

Economic Note

Potential economic impacts of the coronavirus

10 February 2020

Coronavirus economic impacts

- The impacts of viral outbreaks on the global (and NZ) economies typically prove temporary.
- It is early days, but we anticipate a short hit to Q1 NZ GDP, equivalent to roughly 0.6% of GDP.
- At this stage, we assume no change to monetary or fiscal settings as a result of the outbreak.
- Should the impact prove worse than typical, then we'd expect OCR cut(s) and/or fiscal stimulus.

Summary and key takeouts

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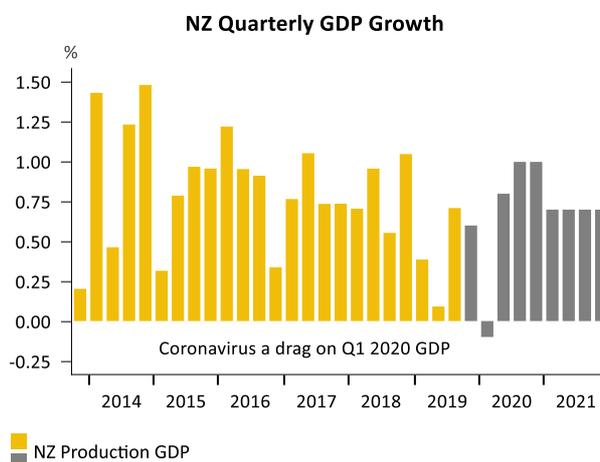
Viral outbreaks typically result in a sharp, but relatively brief, shock to both the NZ and global economies. Outcomes are highly sensitive to the location, severity and duration of the outbreak and measures taken to control it. The mortality rate of the coronavirus looks to be low, but its long incubation period makes early detection and containment difficult. The virus is still spreading rapidly.

The epicentre of the outbreak, **China, is both the growth engine for the global economy and New Zealand's largest trading partner.** Already there are signs of a larger proportionate hit to global tourism from the virus. Economic impacts are also occurring because of the extensive (and disruptive) efforts to contain the virus that will impede the movement of goods and services.

For the NZ export sector, the impacts are likely to be uneven. Given the timing of the outbreak around the Chinese New Year, the impacts are especially acute for the tourism and education sectors. The goods sector will be impacted to varying degrees. All up, **we anticipate a 0.6% hit to Q1 GDP relative to our baseline,** primarily via lower services exports. However, a more severe outbreak globally could result in longer-lasting disruption to NZ exports and broader economic activity.

We are not detecting many signs of the virus impacting NZ adversely via financial channels. Equity markets are off lows. The economy's key shock absorbers are working: the NZ dollar and interest rates are lower than they would otherwise be. A severe virus outbreak in NZ could push the NZD lower and see markets price in higher NZ risk.

For now, **we expect NZ policymakers will not change policy settings.** If, however, the virus reaches NZ or the global virus impacts turns out to be significant, additional policy support will be required. The RBNZ will move the OCR lower. Fiscal policy will also have a key role to play.



Source: Macrobond, ASB

What are the economic impacts?

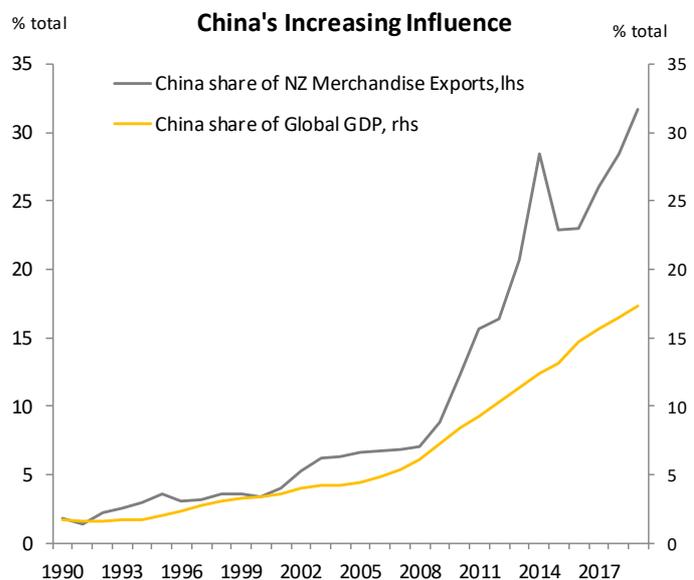
Viral outbreaks over the past few decades have typically resulted in a sharp, but relatively brief, shock to both the NZ and global economies. Outcomes are, however, highly sensitive to the severity and duration of the outbreak and measures taken to control it. The potentially long incubation period of the coronavirus means it will take time for a turning point (reduction) or escalation in cases to appear. Here we sketch out some potential economic impacts of the coronavirus.

