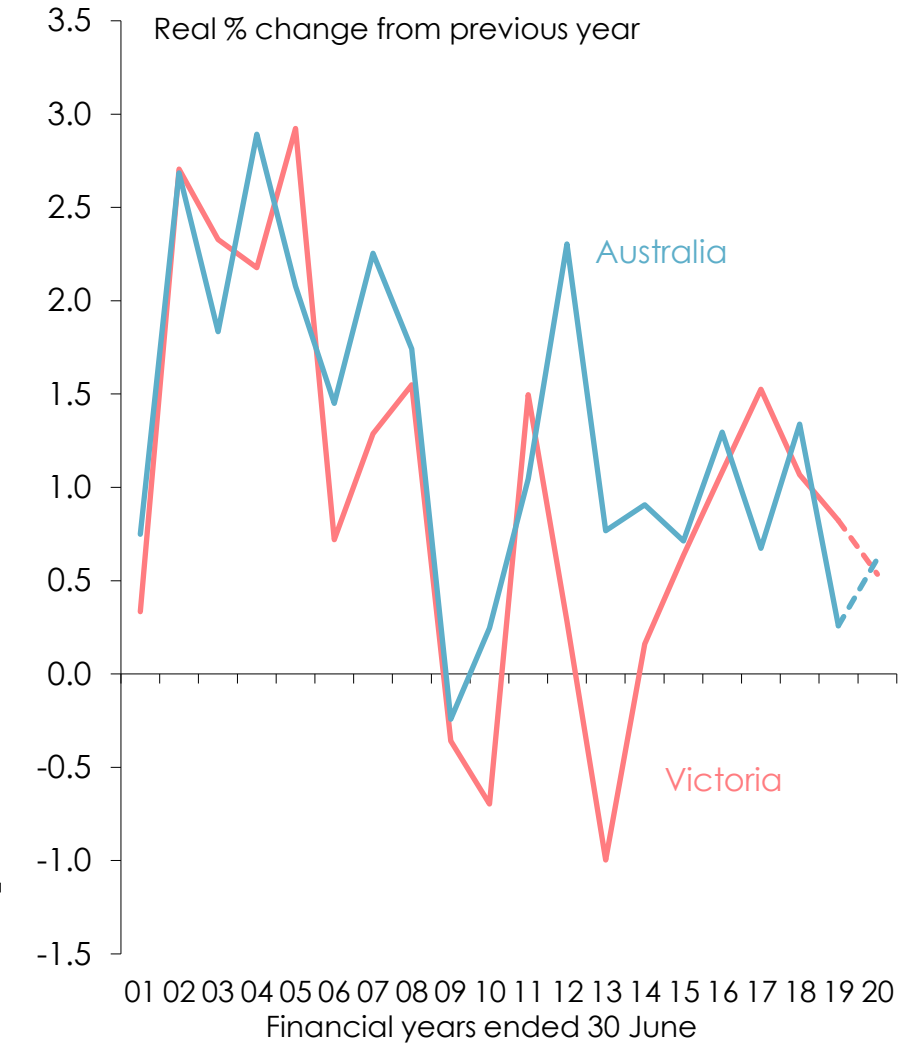
Population growth – Victoria vs national average



Sources of Victoria's population growth



Per capita economic growth – Victoria vs national average

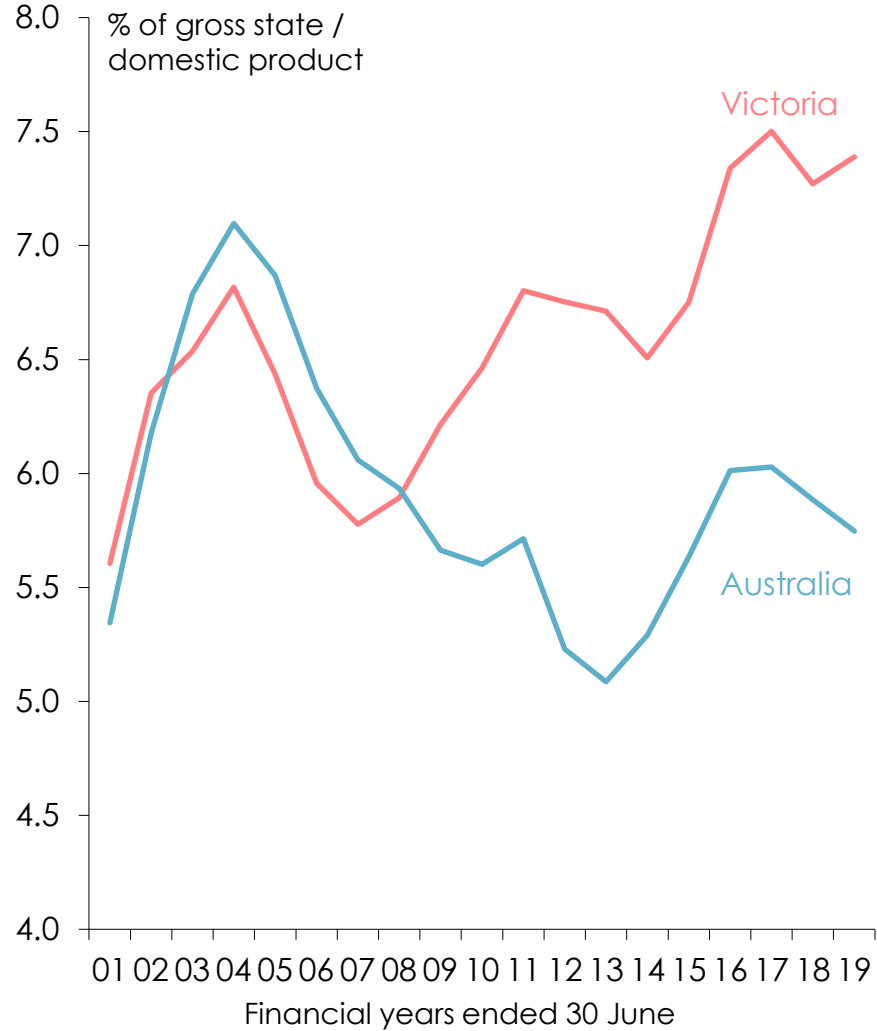


Note: 2019-20 economic growth estimates are forecasts provided in the Victorian and Australian Government mid-year budget reviews published in December 2019.

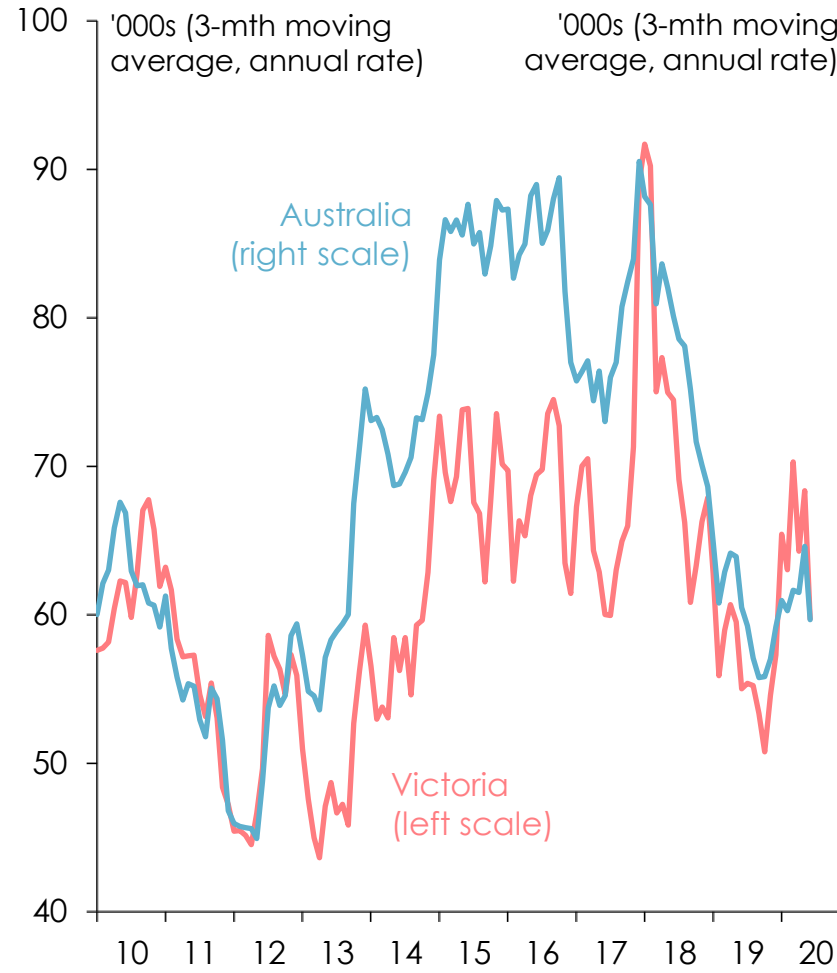
Source: ABS; Victorian and Australian Governments.

... as a result of which, it has become much more vulnerable to a downturn in housing activity than the rest of Australia

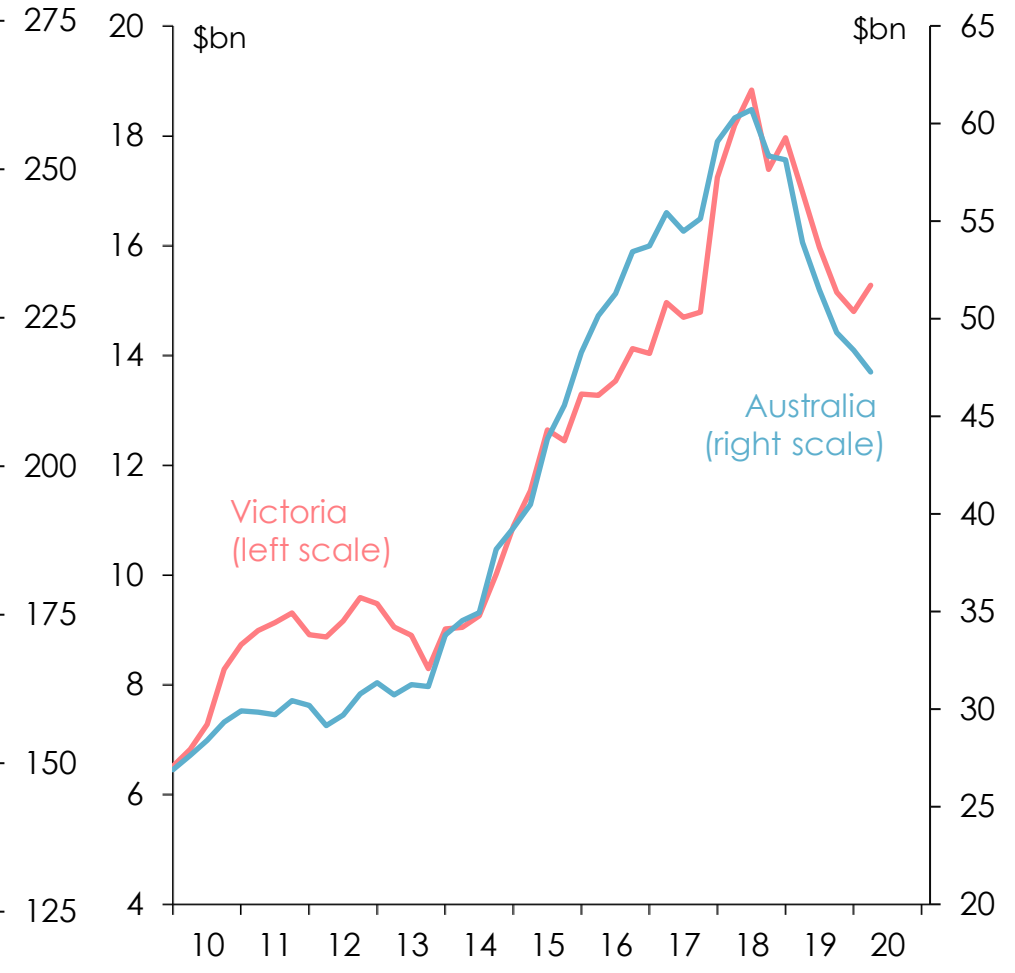
Dwelling construction as a pc of gross product



Residential building approvals



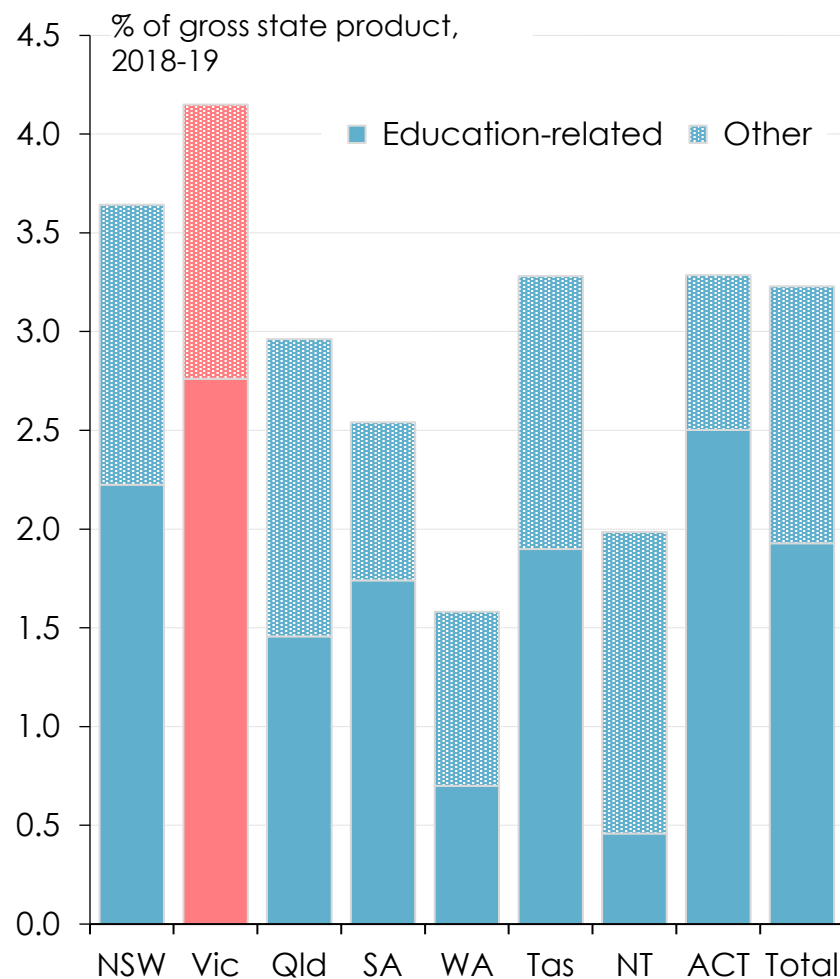
'Pipeline' of residential building work yet to be done



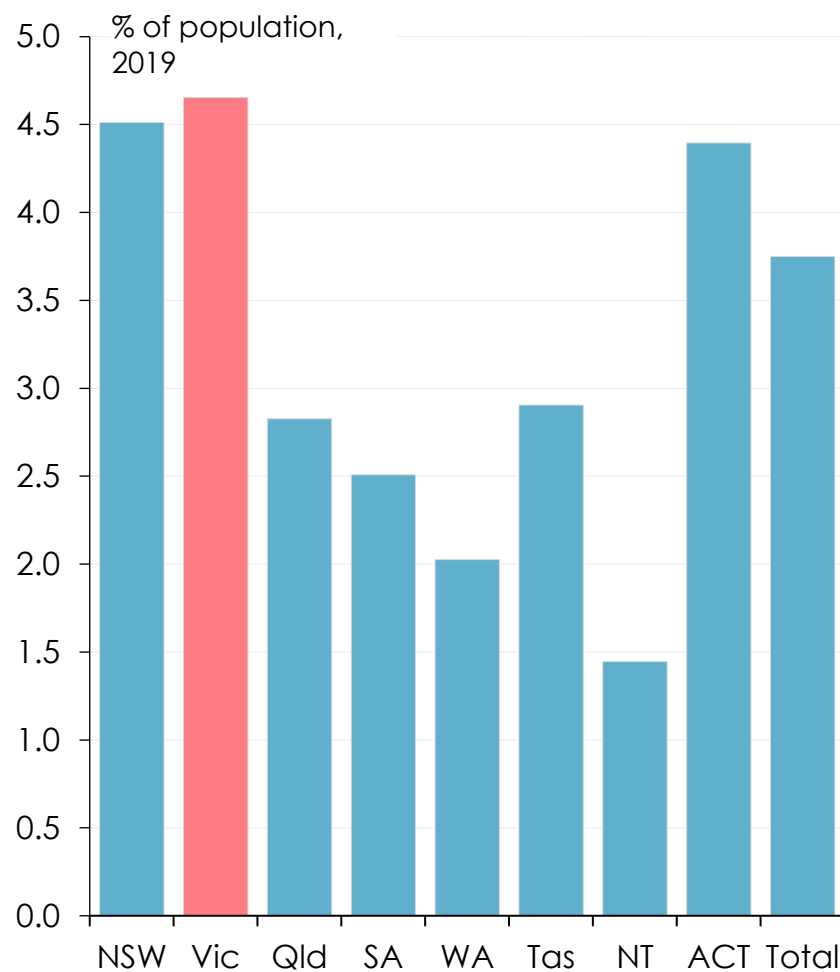
Source: ABS.

