

AUSTRALIAN MARKETS WEEKLY

OECD estimates of the substantial economic cost of containment



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Analysis – OECD estimates of the substantial economic cost of containment

- As the pandemic continues, most governments have restricted international travel, with domestic travel restrictions slightly less common. Classroom closures and restrictions on non-essential business are standard. Quarantine/confinement measures are variable; some countries advise someone stays home if they are sick or have returned from overseas, while others ban leaving the home unless for essential business. Australia has all these measures in place, although some vary across the country.
- The OECD has estimated that the *direct* economic cost of these containment measures is substantial, with shutdown resulting in a 20-25% fall in real GDP, across the advanced economies. This means the loss of output from each month of containment takes about 2pp off annual growth in GDP. In Australia's case, the OECD estimates shutdown takes 22% off GDP. This means a shutdown of six months – which is the timeframe indicated by the PM – would take 11pp off annual GDP growth. Indirect spillovers exacerbate the economic cost, but the unprecedented macroeconomic policy stimulus will reduce it by supporting the economy when recovery comes.
- Extending the OECD analysis, we calculate that the Australian sectors most affected by the shutdown to date employ about 3 million people, or about 25% of total jobs. A tougher shutdown could see that number increase to 5.8 million, or almost half of total jobs. The government's unprecedented wage subsidy should ensure most employees stay in work, but the hit to hours worked and household incomes will still be very substantial, feeding back to weaker consumer spending.

The week ahead – AU RBA on hold, health modelling; NZ business surveys; CH containment

- **Australia.** The government should soon announce an industry code on commercial tenancies, as well as health modelling of the pandemic. The RBA board meets Tuesday and is expected to keep policy – the cash rate, yield curve control and QE – unchanged. The ABS releases its latest business survey on the impact of COVID-19. Job ads likely fell very sharply in March, while weekly consumer confidence could fall further from its record low.
- **NZ.** Tuesday's Quarterly Survey of Business Opinion is dated because final responses came in almost a week before NZ went into full lock-down mode. And while the headline results of Wednesday's ANZ preliminary business survey for April will surely slump further, there won't be the details that would otherwise be the salient news.
- **International.** Markets will monitor China's recent lifting of containment measures given a few isolated reports of a COVID-19 outbreak in one county and some re-implementation of social distancing in Shanghai. The CPI/PPI on Friday should show some easing in inflation with wholesale pork prices starting to fall.

Key markets over the past week

| | Last | % chg week | | Last | bp/% chg week |
|---------|--------|---------------|-----------|------|------------------|
| AUD | 0.6037 | -2.2 | RBA cash | 0.18 | -4.0 |
| AUD/CNY | 4.28 | -2.1 | 3y swap | 0.35 | 0.0 |
| AUD/JPY | 65.8 | -1.1 | ASX 200 | 5287 | 2.0 |
| AUD/EUR | 0.558 | -0.1 | Iron ore | 79.2 | -4.0 |
| AUD/NZD | 1.024 | -0.7 | Brent oil | 34.1 | 29.2 |

Source: Bloomberg

OECD estimates of the substantial economic cost of containment

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The lack of antiviral treatments and a vaccine has forced governments to adopt containment measures to mitigate the impact of the pandemic

As the coronavirus pandemic continues to wreak havoc, the absence of any antiviral treatments and vaccine means that health policy has focused on what are awkwardly termed "non-pharmaceutical interventions" (or NPIs) to mitigate the impact of the pandemic on the health system. Macroeconomic policy has then focused on supporting economic recovery once the pandemic has subsided, with hopefully a vaccine available in the twelve months or so.

NPIs are generally containment measures involving imposing some form of social distancing, with the degree of enforcement often rapidly evolving from guidance and advice to strict measures administered by police and border officials and occasionally relying on defence forces.