We caution that the magnitude of the total economic impact is highly uncertain and will depend on the outbreak's reach and persistence, whether it lands in NZ, the extent to which export and economic activity is disrupted, and the extent of any policy response should the outbreak persist. The coronavirus outbreak has now spread to at least 28 countries, including Australia, and numbers infected continue to mount. As at the time of publication no cases have been confirmed in NZ.

Global Impacts

It is still early days, but scale of the disruption point to a sizeable hit to the Chinese economy and potentially the global economy. Our CBA colleagues note that the actions taken by the Chinese government and households imply a sharp immediate economic hit and have cut their forecasts for China's Q1 2020 GDP growth by 1.5 percentage points to 4.5% yoy. Chinese consumer spending on travel, tourism, catering, entertainment and retail will bear the brunt of the virus. Industrial production and construction will also face near-term headwinds.

The direct impact to global GDP is likely to be in the region of at least 0.5% in Q1. Much of this is from lower Chinese GDP. China's economy is close to 20% of global GDP, and is close to five times larger than it was when the SARS outbreak hit in 2003. There will also be significant hits to other trading partners. World Bank figures suggest that since 2003 China has accounted for roughly 30% of global growth, more than twice that of the (larger) US economy.



Source: World Bank, Statistics NZ, ASB

The coronavirus outbreak is significantly impacting global tourism. Roughly 7 million Chinese tourists were expected to travel abroad for the Lunar New Year, with the loss of Chinese tourists likely to be particularly acute in the rest of Asia, which usually attracts roughly 75% of Chinese Lunar New Year travellers. China also is Australia's largest market for overseas tourism, accounting for roughly 15% of visitor arrivals. The virus outbreak could also result in the scaling back of tourism visits by other countries.

China also plays a key role in global supply chains, supplying inputs to manufacturers in other countries. The global tech and automotive sectors appear especially vulnerable. Disruptions to Chinese manufacturing activity are now reportedly weighing on manufacturing activity in other economies, including South Korea. Shortages of capital and consumer goods imports are likely to occur, dampening global industrial production and growth. Just over 15% of New Zealand's imports are directly sourced from China, but a greater portion could potentially be impacted. Lower oil and global commodity prices will help cushion the hit to some economies, but not others. **We are hoping that the global impact from the virus proves to be short-lived but this is based on the assumption that the outbreak is quickly contained and supply disruptions do not last for long.** The risk remains that growth does not rebound as quickly or to the extent assumed, delivering a more prolonged slowdown.

Impacts on the New Zealand economy

The crucial factor is how long the virus continues to disrupt the economy and which parts of the economy it impacts. Last month's RBNZ [speech](#) by Assistant Governor Hawkesby set out the framework the Bank used to analyse global influences, highlighting the trade, financial and uncertainty channels. Here, we follow this framework to sketch out some potential economic impacts.

Trade impacts

China is our largest trading partner so the impacts could potentially be significant. New Zealand's direct trade exposure with China has also exploded following the signing of the NZ-China free trade [agreement](#) in 2008. China is our largest export market accounting for 23% of total exports and, as the accompanying table confirms, takes a larger proportionate share of forestry, beef, mutton and seafood exports.

However, the coronavirus is most likely to impact the NZ export sector via its effects on person-to-person transmission.

Proportionately larger impacts are then likely for tourism and educational exports.

To take a glass half-full perspective, over half of NZ's exports to China are food, and people still need to eat. What people eat, and any impacts on the global logistics chain and China's domestic food production, will influence how the response to the viral outbreak affects a significant proportion of NZ's export base.