Victoria is also more dependent on foreign tourists and students than any other state or territory

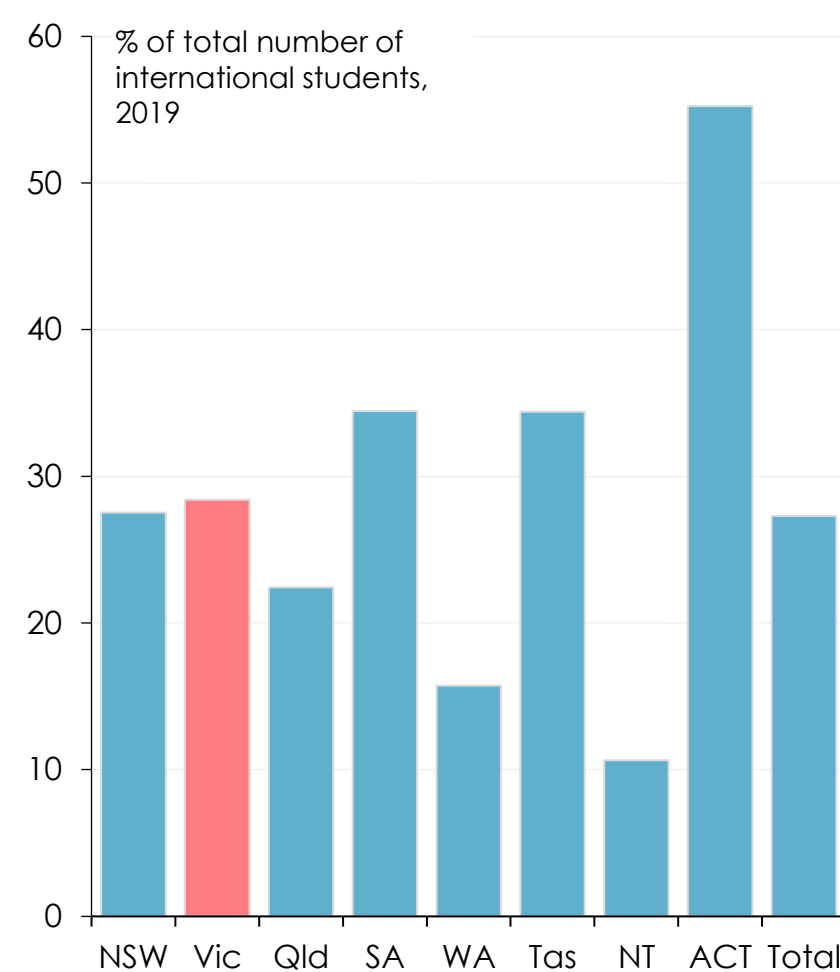
Travel services exports as a pc of gross state product, 2018-19



International students as a pc of population, 2019



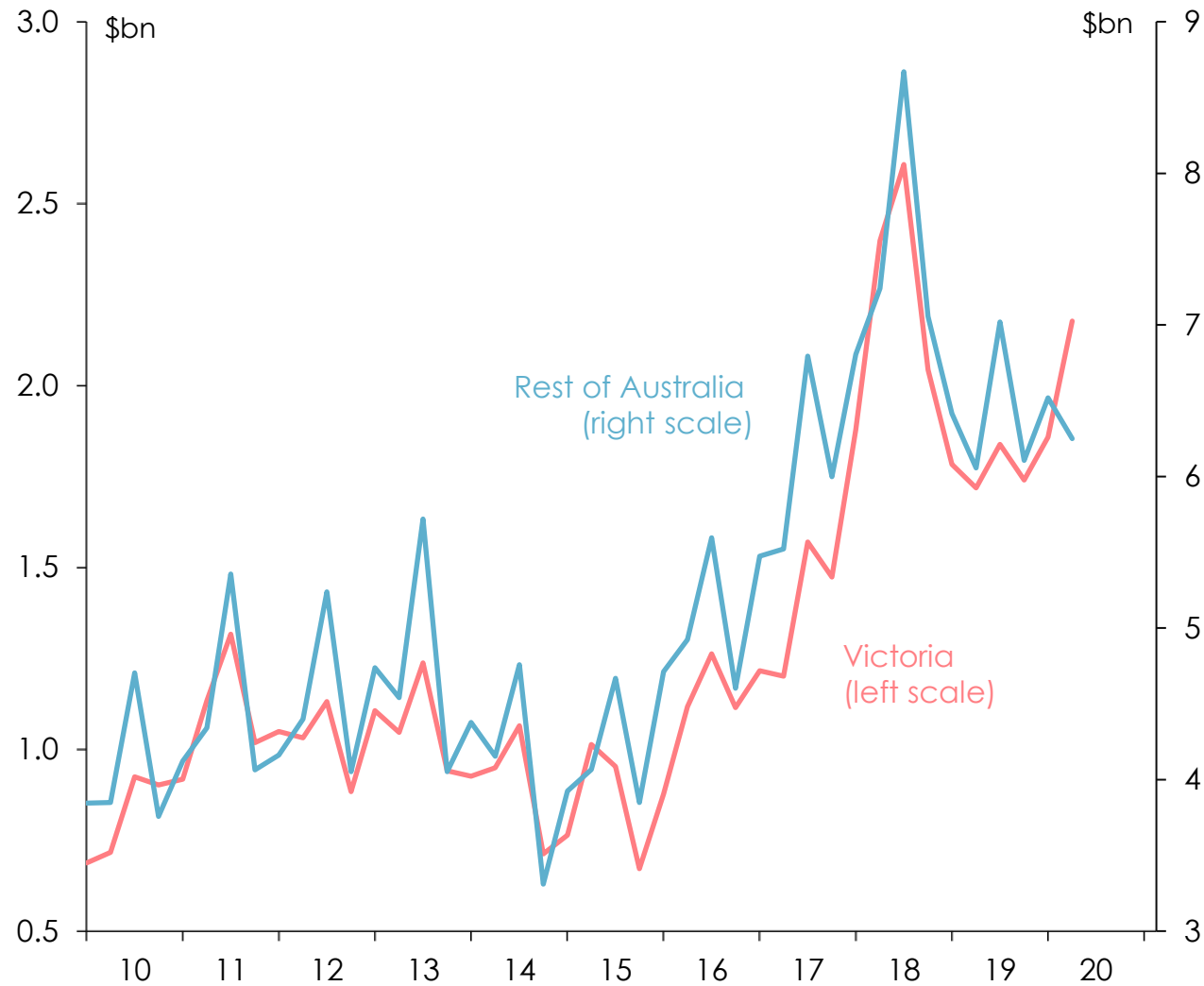
Chinese students as a pc of total international students, 2019



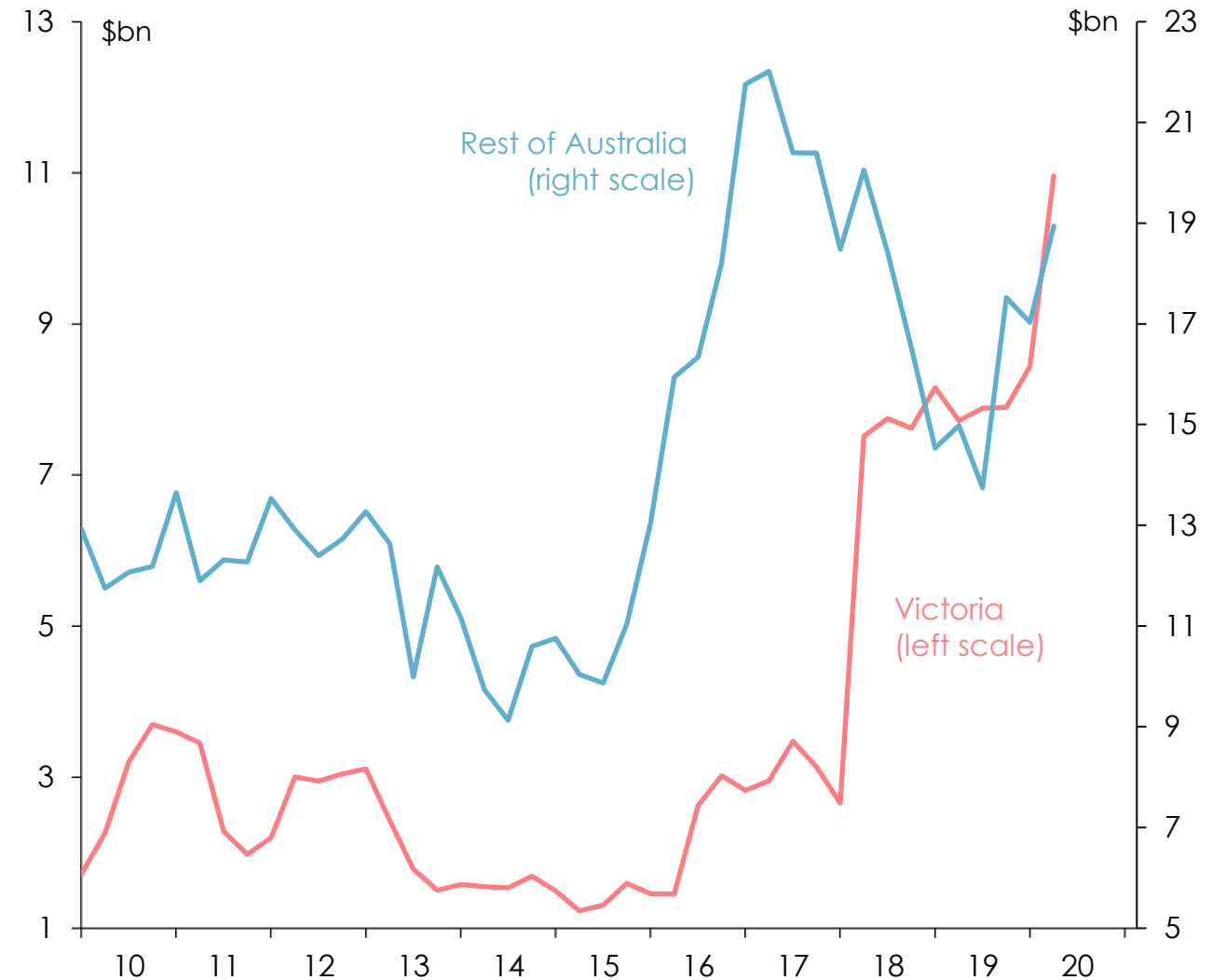
Sources: ABS; Australian Department of Education, Skills and Employment.

Victoria does have a strong pipeline of infrastructure construction work

Infrastructure construction work done



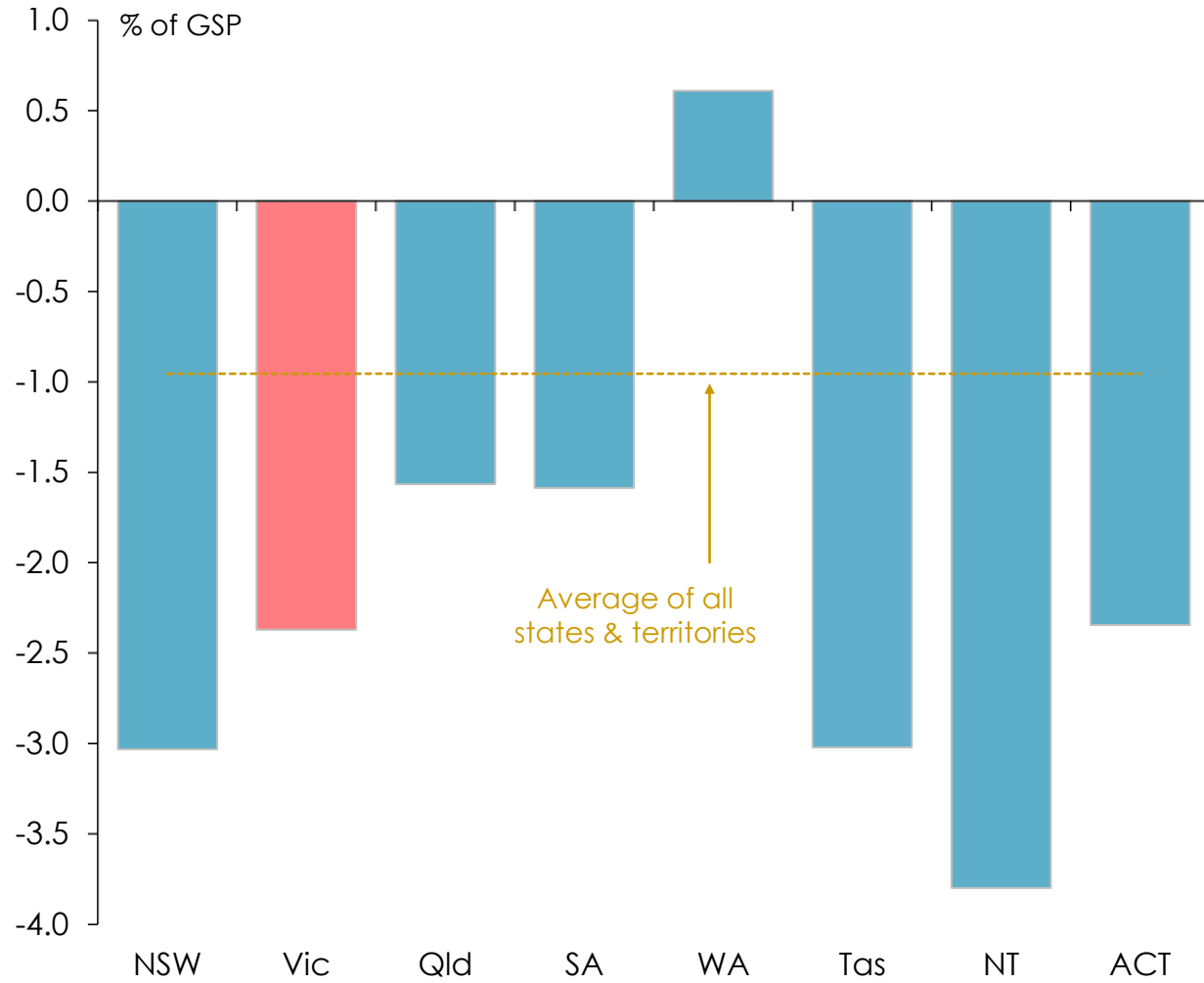
'Pipeline' of infrastructure construction work yet to be done



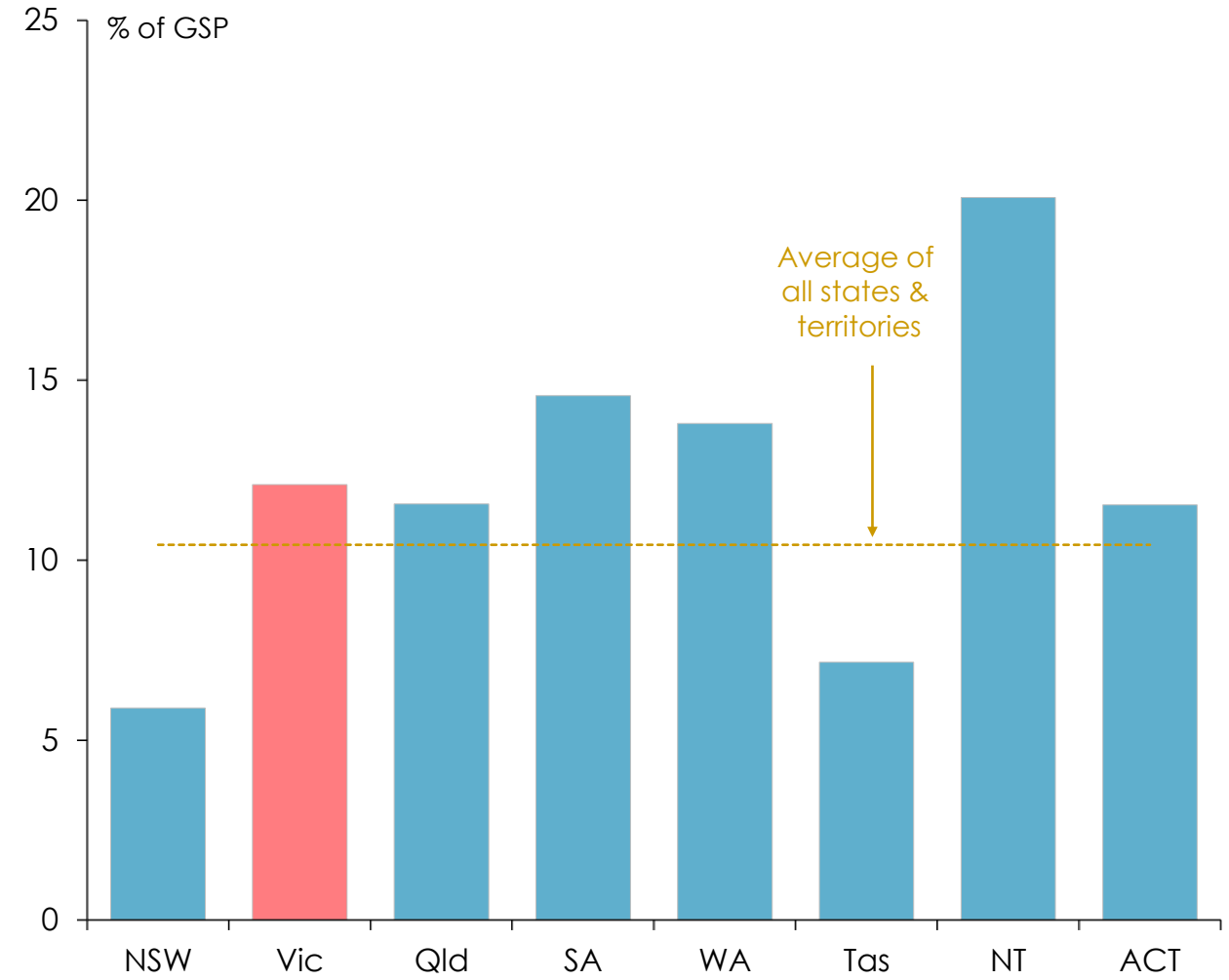
Note: 'infrastructure construction' is engineering construction work done by or for the public sector, excluding electricity and heavy industry. Source: ABS.