Using information on containment measures from the Organisation for Economic Co-operation and Development (OECD), containment measures can be broadly categorised as:

- **Quarantine/containment measures.** For example, requiring persons to stay at home unless needing to visit a supermarket/grocer or doctor/chemist. Lockdowns may be partial, applying to cities or certain regions, or national.
- **Domestic travel restrictions.** These include stopping flights and trains between regions.
- **International travel restrictions.** At the extreme, this involves closing a country's borders, with few exceptions, such as allowing residents to return.
- **School/university closures.** Classroom teaching can be banned.
- **Closure of public events/public spaces.** For example, sports events can be cancelled, and public gatherings can be either severely limited or banned outright.
- **Closure of non-essential businesses.** This can include the forced closure of non-essential services such as restaurants, entertainment venues and sporting facilities.

All advanced economies and most emerging markets have quickly introduced containment measures

China was first to introduce restrictions, commencing an aggressive lockdown of Hubei province in late January. The lockdown centred on the city of Wuhan, where the outbreak of the respiratory illness COVID-19 was first identified. The lockdown saw an estimated 11 million people banned from unnecessary travel and the shutdown of non-essential business. Over the next few days, the lockdown was expanded to encompass the entire Hubei province, applying to almost 60 million people.

Globally many countries have quickly followed China's lead given the rapid spread of the coronavirus, albeit generally introducing less stringent restrictions on movement than China, except when the health system is overwhelmed.

Using the OECD's classification, the most common measures currently in place are school and university closures to ban classroom teaching, the cancellation of public events and severe limits on gatherings in public places and the closure of non-essential services.

Most governments have restricted international travel, although some countries have exemptions. Domestic travel restrictions are slightly less common, although in some instances they apply to regions rather than nationally. There is more variability when it comes to quarantine and confinement. Some countries only advise someone stays home if they are sick or have returned from overseas. Others have a strict ban on leaving the home unless for essential business.

Chart 1: A subjective rating of select health measures by country

| | Quarantine & confinement | Travel restrictions: Domestic | International | Closures: Schools | Universities | Public events | Public places | Non-essential business |
|-------------------------------|--------------------------|-------------------------------|---------------|-------------------|--------------|---------------|---------------|------------------------|
| (1) Advanced economies | | | | | | | | |
| Australia | | | | | | | | |
| Austria | | | | | | | | |
| Belgium | | | | | | | | |
| Canada | | | | | | | | |
| Denmark | | | | | | | | |
| Finland | | | | | | | | |
| France | | | | | | | | |
| Germany | | | | | | | | |
| Greece | | | | | | | | |
| Ireland | | | | | | | | |
| Italy | | | | | | | | |
| Japan | | | | | | | | |
| Korea | | | | | | | | |
| Netherlands | | | | | | | | |
| NZ | | | | | | | | |
| Norway | | | | | | | | |
| Portugal | | | | | | | | |
| Spain | | | | | | | | |
| Sweden | | | | | | | | |
| Switzerland | | | | | | | | |
| UK | | | | | | | | |
| USA | | | | | | | | |
| (2) Emerging markets | | | | | | | | |
| Brazil | | | | | | | | |
| China | | | | | | | | |
| India | | | | | | | | |
| (3) Summary measures | | | | | | | | |
| Median | | | | | | | | |

Note: Subjective scoring based on Organisation for Economic Co-operation and Development information as at 3 April 2020. Complete red shading indicates full implementation. A blank cell indicates no formal measures. Government guidance and advice rates below formally implementing a measure. A regional measure also rates below the national implementation of a measure.
Source: Organisation for Economic Co-operation and Development, National Australia Bank

In Australia, containment actions have been recommended by the national cabinet, which comprises the prime minister, state premiers and territory chief ministers, usually on advice from Australia's chief medical officers. Recommendations are publicly announced by the prime minister and it is up to each state as to how stringently restrictions are enforced.

In recent weeks, the prime minister has quickly announced a range of tighter restrictions to limit the spread of coronavirus. Most of these measures match the experience overseas, although sometimes less strictly and with variation among the states. States have also taken their own steps.

- **Quarantine/containment measures.** Persons are required to stay at home unless visiting a supermarket/grocer or doctor/chemist, exercising or caring for a family member, in which social distancing rules apply. In most of Australia, the lockdown is enforced by police warnings/hefty fines and, in some cases, jail. The exceptions are South Australia and the Northern Territory, where there are no restrictions on leaving your home.
- **Domestic travel restrictions.** The smaller states and the Northern Territory have closed their borders with some exceptions. Movement remains free between New South Wales, Victoria and the Australian Capital Territory.