Export Category	\$ billions	% Share
Dairy	4.9	30.8
Forestry	3.1	58.8
Tourism	2.0	14.8
Beef	1.4	40.1
Education	1.3	28.5
Lamb	1.0	32.3
Fruit	0.7	21.0
Seafood	0.7	37.7
Infant Formula	0.7	40.3
Mutton	0.4	72.1
China Total	19.4	22.8

* September 2019 year

Source: StatisticsNZ, ASB

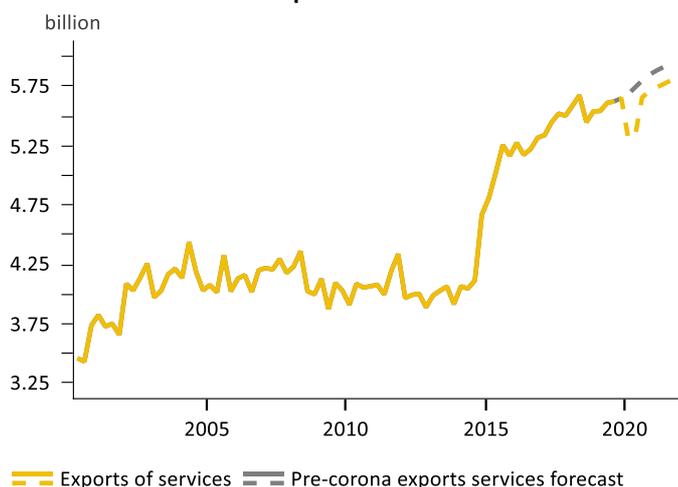
Services exports

China is the second-largest source of tourists in NZ, with approximately 400,000 visitors annually, 10% of total).

However, February is the peak month for tourism from China into NZ with 50,861 Chinese visitors in 2019 (12% of total annual Chinese visitor numbers), with March 2019 seeing 41,063 Chinese visitors (11%). Assuming that the Chinese travel ban extends over February and into March, overall visitor numbers would be roughly 10% lower in seasonally-adjusted terms in the March quarter. This would equate to an approximate 0.5% hit to Q1 GDP.¹ The regional impacts would be uneven, with MBIE tourism [estimates](#) suggesting that more than 50% of nationwide Chinese visitor expenditures in the February/March period are typically in the Auckland region.

The \$1.3bn in education exports to China will also be impacted. According to Statistics NZ estimates, China accounts for around 15% of the roughly 110,000 person annual arrivals on student visas. Other official [figures](#) showed that tuition fees for international students were in the region of \$1.2bn per annum, roughly \$17,000 per pupil. Living costs would be about that again. Close to half of Chinese students typically come into NZ during February/March. If they do not, this equates to \$55m hit,

NZ Exports of Services



Source: Macrobond, ASB

¹ We cross check these estimates using MBIE tourism [estimates](#). Chinese tourists spent just over \$400m in NZ in the February/March period in 2019 (12% of total visitor spending). Assuming Chinese visitor spending per person is in a similar ballpark to 2019 (\$5,200 per person), the fall in tourism expenditures would equate to roughly 0.5% off quarterly nominal GDP.

approximately 0.1% of nominal GDP. **All up, our estimates suggest that exports of services would be about 6% lower in Q1, roughly equivalent to 0.6% of GDP.** We expect services export growth to quickly rebound, but this is on the proviso that the virus is quickly contained and travel restrictions are lifted. Despite this, we anticipate that the level of services exports will remain lower than the pre-virus baseline scenario (see chart). The overall GDP impact may be less significant if NZ residents in turn scale back overseas trips and spend more in NZ on holidaying or general consumption.

Goods Exports

We expect a 0.1% of GDP hit to come from lower exports of goods, reflecting the likely delay of export shipments to overseas markets as a result of the outbreak. For NZ's goods export sector the impacts are likely to be uneven. With this in mind, we have classified the risk to each main sector using what we consider key exposure risks (see table below). In our view, the export sector risks are as follows:

High risk – Forestry, Tourism, Education, Seafood and Mutton;

Medium risk – Beef and Lamb; and

Low risk – Dairy, Fruit and Infant Formula.