Victoria's state public sector was in a slightly weaker financial position going into the pandemic than the average for all states and territories

Projected public non-financial sector cash balance, 2019-20



Projected public non-financial sector net debt, 30th June 2020

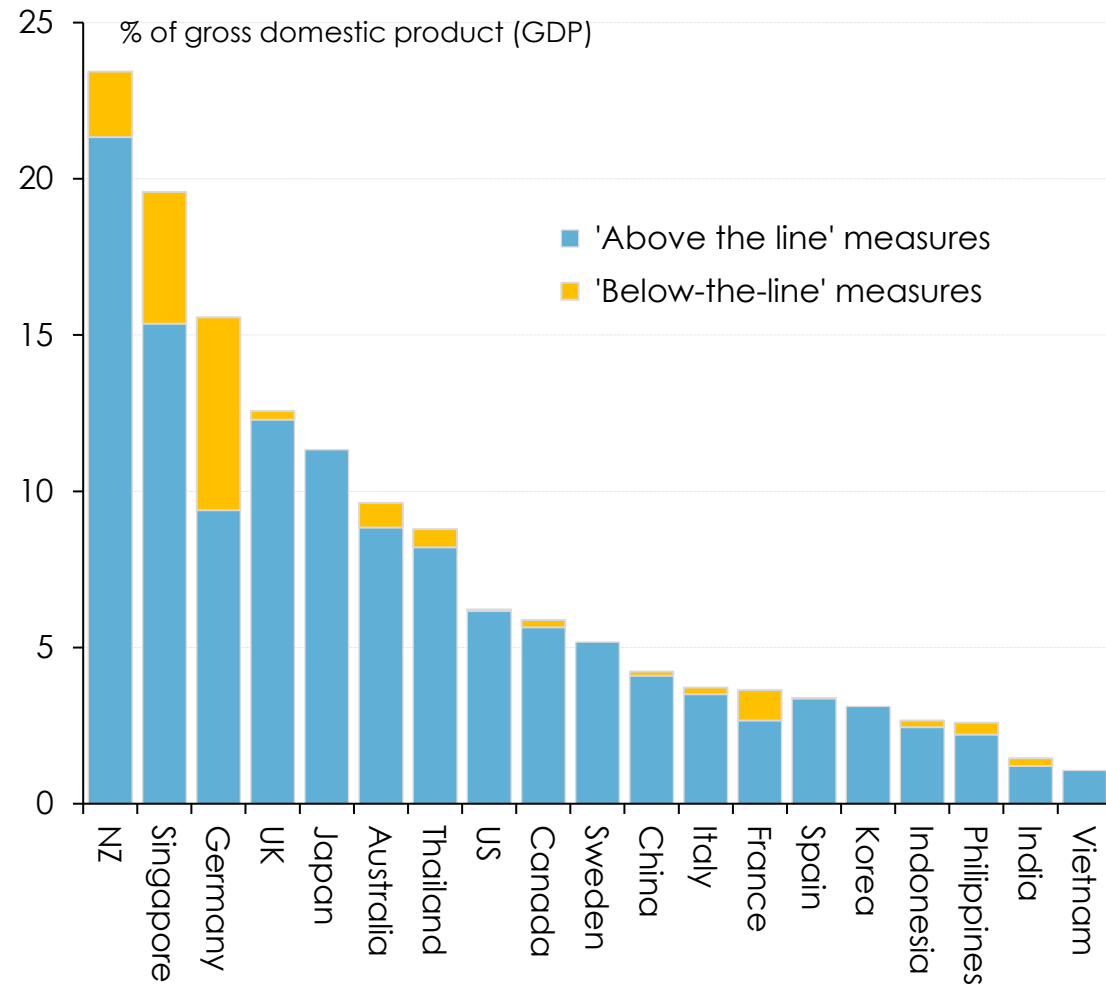


Note: 'Public non-financial sector' encompasses 'general government' (departments and agencies funded primarily by taxation revenue or grants) and public non-financial corporations. Source: State and territory Mid-Year Budget Reviews (December 2019, except Tasmania, February 2020); ABS; Corinna.

The Australian policy response

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.

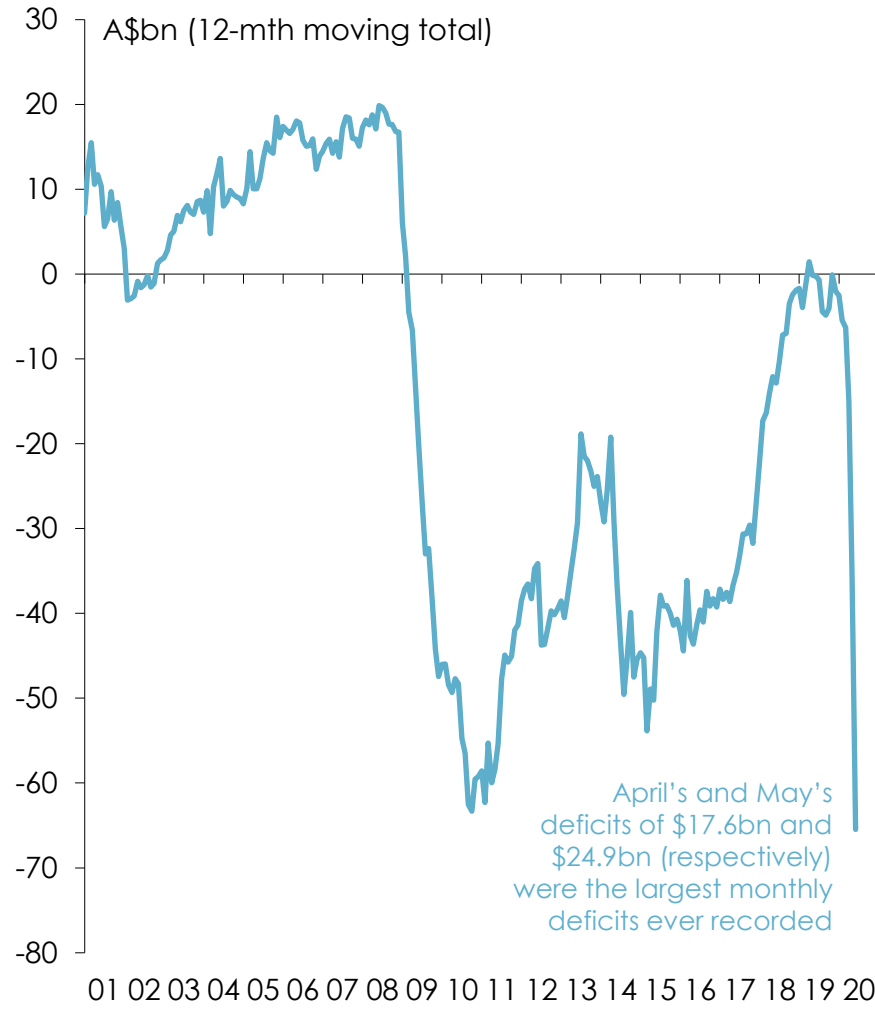
- ❑ Policy measures announced thus far by the Australian Government total \$180bn (allowing for the downward revision to the cost of JobKeeper), or about 9% of GDP – which is large by international standards (and double what was done during the GFC)
- ❑ Principal objectives of policy measures have been to –
 - maximize the 'survival prospects' of businesses affected by the shutdown
 - 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 has resulted in some anomalies
- ❑ Policy measures also designed to be readily 'switched off' once the need for them has passed
 - most of them scheduled to terminate at the end of September
 - which poses the risk of a 'setback' at that time unless the Government 'tapers' some programs

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

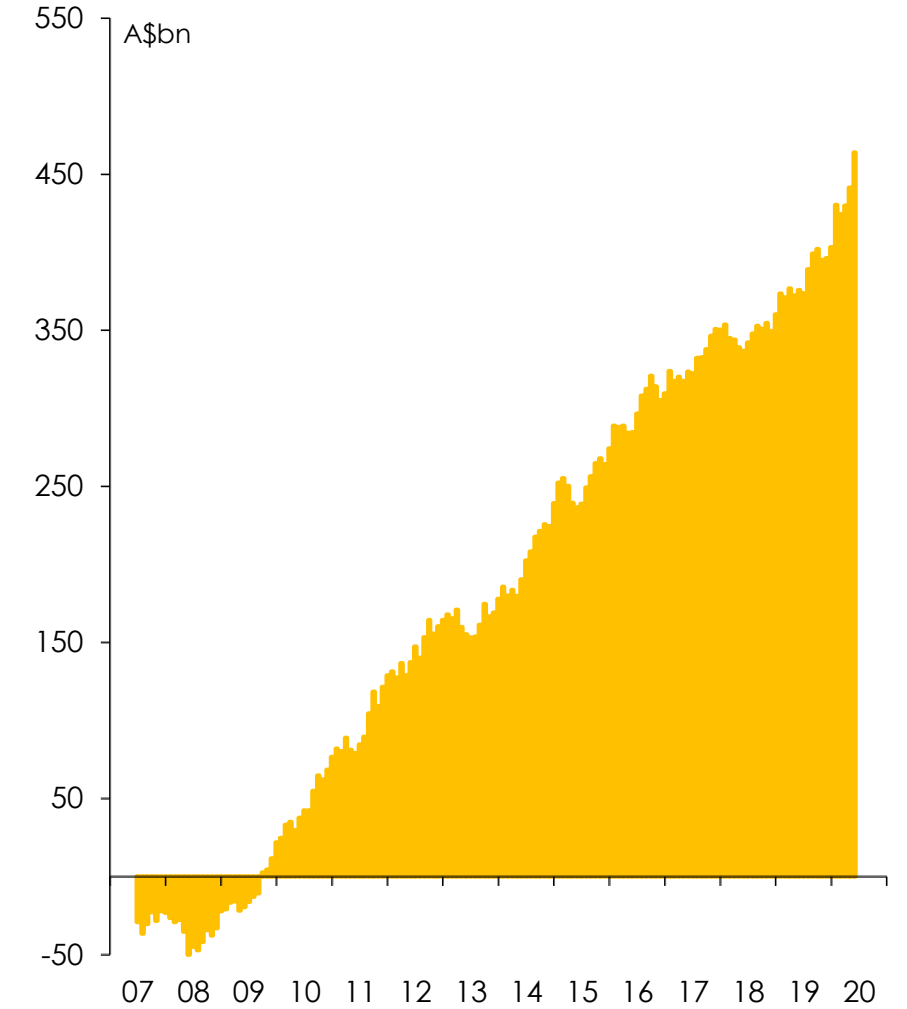
Australian Government revenue and expenses



Australian Government 'underlying' cash balance



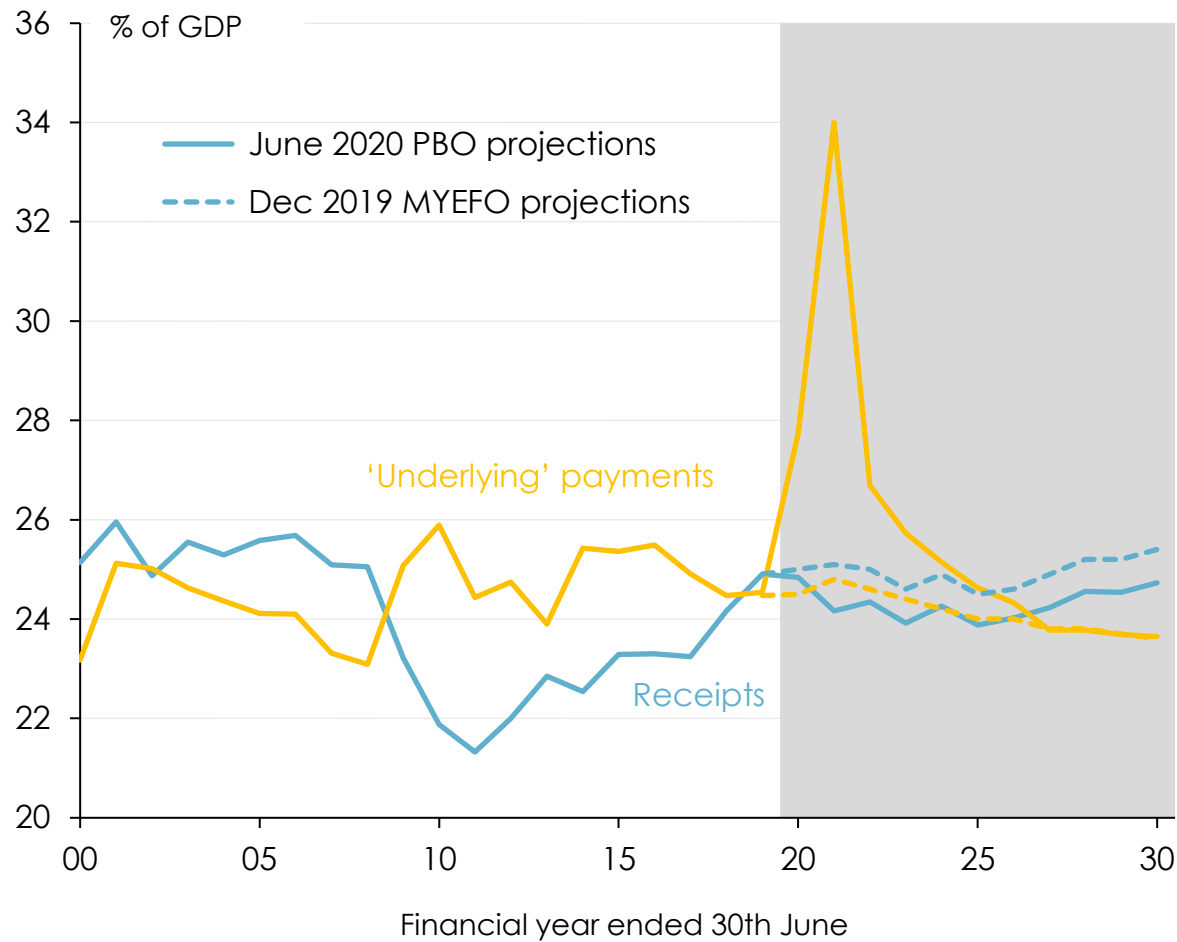
Australian Government net debt



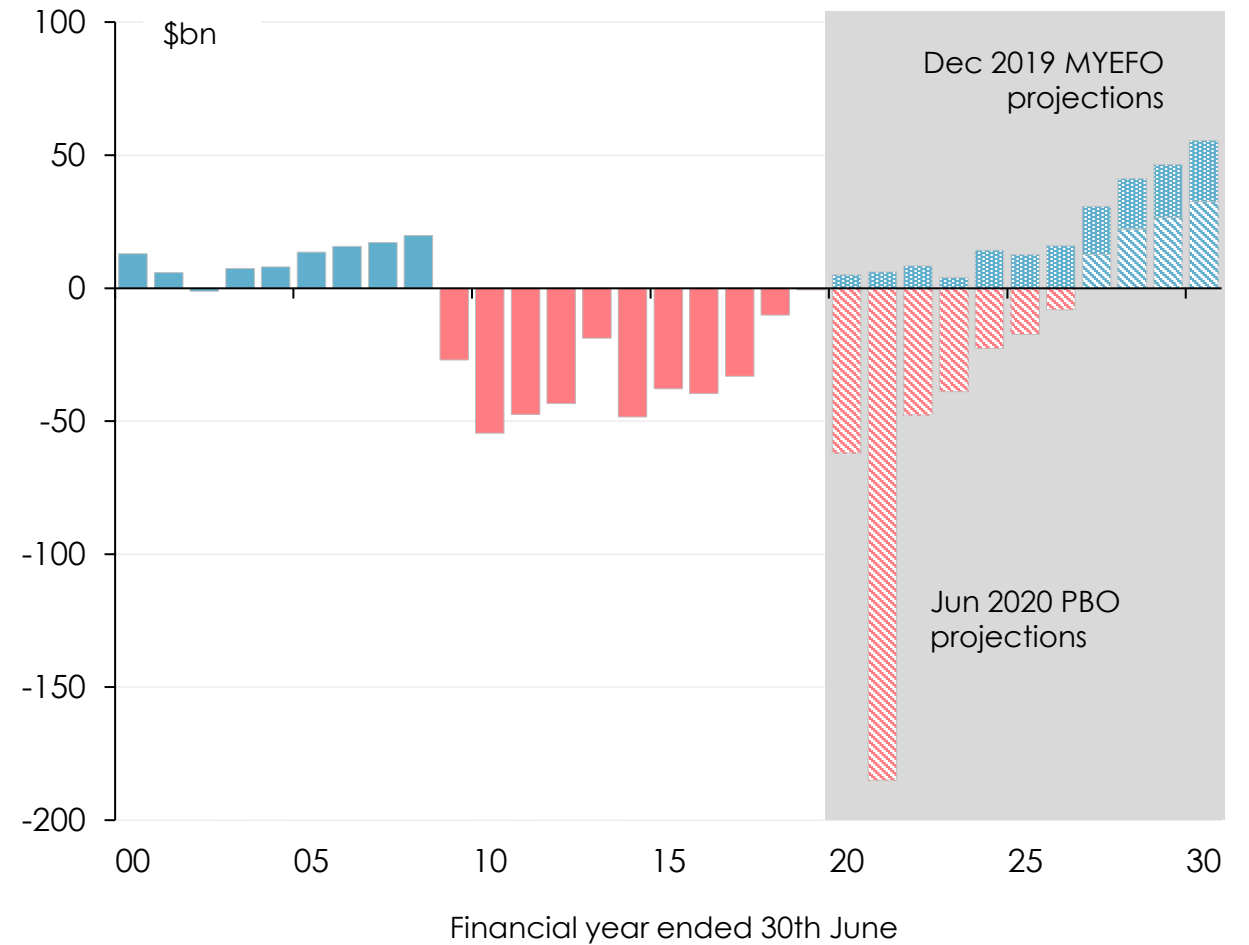
Note: Revenue and expenses are accrual accounting items. The 'underlying' cash balance is (cash) receipts minus payments, excluding transactions in financial assets for policy purposes and net earnings of the Future Fund. Net debt is total interest-bearing liabilities (government securities, deposits,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

... will blow out to over \$60bn in 2019-20, around \$185bn in 2020-21, and won't return to surplus (on unchanged policies) until 2026-27 – but ...