- **International travel restrictions.** The national border is closed, although residents can return and the prime minister has encouraged non-residents to leave.
- **School/university closures.** Schools remain open, although some states have encouraged parents to keep their children at home or brought forward school holidays (for example, attendance has reportedly dropped to 6% in New South Wales public schools). Universities have shifted to online classes.
- **Closure of public events/public spaces.** National cabinet has recommended gatherings not exceed two persons, except in a shared household and with limits for weddings and funerals.
- **Closure of non-essential businesses.** The government has forced the closure of hospitality, entertainment and recreation venues and most personal service providers (restricted operations are allowed for some business, such as hairdressers and takeaway food). Many retailers have also closed either temporarily or permanently because of a severe slump in sales.

OECD estimates of the very substantial economic cost of health containment measures

The health measures are necessary to mitigate the terrible health and social cost of the COVID-19 pandemic. However, there is a clear economic impact, which rises with the severity of restrictions and likely only surpassed by depression or war.

The OECD recently published its preliminary estimates of the *direct* impact of lockdowns by country.¹ The estimates are for the initial impact on GDP, where the total impact on growth depends on the magnitude and duration of containment measures, the extent of indirect spillovers, and the response of fiscal and monetary policy.

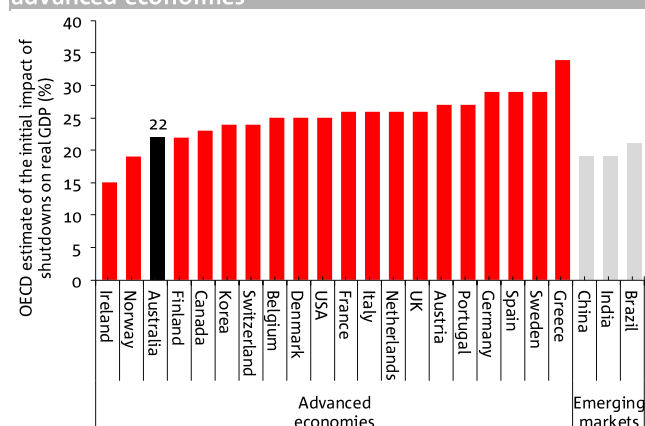
The OECD initially estimated the effect by focusing on the impact of business closures on GDP, assuming:

1. Complete closure of personal and recreation services and vehicle manufacturing, where the latter is affected by supply chain issues.
2. Almost complete closure of 75% of production for all other industries directly affected by shutdown, including retail, wholesale, real estate, hospitality and air travel.
3. Substantial closure of 50% of production for construction and professional services.

As a cross-check, the OECD then estimated the effect by focusing on the impact of reduced consumer spending on GDP, assuming:

1. No spending on clothing, household goods, new cars, holidays and personal services.
2. Almost no spending – a reduction of 75% – on entertainment, hotels and eating out/takeaway food.
3. A substantial reduction of 50% in spending on transport services, petrol and car maintenance.

Chart 2: The OECD estimates that one month of strict containment reduces GDP by about 20-25% in the advanced economies



Note: The estimates were rounded to the nearest whole number and apply to one month of strict containment.
Source: Organisation for Economic Co-operation and Development (2020), National Australia Bank

Using these two approaches the OECD estimated a *direct* impact of a shutdown on real GDP across the advanced economies of around 20-25%, with consumer spending dropping by around one-third. Most of the collapse in

activity is driven by the fall in retail and wholesale trade, and in professional and real estate services.

This means that for every month of strict containment, there is a direct loss of about 2pp in annual growth in real GDP. The ultimate impact would be boosted by indirect spillovers and partly offset by the success of macroeconomic policy.

For Australia, the OECD estimates that strict containment triggers a 22% fall in real activity. This suggests that every month of lockdown comes at a direct economic cost to annual growth in real GDP of 1.8pp. The prime minister has repeatedly stressed that the current shutdowns are likely to remain in place for at least six months. Assuming a six-month lockdown, the OECD estimates point to a 11pp hit to real GDP, although the duration of containment remains highly uncertain. The unprecedented monetary and fiscal easing over recent weeks should assist in recovery, but it remains very uncertain how quickly activity returns to normal if there are waves of infection until a vaccine is found.