Export Sector Exposure by Key Risks							
Export Sector	Share Risk	Health Risk	Place of Consumption Risk	Border/Port risk	Value Chain/Activity Risk	Timing	Overall Risk
Dairy	8.0	Low	Low	Low	High	Low	Low
Forestry	36.0	Low	Low	High	High	High	High
Tourism	-8.0	High	High	High	Low	High	High
Beef	17.3	Medium	Medium	Low	Low	High	Medium
Education	5.7	High	High	High	Low	High	High
Lamb	9.5	Medium	Medium	Low	Low	Medium	Medium
Fruit	-1.8	Medium	Low	Low	Low	Low	Low
Seafood	14.9	High	High	High	Low	High	High
Infant Formula	17.5	Low	Low	Low	Medium	Low	Low
Mutton	49.3	Medium	Medium	Low	Low	High	High

Notes:

Share Risk: China sector share minus China total export share; the higher China's share of the sector, the higher the risk.

Health Risk: higher risk for fresh or live products; higher risk for services generally where people are gathering in large groups.

Place of Consumption Risk: higher risk for consumption in public places; lower risk for consumption in the home.

Border/Port Risk: Higher border risk for the movement of people across borders at airports etc.; as ports prioritise goods movements, higher risk for low-priority goods.

Value Chain/Activity Risk: higher risk for exposure to supply chains, and higher risk for goods that rely on economic activity.

Timing Risk: risk as it relates to the seasonality of each export sector.

High-risk export sectors

The **forestry sector** is highly exposed given that China accounts for a majority of its exports (*share risk*). Also, Chinese construction activity has ground to a halt and, with logs a low priority relative say to food and medicine, ports are turning away log shipments (*border/port risk*). **Forestry prices are feeling the pressure.** Benchmark log prices are anecdotally down by around 12%. And while lower shipping costs and a weaker NZ dollar are helping, the magnitude of the log price fall has been enough for logging to grind to a halt completely in some regions.

The **seafood sector** is also highly exposed to the Chinese market (*share risk*). Seafood is often a luxury item and bought or consumed (*health and place of consumption risks*) in public places such as markets or restaurants. Anecdotally, local crayfish prices have dropped from \$130/kg to \$80/kg in the wake of the virus outbreak.

Meanwhile, the relatively small **mutton export sector** is highly exposed given that around three-quarters of exports go to China (*share risk*).

Medium-risk export sectors

Beef and lamb exports are relatively less exposed than the mutton sector above, chiefly because they have alternative markets that they can readily look to (*share risk*). Lamb prices are holding up relatively well as meat companies switch market focus to the US, UK and the EU. Similarly, attention for beef exports has switched to the US (manufacturing) market, which is still performing relatively well.

However, there is also a sense that the meat sector is ‘playing for time’. Chinese buyers are likely to return to market before long as Chinese consumers ultimately still need to eat. Generally, we agree with this sentiment. However, this expectation is not without risk for both meat companies and producers, particularly as February falls within the peak slaughter period. Also, if current drought conditions worsen many farmers may be forced to slaughter animals, putting added pressure on prices as the meat sector attempts to offload meat supplies.

Low-risk export sectors

We anticipate that key **dairy** as well as **infant formula exports** will hold up relatively well. Dairy forms a staple part of many Chinese diets (read infant formula) with dairy often in powder form, it poses little *health risk* and is often consumed within the home (*place of consumption risk*). With that in mind, dairy products are likely to be a relatively high priority good at ports (*border/port risk*). Much of the risk is likely to come from the extent to which Chinese domestic food manufacturers that use NZ dairy ingredients get impacted by any closures or worker absenteeism as part of efforts to contain the virus or to avoid contracting it.

While virus concerns drove dairy auction prices down sharply last week, **there were signs that the price impact could prove short-lived.** Whole milk powder (WMP) prices slid 6.2%, while overall auction prices fell 4.7%. Indeed, Chinese buyers were still active at similar levels to recent auctions. Meanwhile, later-dated contract prices were higher than for shorter-dated ones and three auction product prices actually rose.