Australian Government receipts and 'underlying' payments



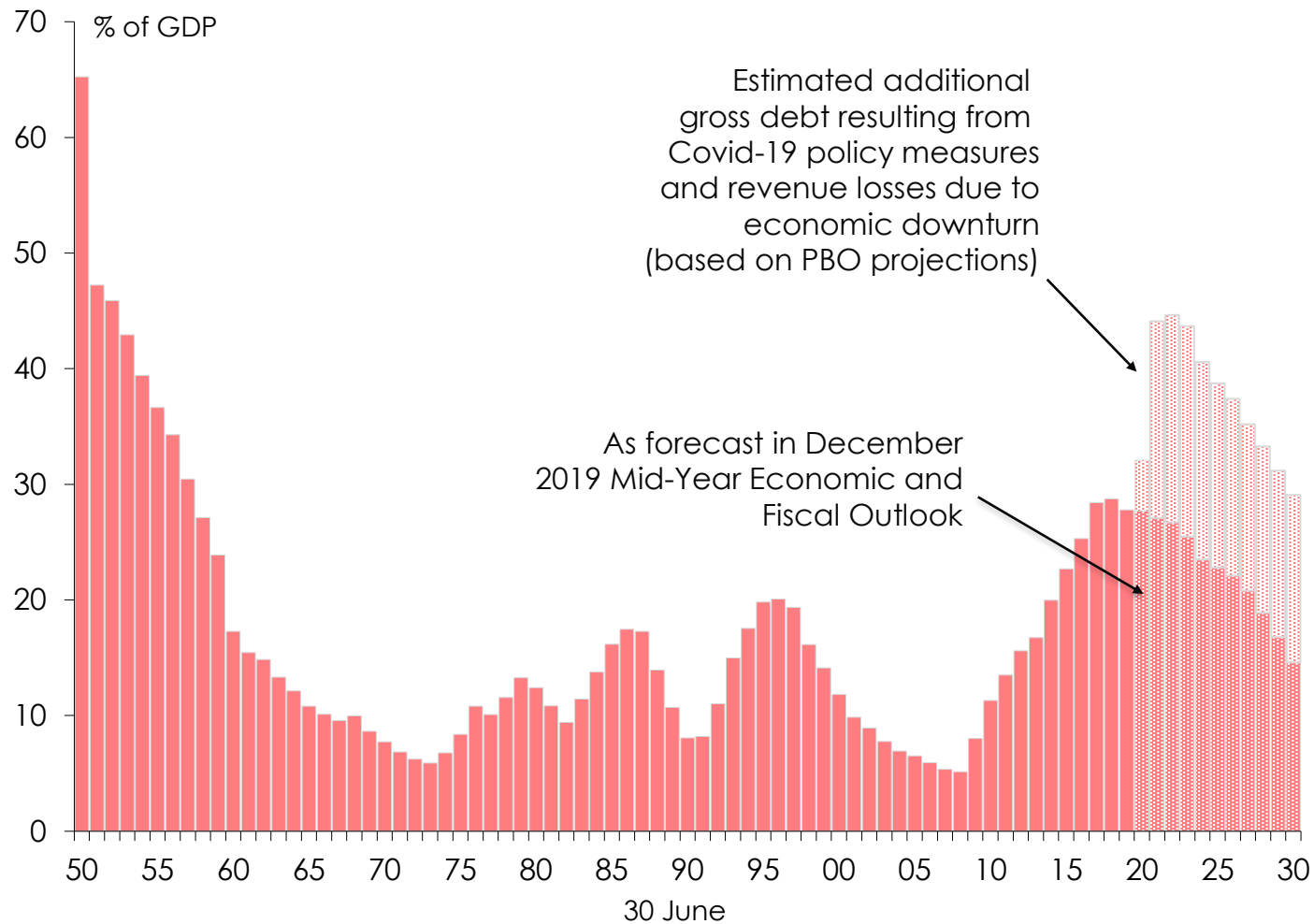
Australian Government 'underlying' cash balance



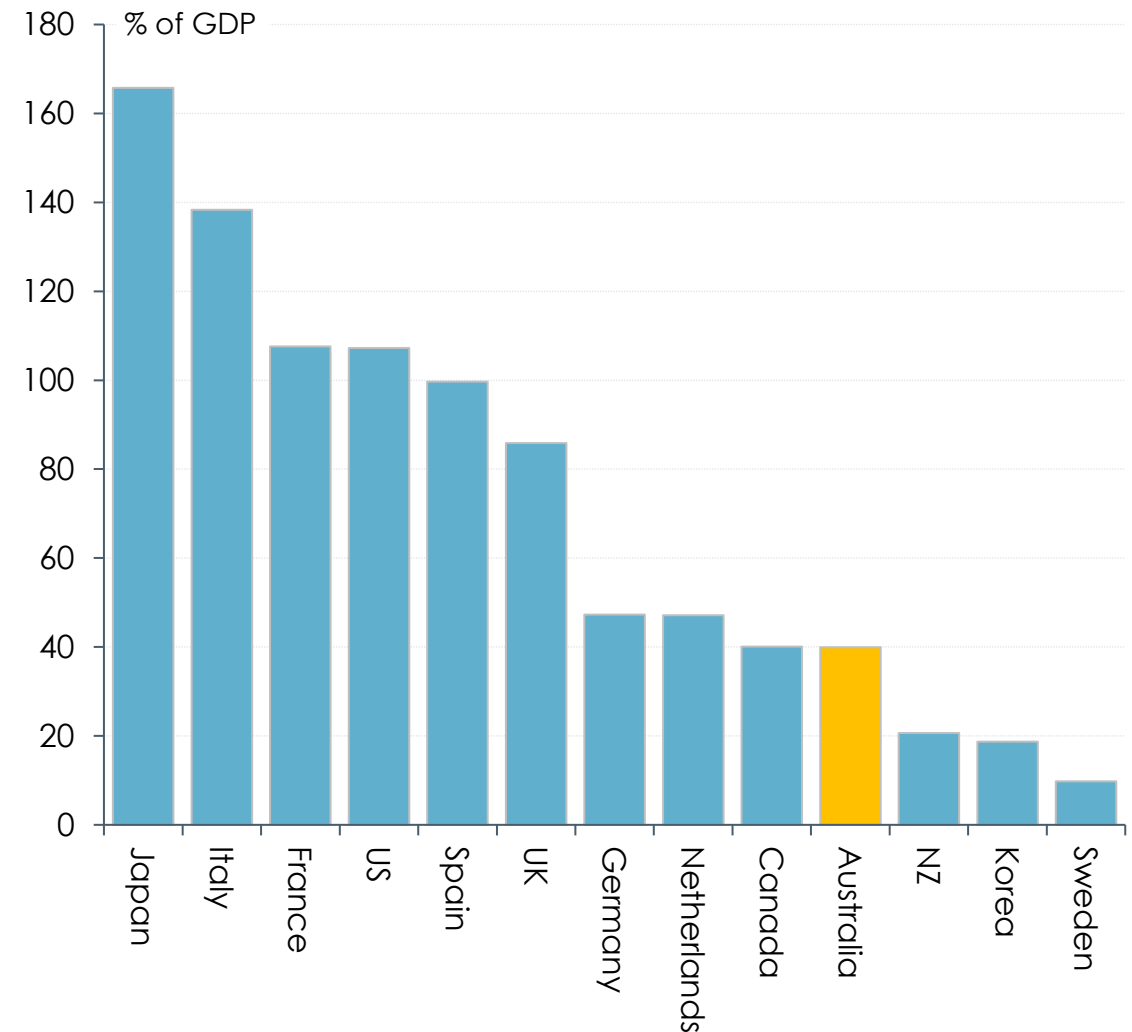
Note: 'Underlying' payments excludes net investment in financial assets for policy purposes. The 'underlying' cash balance also excludes net earnings of the Future Fund prior to 2020-21. Sources: Australian Government, *Mid-Year Economic and Fiscal Outlook (MYEFO)*, December 2019; Parliamentary Budget Office (PBO), *Medium-term fiscal projections: impact of Covid-19 pandemic and response* (5th June 2020). The PBO projections were compiled using the RBA's 'baseline' scenario outlined in its May 8th *Statement on Monetary Policy* for economic parameters. The Treasurer will give an update of fiscal and economic forecasts on 23rd July.

... 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



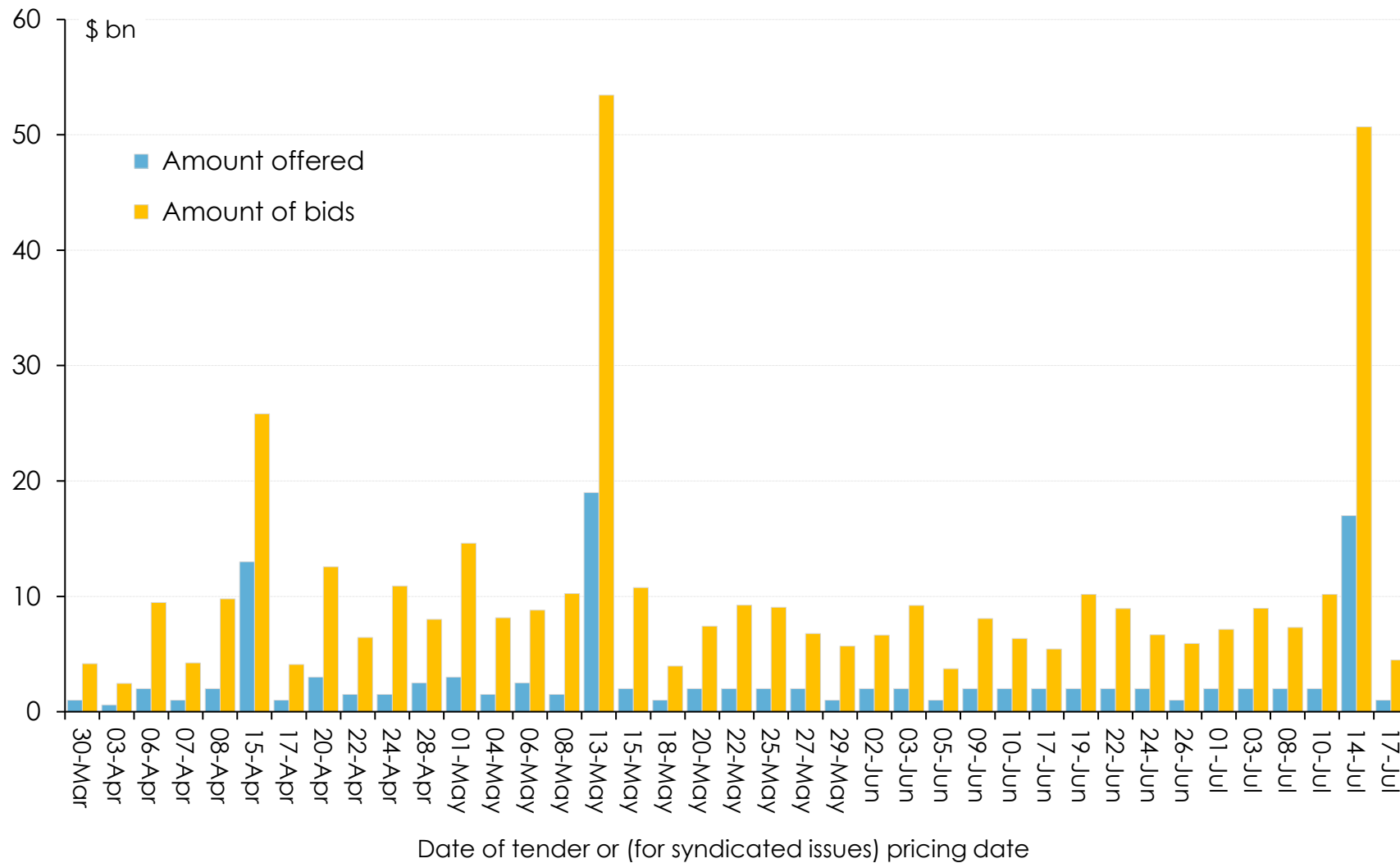
General government net debt, 2021



Note: Estimates of additional gross debt from 2019-20 onwards are derived by assuming that gross debt rises by the same dollar amount as net debt projected by the Parliamentary Budget Office in its 'baseline' scenario. Sources: Katrina Di Marco, Mitchell Pirie and Wilson Au-Yeung, *A History of Public Debt in Australia* (Australian Treasury, 2011); Australian Government, *Mid-Year Economic and Fiscal Outlook* (MYEFO), December 2019; Parliamentary Budget Office (PBO), *Medium-term fiscal projections: impact of Covid-19 pandemic and response* (5th June 2020); International Monetary Fund, *Fiscal Monitor*, April 2020.

The Australian Government has so far had 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 \$112.6bn of Treasury bonds
- Based on the volume of bids received at bond tenders or for syndicated issues, the AOFM could have borrowed \$406bn (that is, 3.6 times as much as it actually accepted) – with the highest yields on unsuccessful bids averaging 34bp above the highest accepted yields
- This past Tuesday, AOFM received offers worth \$50.7bn for \$17bn of 4½ year bonds carrying a coupon rate of 0.25% pa – the average yield on successful bids was 0.495%
 - 42% of the bonds were bought by banks, 27% by fund managers, 23% by hedge funds, and 8% by (foreign) central banks

Source: Australian Office of Financial Management data hub.

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

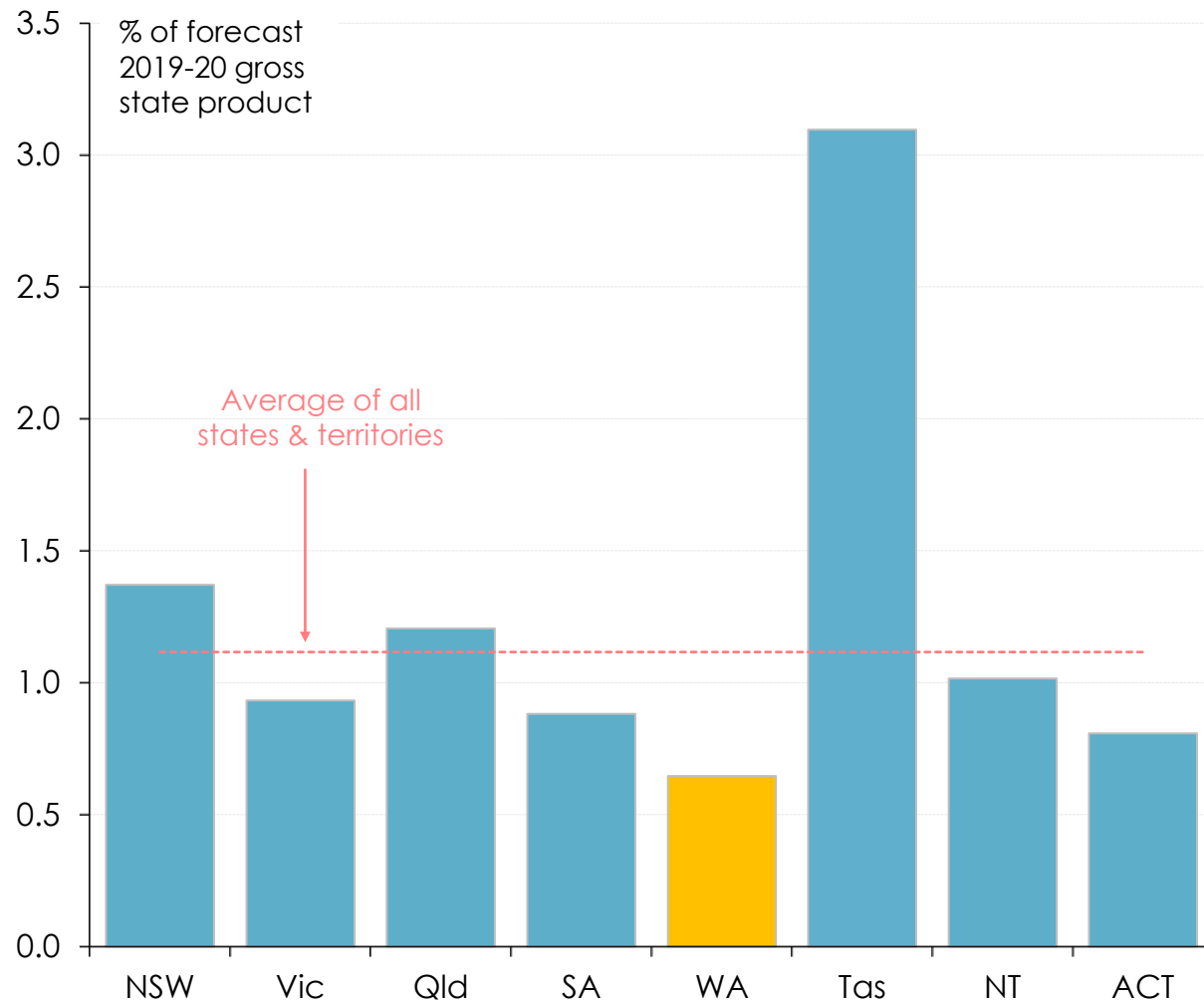
Rates from 2017-18 to 2023-24	New thresholds from 2018-19 to 2021-22	New thresholds from 2022-23 to 2023-24
Nil	Up to \$18,200 pa	Up to \$18,200 pa
19 %	\$18,201 - \$37,000	\$18,201 - \$45,000
32.5 %	\$37,001 - \$90,000	\$45,001 - \$120,000
37 %	\$90,001 - \$180,000	\$120,001 - \$180,000
45 %	Above \$180,000	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	

- ❑ 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 47)
 - 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
- ❑ This week the Government announced an extension of its wage subsidy scheme for apprentices to end-March 2021 (from end-September) and broadened the range of eligible employers, as well as a \$1bn boost for skills training programs
- ❑ Details of changes to the JobKeeper and JobSeeker programs are likely to be announced in the Treasurer’s Updated Economic and Fiscal Outlook Statement this coming Wednesday

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



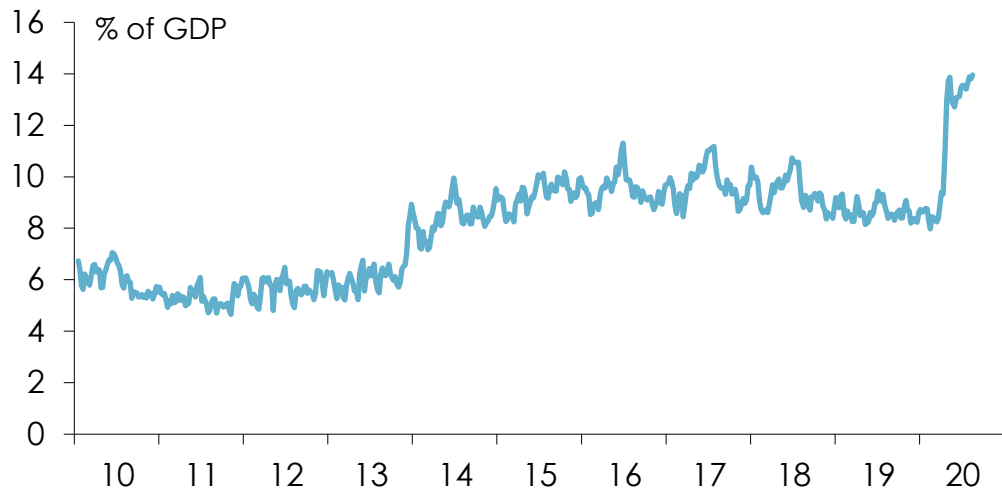
Voter approval of state premiers' handling of Covid-19



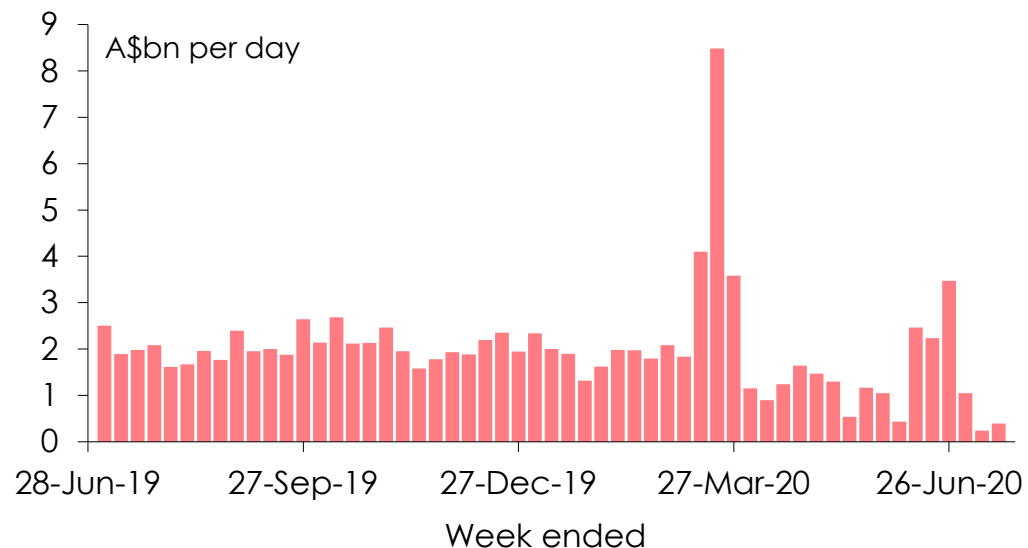
Sources: National Australia Bank, *State Economic Overview*, April 2020); Newpoll in *The Australian*, 30th June 2020.