The shutdowns affect a large swathe of the workforce

Adapting the OECD's work, we used industry level data to estimate the direct impact of lockdown measures on Australian employment. Focusing on the industries most heavily hit by coronavirus restrictions to date – namely, hospitality, recreation services, personal services, aviation, discretionary retail/wholesale and real estate services – they employ about 3.1 million people, or 24% of total employment.

Extending this analysis, we considered a more aggressive shutdown scenario, where non-essential business was closed by government. In this case, we assumed that 75% of manufacturing, construction, professional and administrative services employees worked at non-essential businesses. This increased the total number of affected employees to 5.8 million, or 45% of all jobs.

As a cross-check on these calculations, the Commonwealth estimates that its \$130b wage subsidy scheme which provides a flat payment of \$1,500 per fortnight will cover up to 6 million workers over its span of six months. This is a much larger number of affected workers than suggested by current restrictions and suggests that the government is insuring against more severe restrictions and/or is prepared to cover a longer lockdown than six months.

The great benefit of the job subsidy scheme is that it will ensure that a very large number of at-risk employees stay in work, which will help when the economy recovers. Depending on their circumstances, some companies may not be able to retain staff, but the scheme should temper the rise in unemployment over coming months.

¹ See Organisation for Economic Co-operation and Development, *Evaluating the initial impact of COVID-19*

containment measures on economic activity, OECD Economics Department paper, 27 March 2020.

Nonetheless, there will be a very substantial drop in total hours worked and household income, which will have a large knock-on effect on consumer spending and housing.

Chart 3: Shutdowns affect a large share of employment

| | Employment Q3 2019 ** | | Lockdown % of jobs | Shutdown % of jobs |
|-----------------------------------|-----------------------|------------|-----------------------|-----------------------|
| | '000 | % of total | | |
| Agriculture | 316 | 2.5 | | |
| Mining | 229 | 1.8 | | |
| Manufacturing | 866 | 6.7 | | 5.1 |
| Utilities | 157 | 1.2 | | |
| Construction | 1163 | 9.1 | | 6.8 |
| Wholesale ex. food* | 338 | 2.6 | 2.6 | 2.6 |
| Food wholesaling* | 67 | 0.5 | | |
| Retail ex. food* | 847 | 6.6 | 6.6 | 6.6 |
| Food retail* | 389 | 3.0 | | |
| Hospitality | 901 | 7.0 | 7.0 | 7.0 |
| Transport and logistics (ex. air) | 623 | 4.9 | | |
| Aviation | 42 | 0.3 | 0.3 | 0.3 |
| Telecomm. | 91 | 0.7 | | |
| Other media services | 120 | 0.9 | | |
| Finance | 177 | 1.4 | | |
| Insurance and super. | 266 | 2.1 | | |
| Real estate | 210 | 1.6 | 1.6 | 1.6 |
| Professional services | 1173 | 9.1 | | 6.9 |
| Admin. services | 475 | 3.7 | | 2.8 |
| Public admin. and police | 798 | 6.2 | | |
| Education | 1120 | 8.7 | | |
| Healthcare | 1728 | 13.5 | | |
| Recreation services | 239 | 1.9 | 1.9 | 1.9 |
| Personal services | 501 | 3.9 | 3.9 | 3.9 |
| GDP | 12837 | | 24 | 45 |

Note: * Split of food and non-food retail and wholesale estimated using 2017-18 industry data
 ** Data from characteristics of employment. Split of manufacturing, wholesale, retail, media and telecom., financial services using detailed labour force data
 Source: Australian Bureau of Statistics, National Australia Bank