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



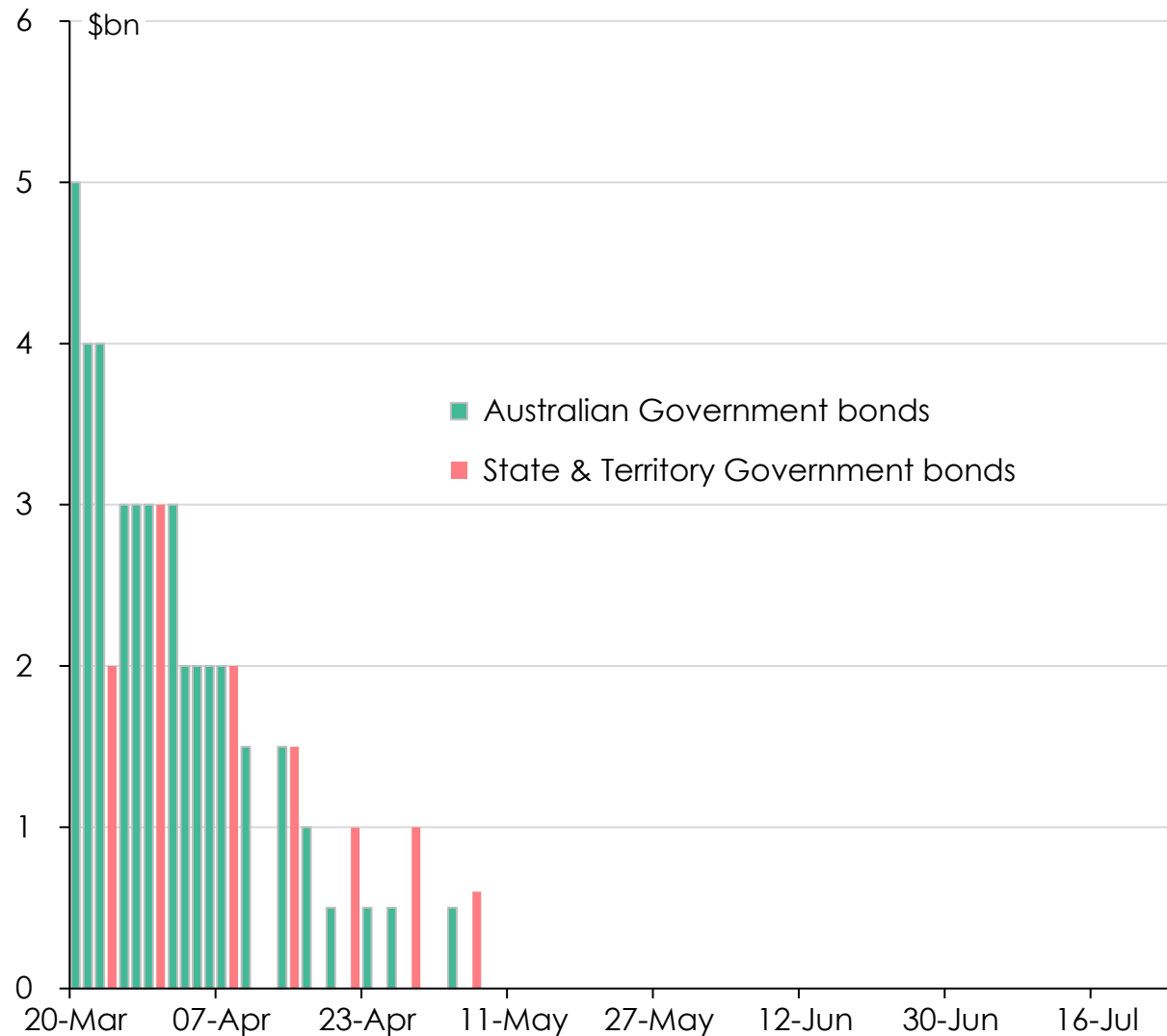
Reserve Bank daily repo transactions



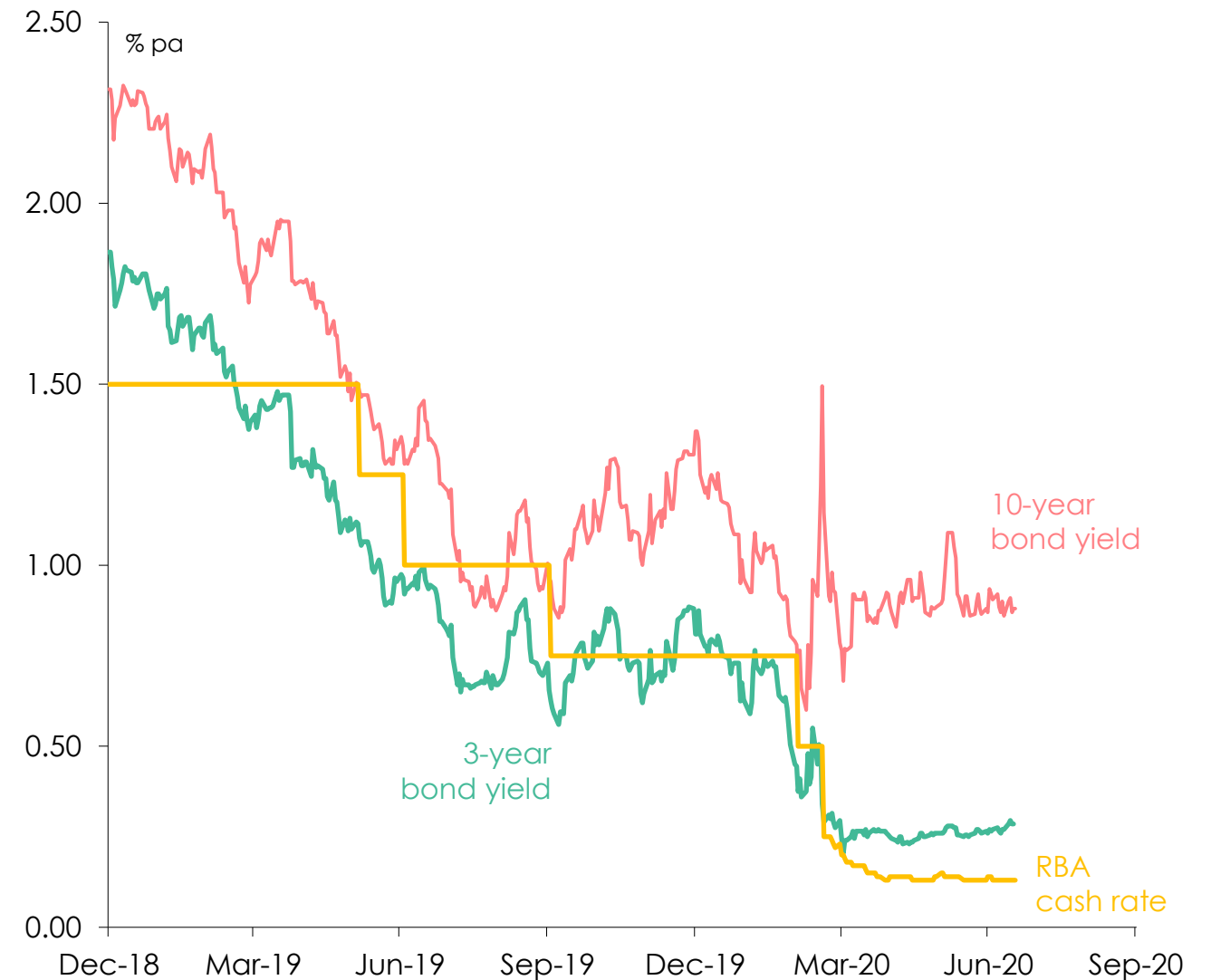
- ❑ **The RBA cut the cash rate to 0.25% in March and has kept it there**
 - the RBA has committed to keeping it at this level 'until progress is made towards full employment' and 'it is confident inflation will be sustainably within the 2-3% target band'
 - RBA has 'no appetite' for negative rates
- ❑ **RBA has committed to purchase bonds in the secondary market with a view to keeping the 3-year yield at 0.25%**
 - to date RBA bond purchases amount to \$50bn (~ 2½% of GDP)
 - the RBA hasn't purchased any bonds since 6th May (but is prepared to 'scale up' these purchases again 'if necessary')
 - RBA assets are now equivalent to 14% of GDP (cf. BoC 23%, US Fed 33%, BoE 36%, ECB 54%, BoJ 119% - see slide 24) and RBNZ 17.5%
- ❑ **RBA provided additional liquidity through 'open market operations' to prevent disruption of credit markets in March**
 - RBA repo transactions averaged just over \$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 \$8½ bn a day in 3rd week of March
- ❑ **'Term Funding Facility' to provide up to \$90 bn at 0.25% pa to lending institutions for increased lending, especially to businesses with annual turnover of less than \$50 mn**
 - to date \$23.3 bn has been provided through this facility (of which \$7.3 bn was drawn down last week, by far the largest so far)

The RBA is targeting the 3-year bond yield at 0.25% pa – and hasn't needed to purchase bonds since 6th May in order to keep it there

RBA open market bond purchases



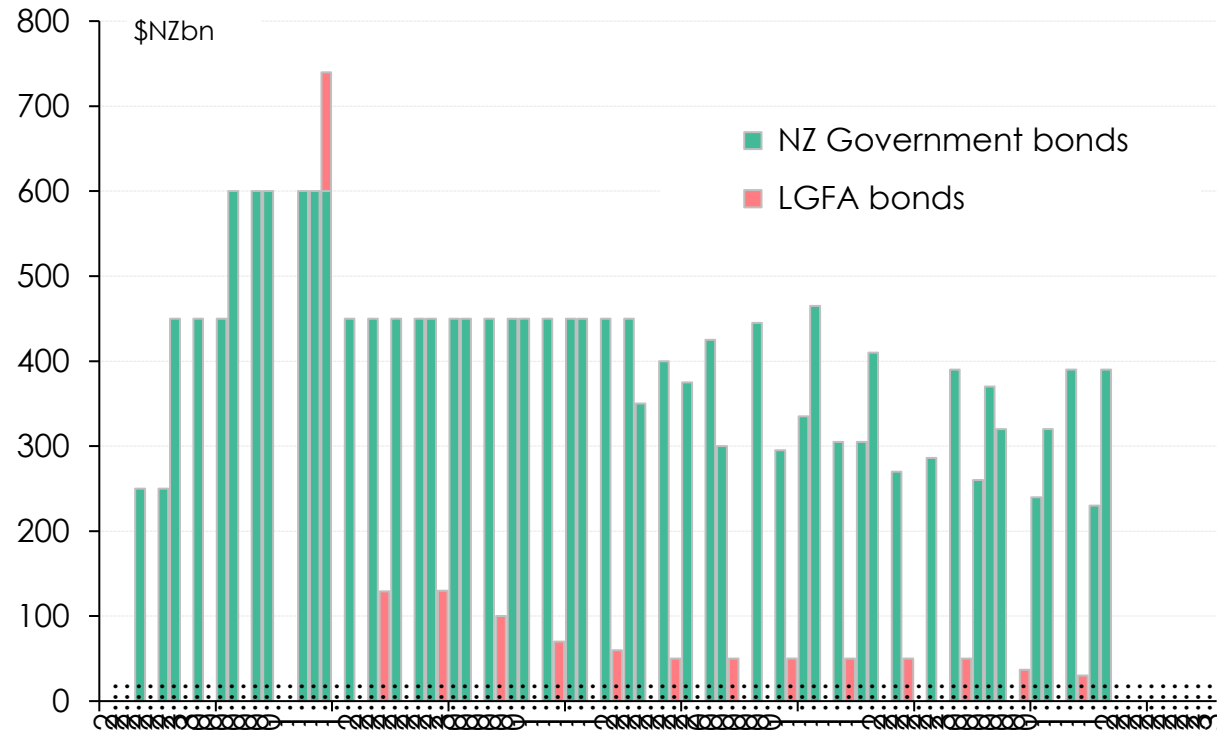
Interest rates



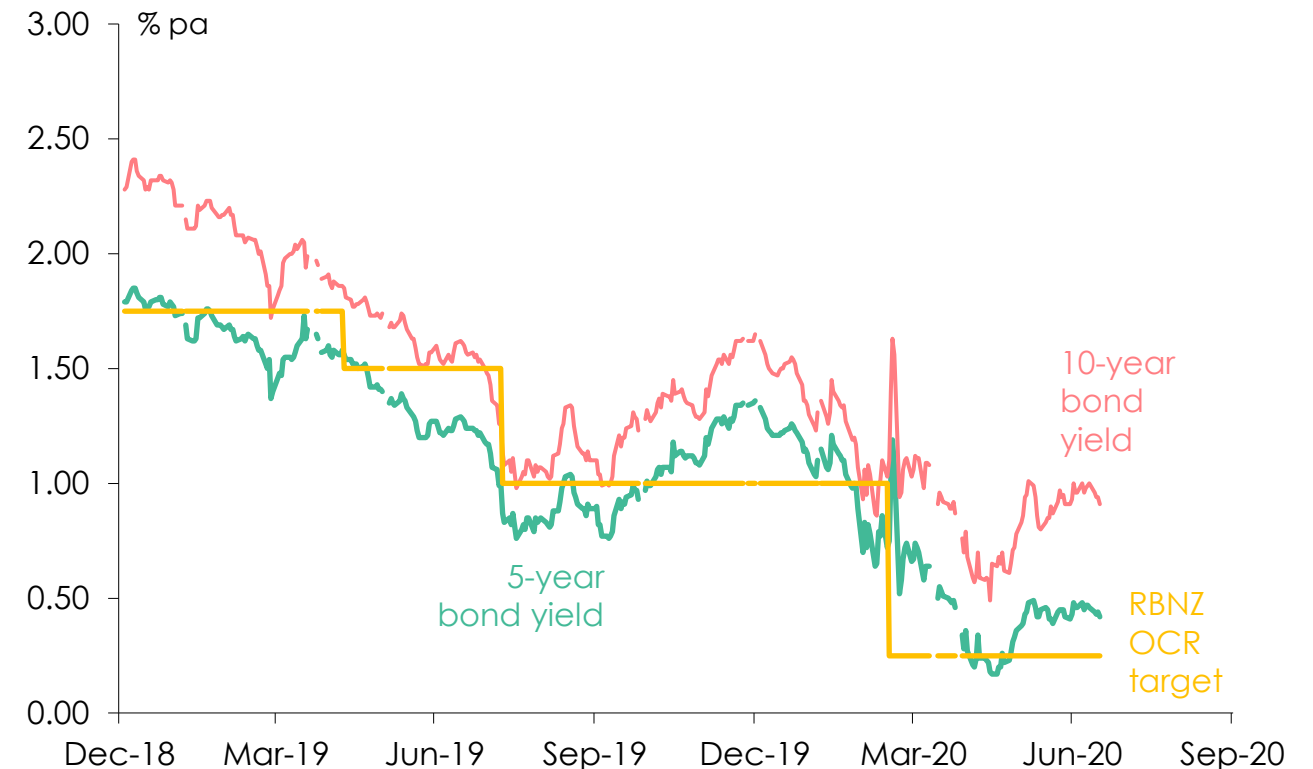
Source: Reserve Bank of Australia. Data up to 17th July.

The RBNZ's 'QE' program has been larger than the RBA's, but less successful in stabilizing bond yields

RBNZ open market bond purchases



New Zealand interest rates

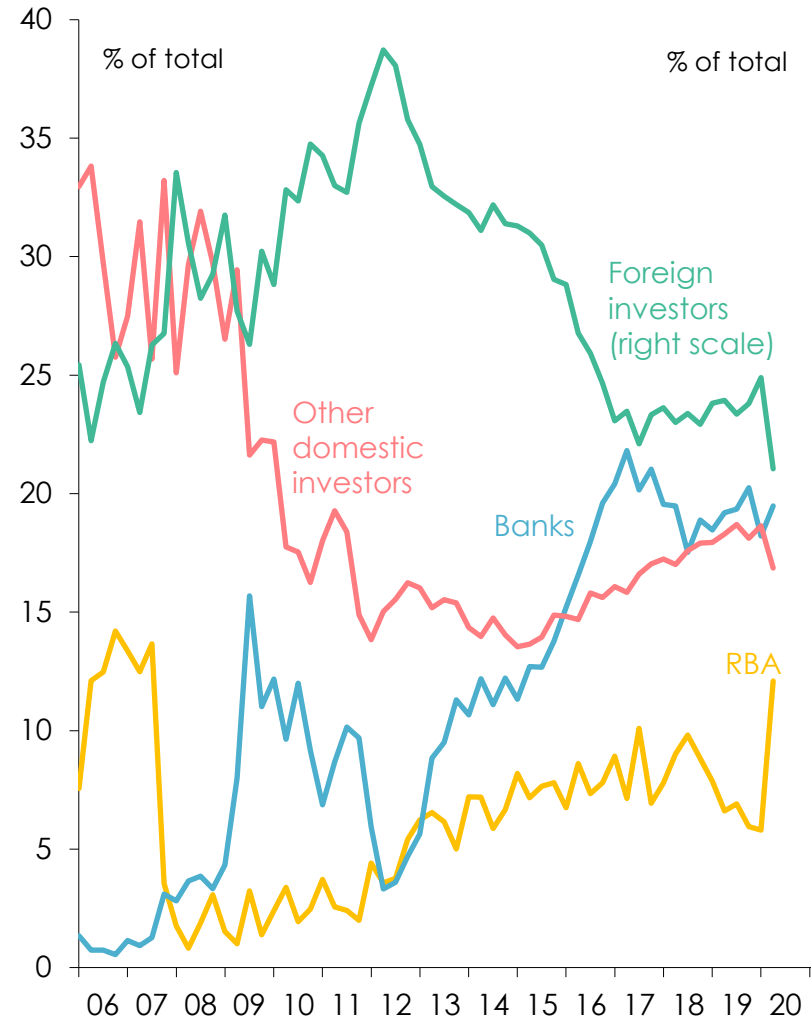


- ❑ RBNZ has adopted an ECB-style QE program, establishing a Large Scale Asset Program initially set at \$NZ33bn (10½% of GDP), since increased to \$60bn (19% of GDP)
- ❑ Since 25th March RBNZ bond purchases have amounted to \$NZ21.4 bn (6.9% of GDP) – but have been less successful than the RBA's in stabilizing medium-term bond yields
- ❑ The RBNZ has asked banks to prepare operationally for the possibility of negative interest rates

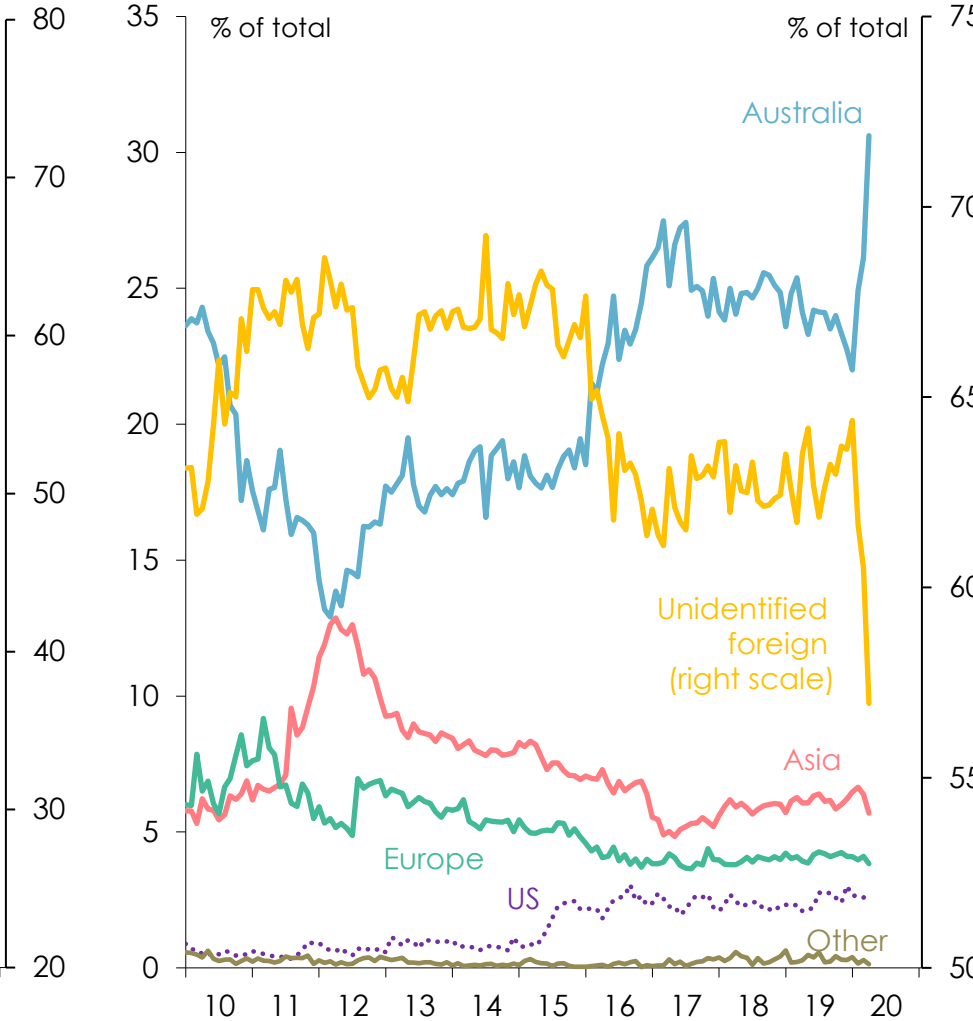
Note: LGFA = Local Government Financing Authority. Source: Reserve Bank of New Zealand. Data up 20th July.

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

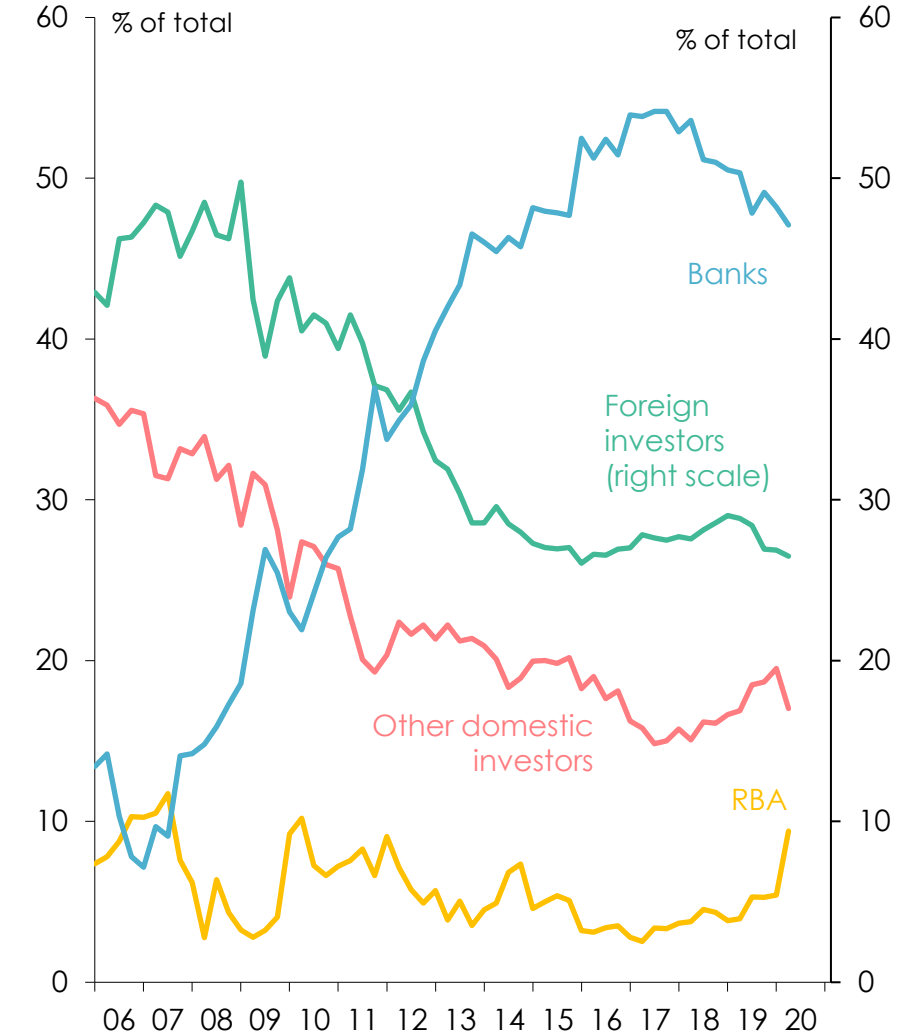
Holder of Australian Government bonds



Nationality of Australian Government bond holders



Holder of State and Territory Government bonds



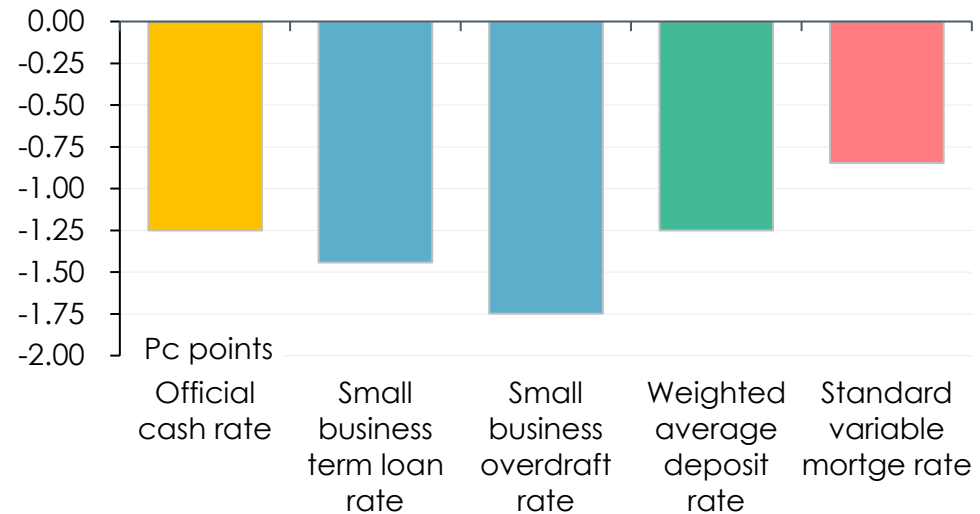
Sources: ABS (Finance & Wealth Accounts); Australian Office of Financial Management. June quarter data will be released on 24th September.

The RBA Governor has again ruled out negative interest rates - and the application of 'modern monetary theory'

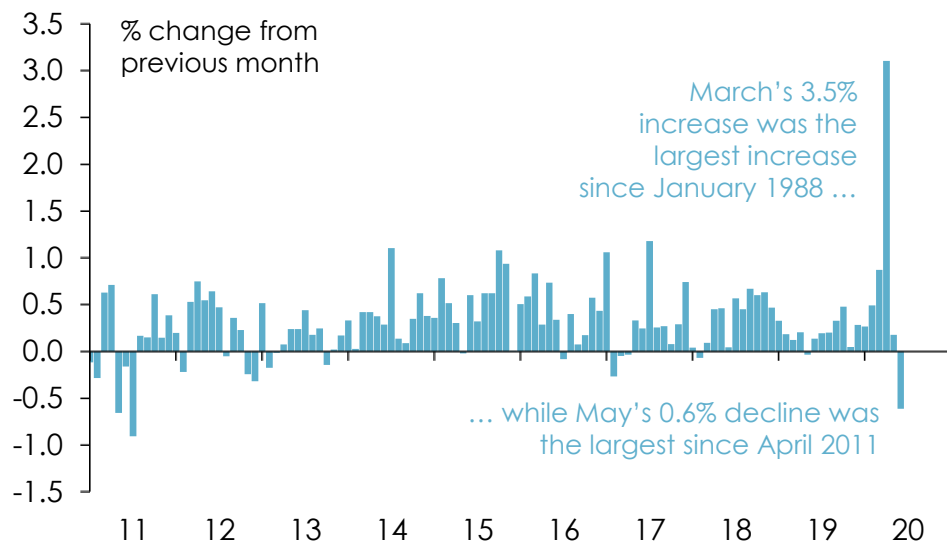
- ❑ **Speaking yesterday, Governor Lowe said “negative interest rates in Australia are extraordinarily unlikely”**
 - “They can cause stresses in the financial system that are unhelpful for the supply of credit. They can also encourage people to save more, rather than spend more, so they can be counter-productive from that perspective too”
- ❑ **Governor Lowe also dissed ‘modern monetary theory’ (MMT) – though without referring to it by name**
 - “For some, this idea is seen as a way of avoiding financing constraints – it is seen as holding out the offer of a free lunch of sorts”
 - “The reality, though, is there is no free lunch. The tab always has to be paid and it is paid out of taxes and government revenues in one form or another”
- ❑ **How ‘the tab is paid for’ depends, according to Governor Lowe, on ‘the arrangements in place’**
 - if money-financed government spending was “successful in stimulating the economy” and started to push inflation up, and interest rates weren’t raised to counter that, the tab would be paid “through the inflation tax that the community pays”
 - if the government were to pay the IOU issued to the central bank along with any accumulated interest at some point, “this repayment would need to be funded by future taxes”
 - if the IOU was not interest-bearing and wasn’t repaid, “the central bank would start accumulating losses as the interest rate it paid on its deposit liabilities increased and there was no offsetting income” which “would lead to a decline in dividends to the government and possibly a future recapitalization of the central bank” both of which “have to be funded through tax revenue”
 - or, if the general level of interest rates were raised to counter inflation, but the low rate on deposits at the central bank maintained, that “would effectively amount to a tax on the banking system”
- ❑ **Governor Lowe also addressed the proposal by Stanley Fischer et al that monetary financing of budget deficits could be ‘welfare enhancing’ when governments are unable to borrow ‘on reasonable terms’ and conventional monetary policy options have been exhausted, provided that the central bank (rather than the government) determined the amount of monetary financing and the conditions under which it is provided**
 - “there are likely to be very significant challenges in maintaining this type of safeguard over time”
 - and in any case this “is not relevant to the situation we face in Australia”

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' of up to six months to business and home mortgage borrowers who request it (about 13% 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 this week 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
- ❑ Major banks have cut or deferred dividends
- ❑ 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
- ❑ Banks may be hit by increased loan impairment charges after 30th September

Conclusion: Some longer-term considerations

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

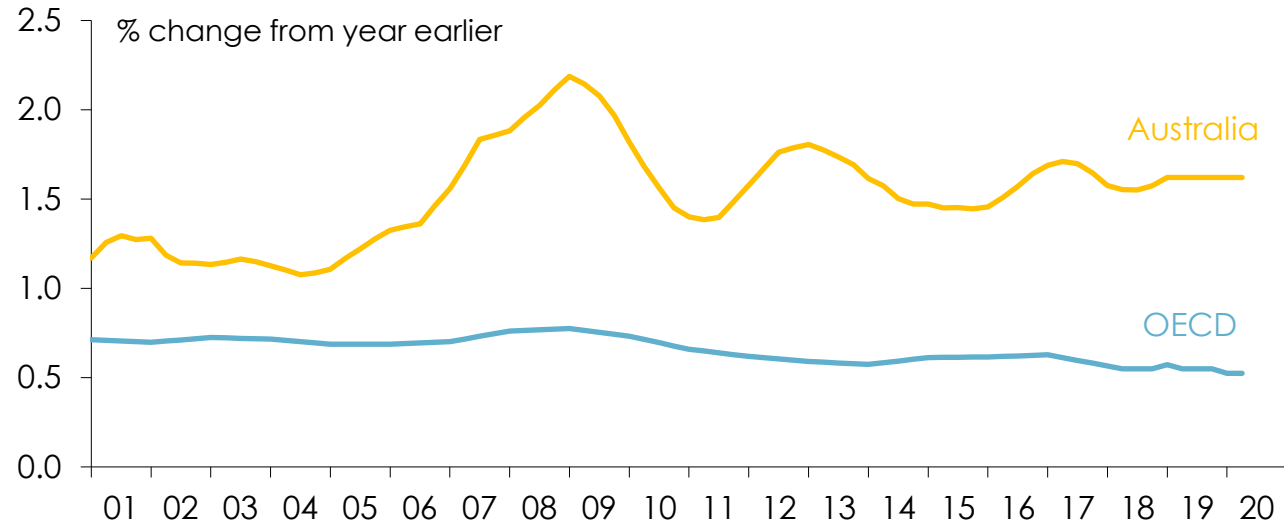
❑ (Mostly) good macro-economic policy – especially by comparison with other 'advanced' economies