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CALENDAR OF ECONOMIC RELEASES

| Country | Economic Indicator | Period | Forecast | Consensus | Actual | Previous | GMT | AEDT |
|---|--|--------|----------|-----------|--------|----------|----------------|-------|
| Monday 06 April 2020 | | | | | | | | |
| AU | Melbourne Institute Inflation YoY | Mar | | -- | | 1.6 | 0.00 | 11.00 |
| NZ | ANZ Commodity Price | Mar | | -- | | -2.1 | 0.00 | 11.00 |
| AU | ANZ Job Advertisements MoM | Mar | | -- | | 0.7 | 0.30 | 11.30 |
| GE | Factory Orders MoM | Feb | | -- | | 5.5 | 5.00 | 16.00 |
| Tuesday 07 April 2020 | | | | | | | | |
| AU | AiG Perf of Services Index | Mar | | -- | | 47 | 21.30 | 8.30 |
| AU | Trade Balance | Feb | 5200 | -- | | 5210 | 0.30 | 11.30 |
| AU | RBA Cash Rate Target | Apr 7 | 0.25 | 0.25 | | 0.25 | 3.30 | 14.30 |
| GE | Industrial Production WDA YoY | Feb | | -- | | -1.3 | 5.00 | 16.00 |
| Wednesday 08 April 2020 | | | | | | | | |
| JN | BoP Current Account Balance | Feb | | -- | | 612.3 | 22.50 | 9.50 |
| JN | Core Machine Orders YoY | Feb | | -- | | -0.3 | 22.50 | 9.50 |
| AU | ABS COVID-19 impact on business survey | | | -- | | | 0.30 | 11.30 |
| US | FOMC Meeting Minutes | Mar 18 | | -- | | | 17.00 | 4.00 |
| Thursday 09 April 2020 | | | | | | | | |
| NZ | ANZ Truckometer Heavy MoM | Mar | | -- | | -3 | 21.00 | 8.00 |
| UK | Monthly GDP (MoM) | Feb | | -- | | 0 | 5.00 | 16.00 |
| CA | Unemployment Rate | Mar | | -- | | 5.6 | 11.30 | 22.30 |
| CA | Net Change in Employment | Mar | | -- | | 30.3 | 11.30 | 22.30 |
| CA | Hourly Wage Rate Permanent Employees YoY | Mar | | -- | | 4.3 | 11.30 | 22.30 |
| US | PPI Final Demand YoY | Mar | | -- | | 1.3 | 11.30 | 22.30 |
| US | Wholesale Inventories MoM | Feb F | | -- | | -0.5 | 13.00 | 0.00 |
| US | U. of Mich. Sentiment | Apr P | | 82 | | 89.1 | 13.00 | 0.00 |
| US | U. of Mich. Expectations | Apr P | | -- | | 79.7 | 13.00 | 0.00 |
| Friday 10 April 2020 | | | | | | | | |
| Easter Friday Public Holiday | | | | | | | 10 April | |
| NZ | REINZ House Sales YoY | Mar | | -- | | 9.2 | 10 to 14 April | |
| CH | Money Supply M2 YoY | Mar | | 8.5 | | 8.8 | 10 to 15 April | |
| CH | New Yuan Loans CNY | Mar | | 1660 | | 905.7 | 10 to 15 April | |
| JN | PPI YoY | Mar | | -- | | 0.8 | 22.50 | 9.50 |
| CH | PPI YoY | Mar | | -1.1 | | -0.4 | 0.30 | 11.30 |
| CH | CPI YoY | Mar | | 4.9 | | 5.2 | 0.30 | 11.30 |
| US | CPI YoY | Mar | | 1.6 | | 2.3 | 11.30 | 22.30 |
| Upcoming Central Bank Interest Rate Announcements | | | | | | | | |
| Australia, RBA | | Apr 7 | 0.25 | 0.25 | | 0.25 | | |
| Canada, BoC | | Apr 15 | 0.25 | 0.25 | | 0.25 | | |
| Japan, BoJ | | Apr 28 | -0.10 | -0.10 | | -0.10 | | |
| US, Federal Reserve | | Apr 29 | 0/0.25 | 0/0.25 | | 0/0.25 | | |
| Europe, ECB | | Apr 30 | -0.50 | -0.50 | | -0.50 | | |
| UK, BOE | | May 7 | 0.10 | 0.10 | | 0.10 | | |
| New Zealand, RBNZ | | May 13 | 0.25 | 0.25 | | 0.25 | | |

GMT: Greenwich Mean Time; AEDT: Australian Eastern Daylight Time

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