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

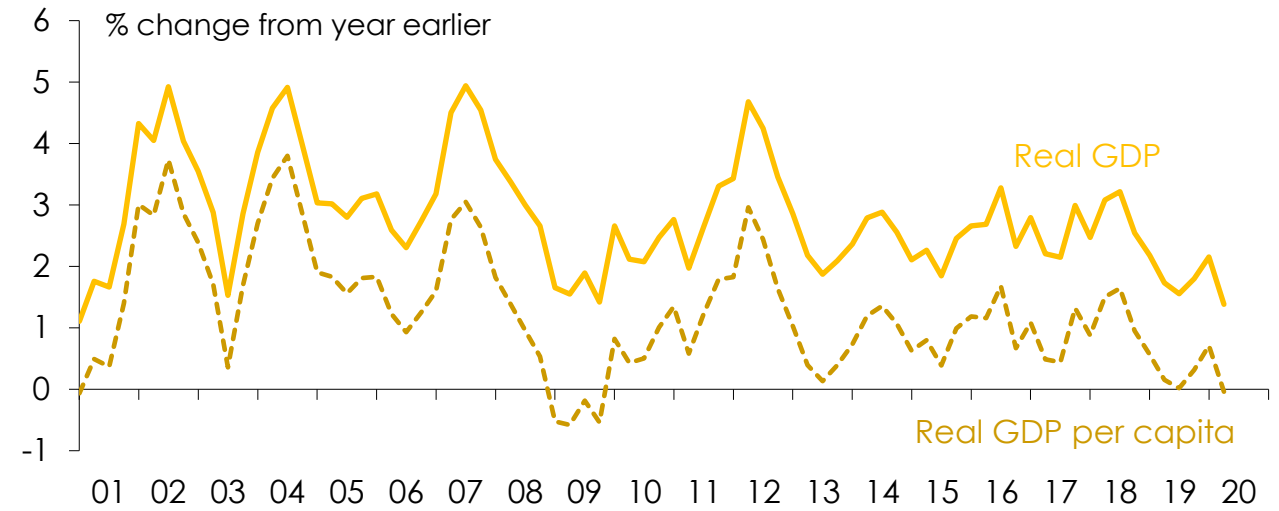
The first three of these are likely to be of less assistance from now on

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

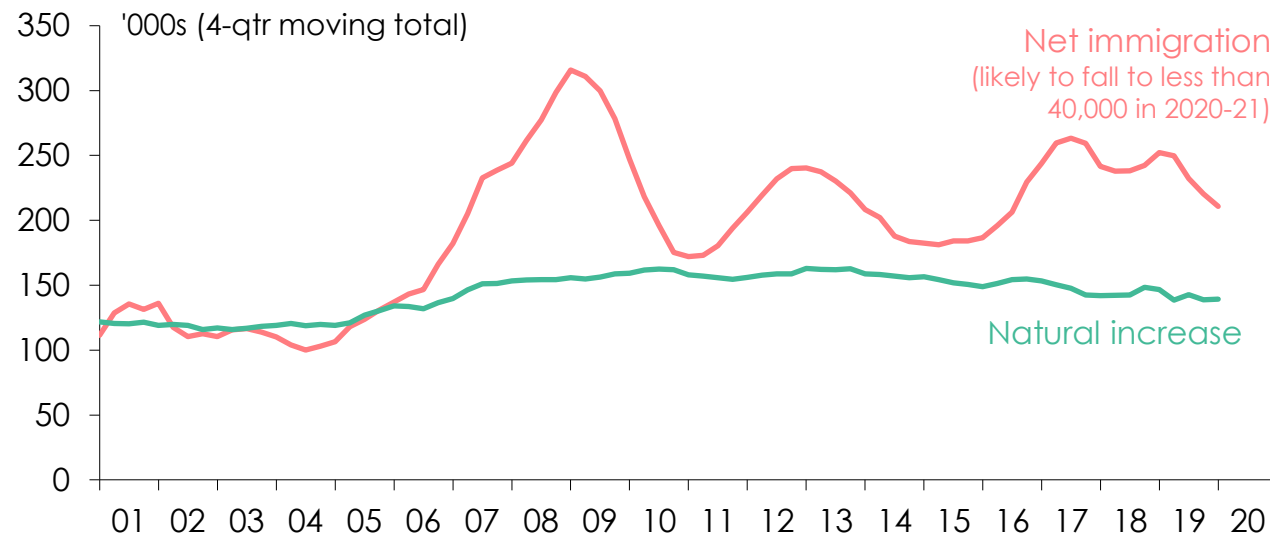
Australia and OECD population growth



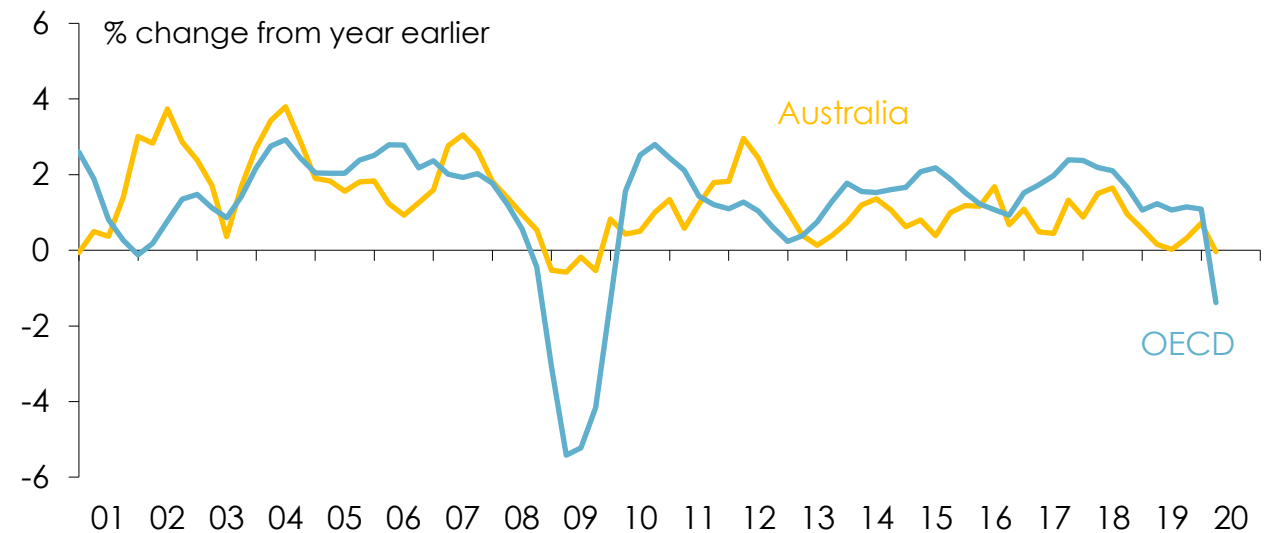
Australian GDP and per capita GDP growth



Sources of Australia's population growth



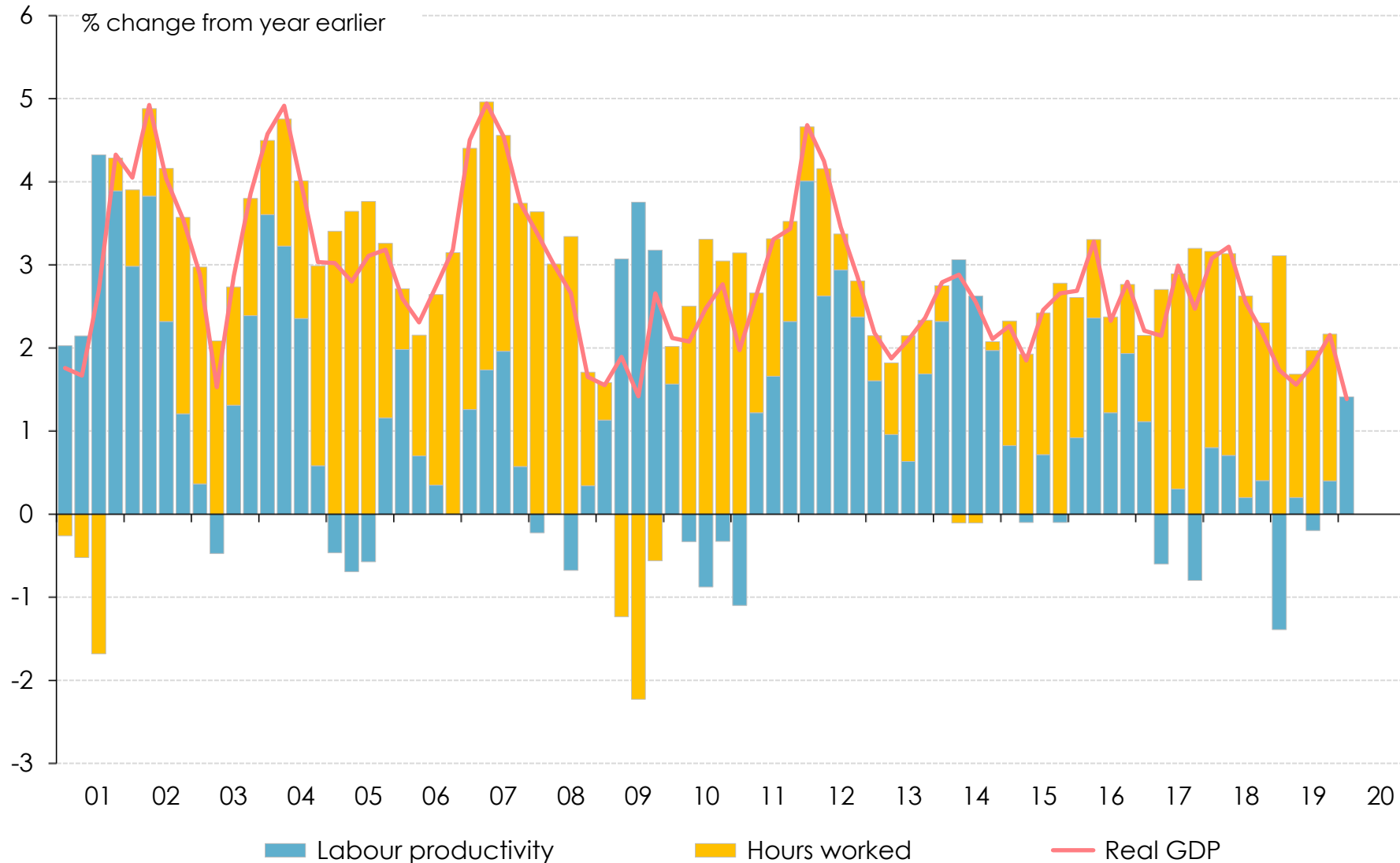
Australia and OECD per capita real GDP growth



Sources: ABS; OECD.

Australia has come to rely much more heavily on increased labour input to drive economic growth in recent years

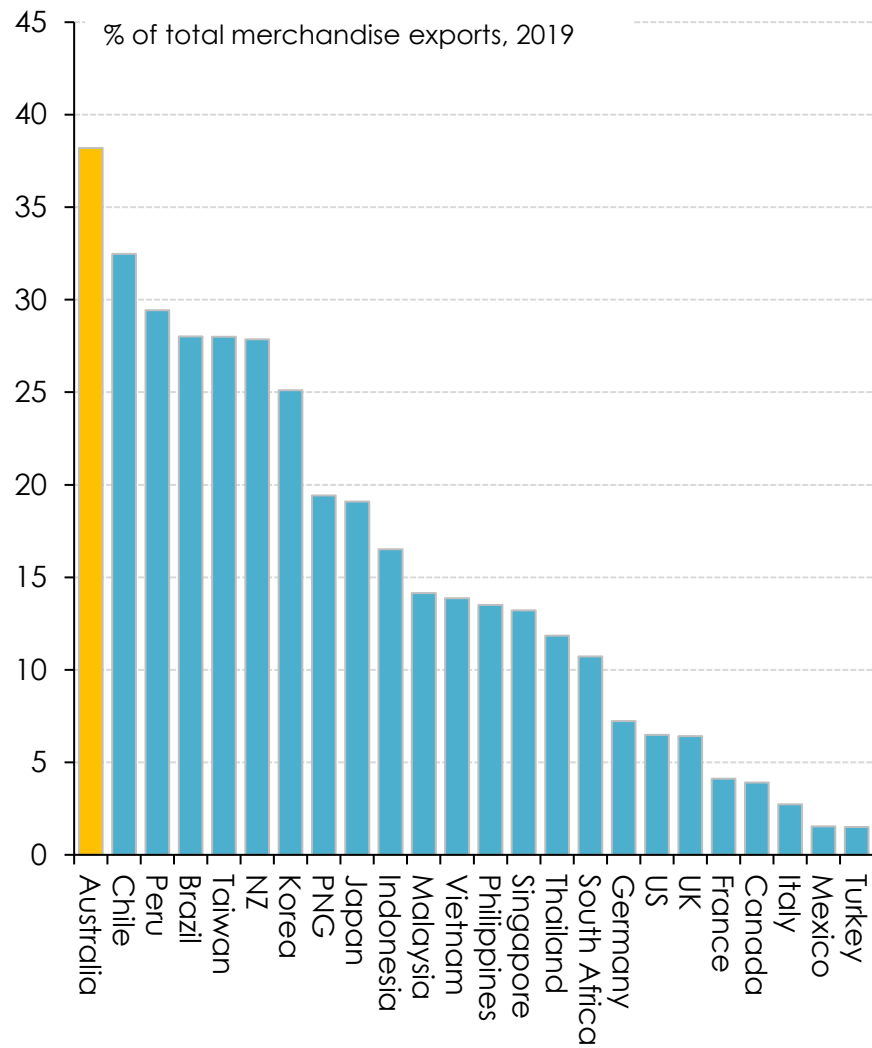
Labour input and labour productivity contributions to Australian real GDP growth



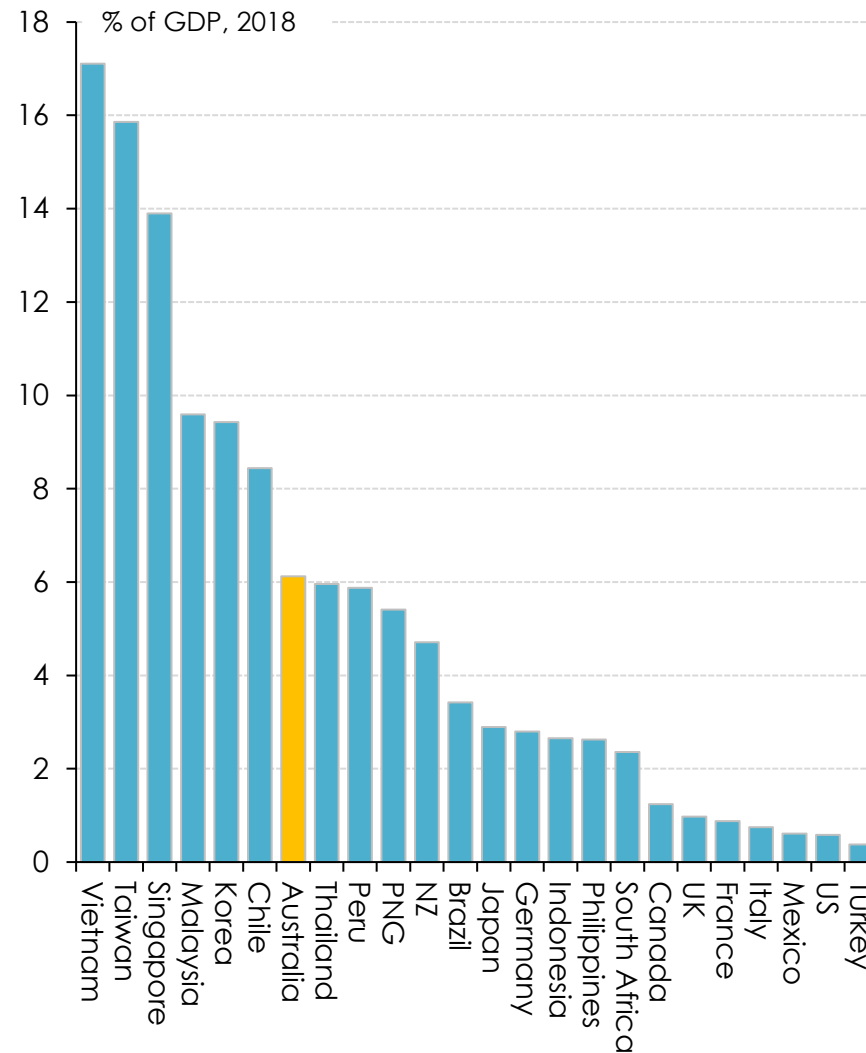
- Over the past five years, 72% of Australia's real GDP growth has come from increased labour input, and only 28% from labour productivity growth
- By contrast, between the end of the early 1990s recession and the onset of the global financial crisis, 46% of Australia's real GDP growth came from increased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

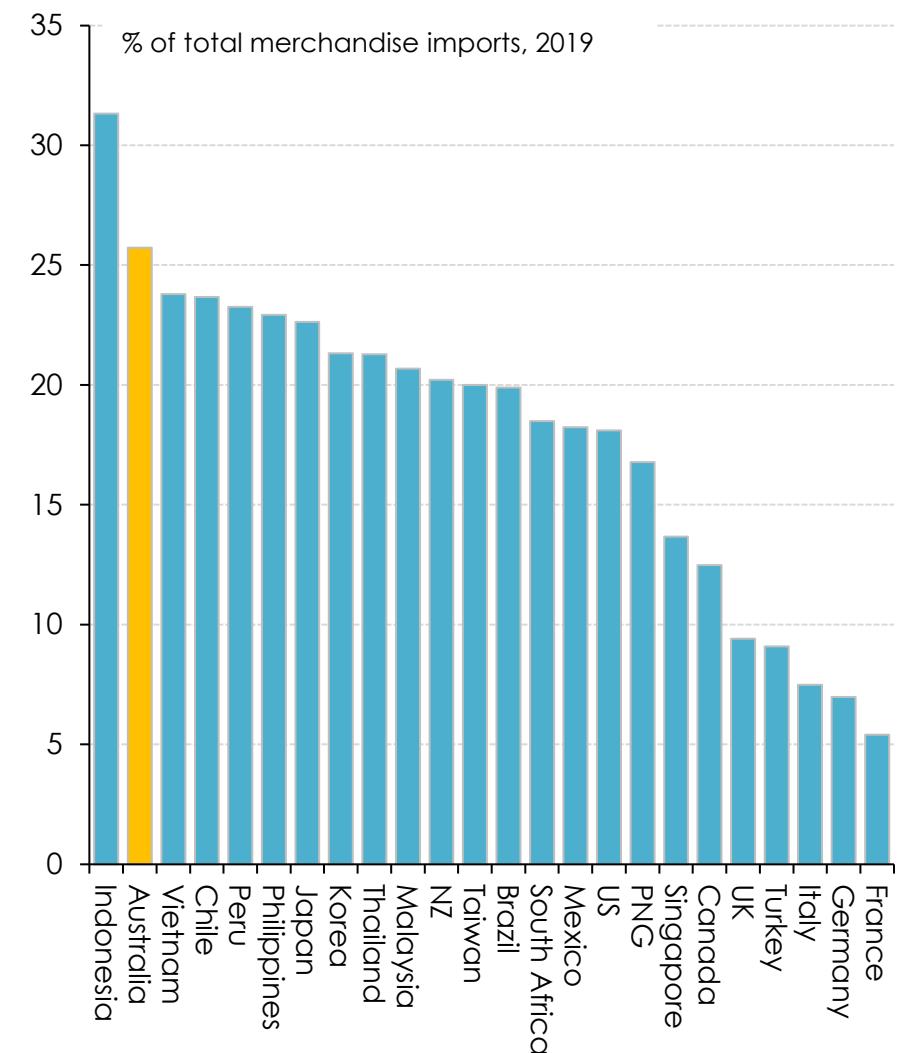
Merchandise exports to China as a pc of total



Merchandise exports to China as a pc of GDP



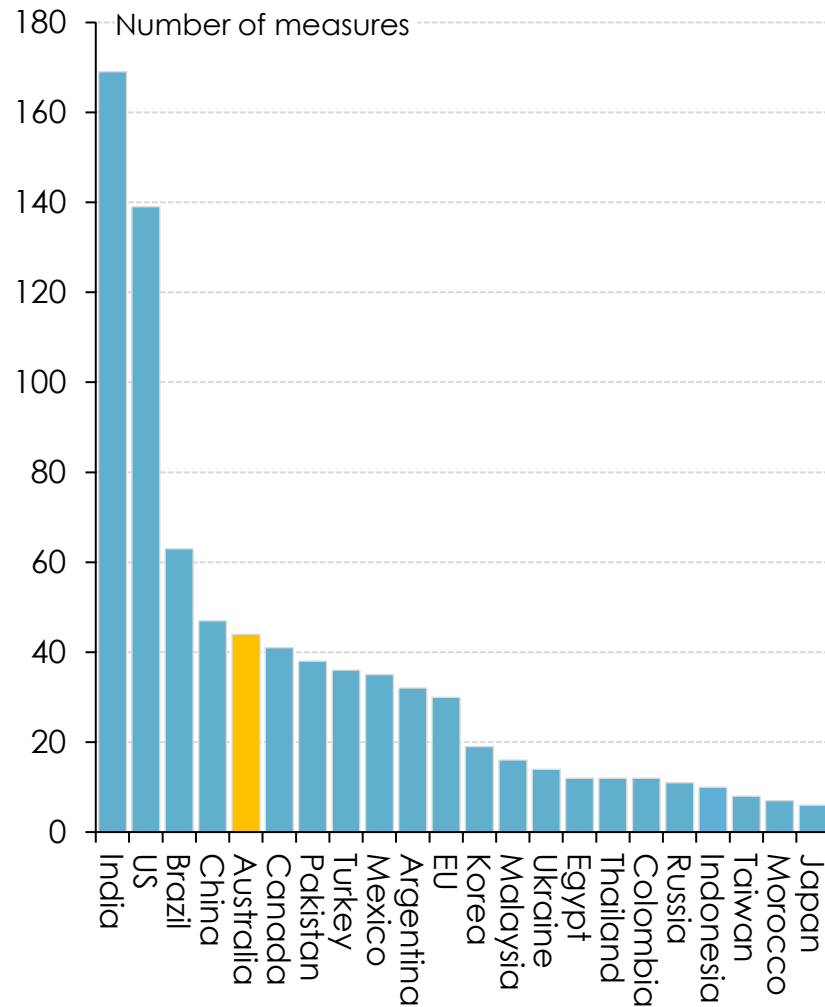
Merchandise imports from China as a pc of total



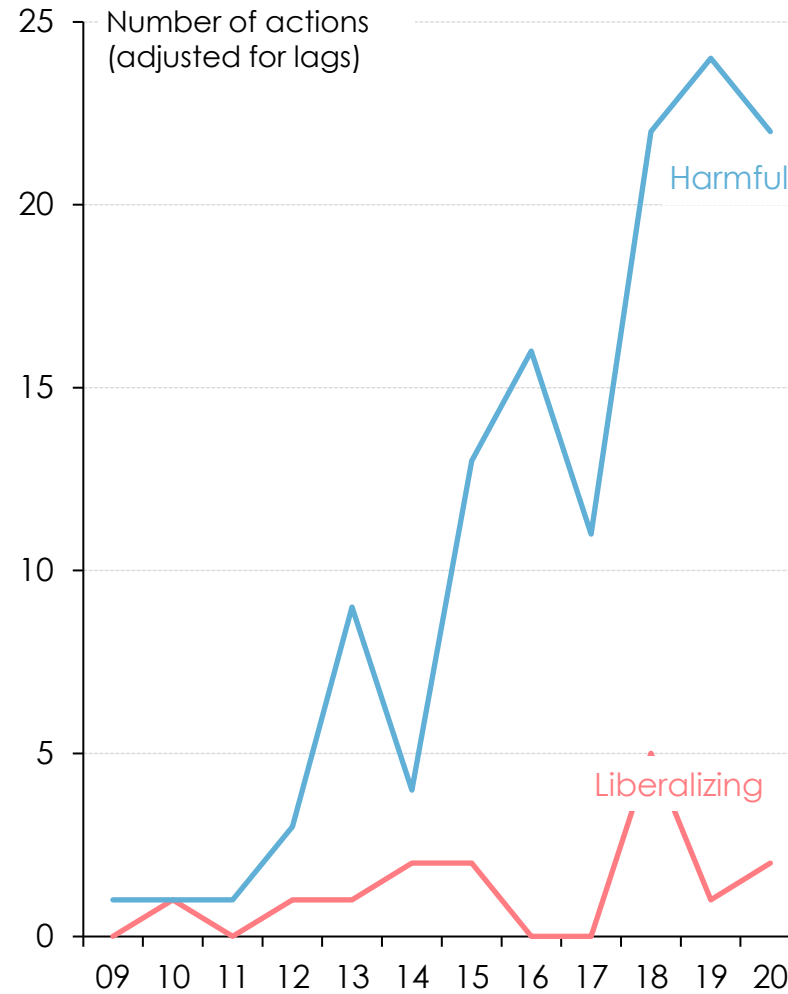
Sources: IMF, Direction of Trade Statistics; Taiwan Ministry of Economic Affairs, Bureau of Foreign Trade.

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

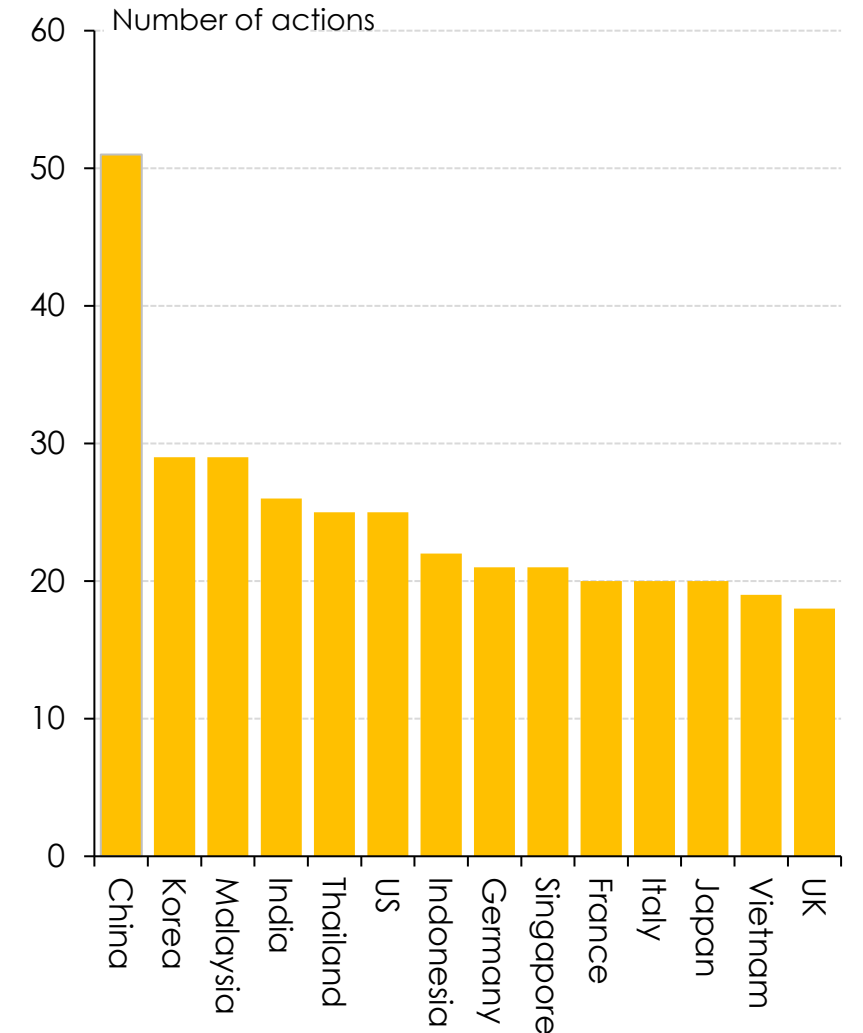
Number of anti-dumping measures imposed, 2015-19



Australian trade policy measures since 2009



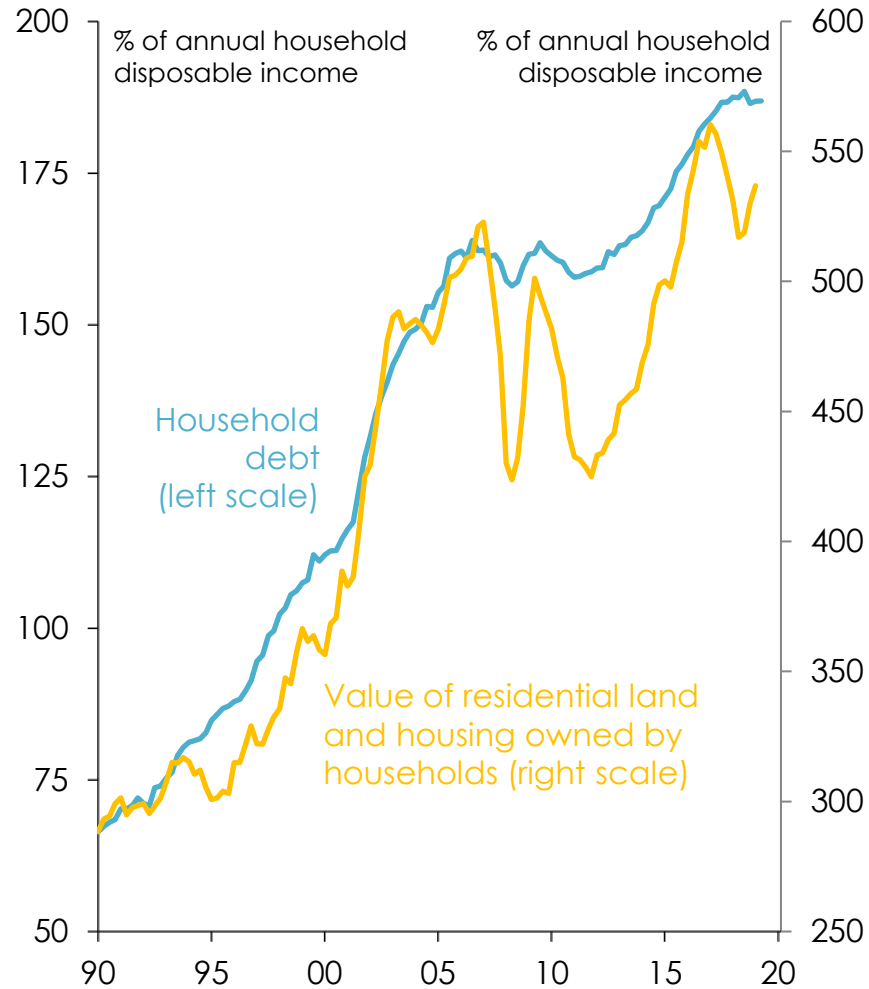
Countries adversely affected by 'harmful' Australian trade actions



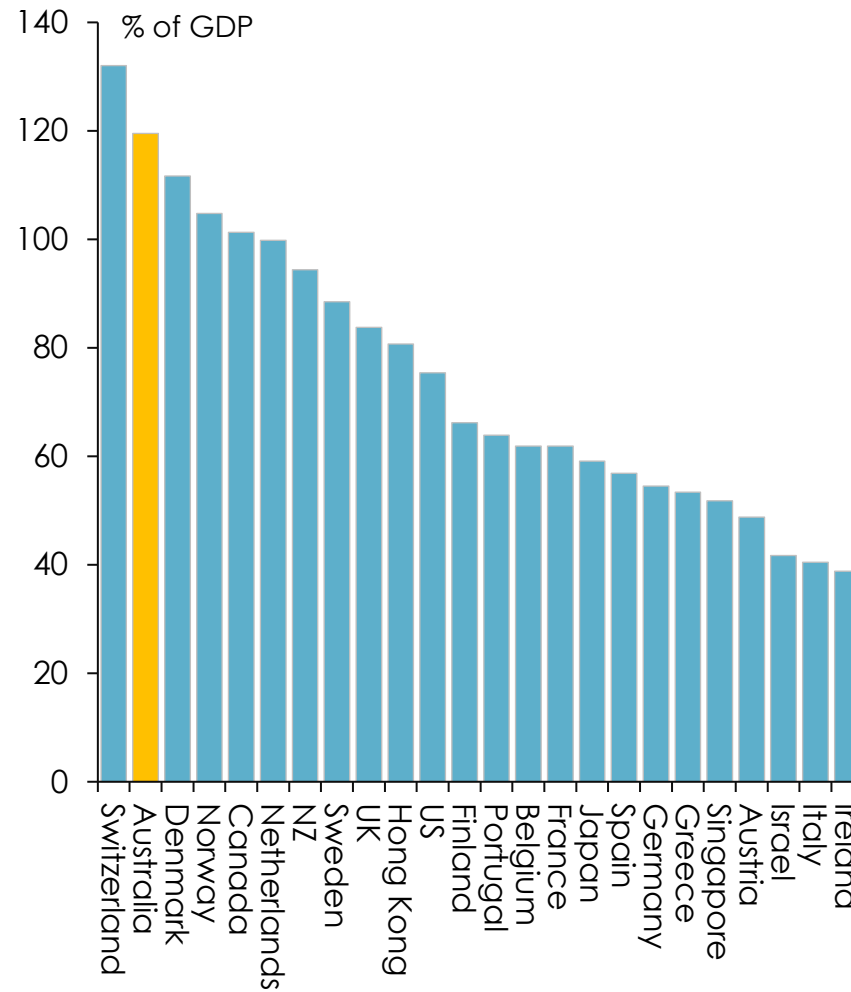
Sources: World Trade Organization; Global Trade Alert (data up to 20th July).

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

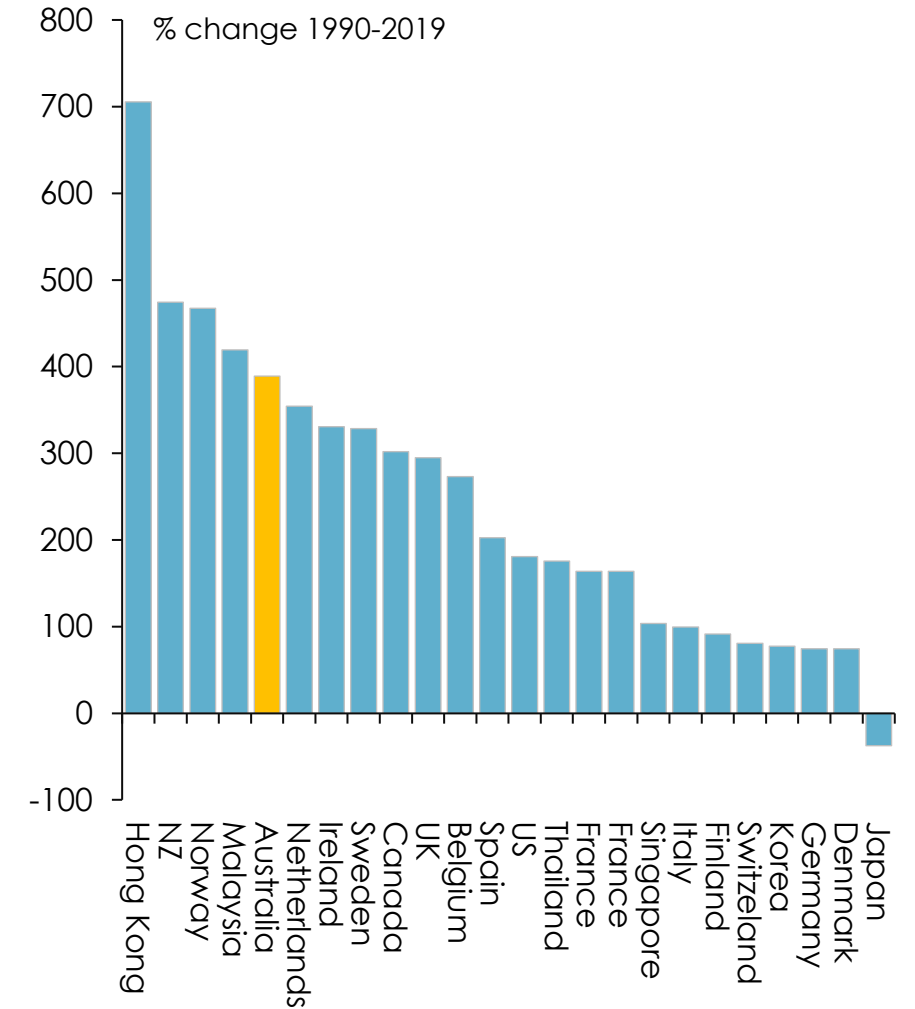
Australian housing wealth and household debt



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.

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 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)
- ❑ **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**
- ❑ **Accelerated decline in the use of cash for transactions**
- ❑ **Re-think of relationships with China**
 - 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 and Biden can reverse the damage done to perceptions of US credibility, competence and commitment

I will be doing two more webinars
on Wednesday 29th and Friday 31st July
at 4pm AEST

Go to www.bettercallsaul.com.au for details

You can also subscribe to a weekly update
of these and other charts

Q & A

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