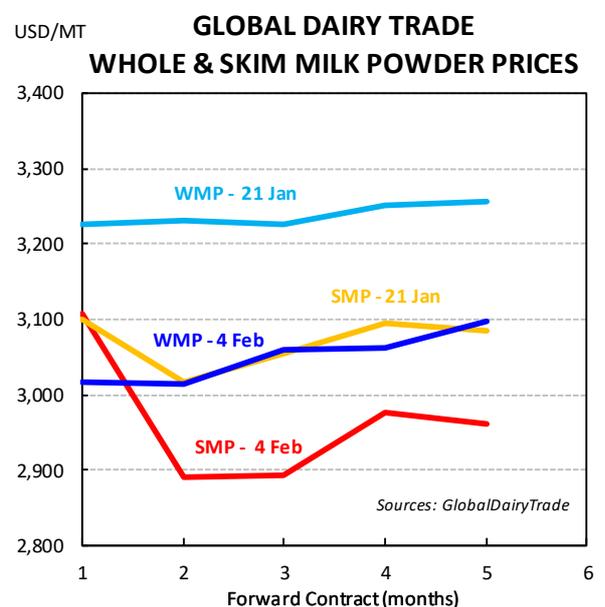
Fruit exports are low risk simply because they are out of season (*timing risk*). Kiwifruit picking begins in autumn, while apple picking gets underway in a few weeks’ time. Moreover, both fruits store well – if exporters need to, they can buy time by storing the fruit in cool stores.

Indirect impacts

In addition to the direct impacts on export industries are the flow-on impacts to support industries, particularly goods export logistics. Some of these effects will be concentrated. Forestry is a prime example: cutting gangs, land transportation, logistics and port activity all stand to be affected by the stop/start behaviour that is common in this industry and already starting to occur.

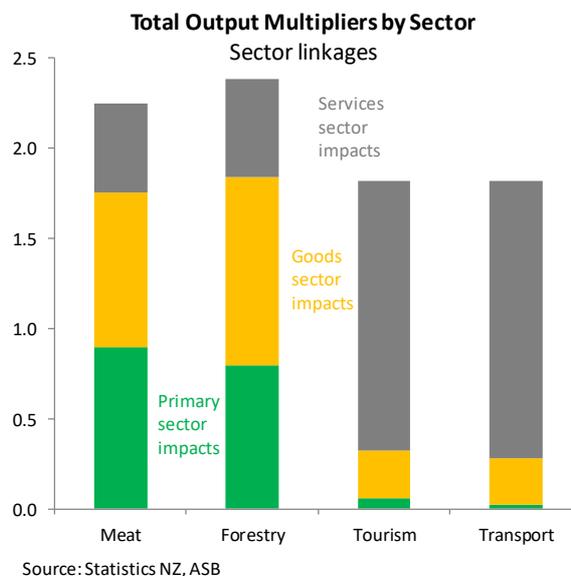
Tourism, the NZ sector most exposed, will have a range of flow-on impacts. Declines in international air travel (e.g. our estimated 10% short-term dip) will impact on a range of services from airline food catering, airport transfers, rental cars, through to touring services. Impacts will be most heavily felt by businesses that cater heavily to Chinese tourists. But NZ’s tourism industry is diverse, often with broader exposures beyond international tourism to domestic tourism and consumption. The hospitality sector, however, is vulnerable to NZ residents becoming more cautious themselves about venturing out should the risks from the virus increasingly become more front-of-mind.

Any short-term weakness in pastoral export prices, combined with heightened uncertainty, risk further spending caution by farmers on land improvements and general consumption. However, given farmers already have a long



list of reasons to be cautious (e.g. environmental regulation, dry conditions), the incremental impact may not be that large.

Here we use the latest input-output [tables](#) (March 2013 year) for the NZ economy to highlight sector linkages, with the chart shows the total long-run output multipliers for sectors likely to be directly impacted by the coronavirus. The total impact for the meat (total multiplier 2.2) and forestry sectors (2.4) is more than twice the direct impact, with much of the downstream demand met by primary and goods sector firms. The flow-on effects from the tourism and transport sectors (which have total multipliers in the region of 1.8) are more modest, with most of the impacts likely to be confined to the services sector.

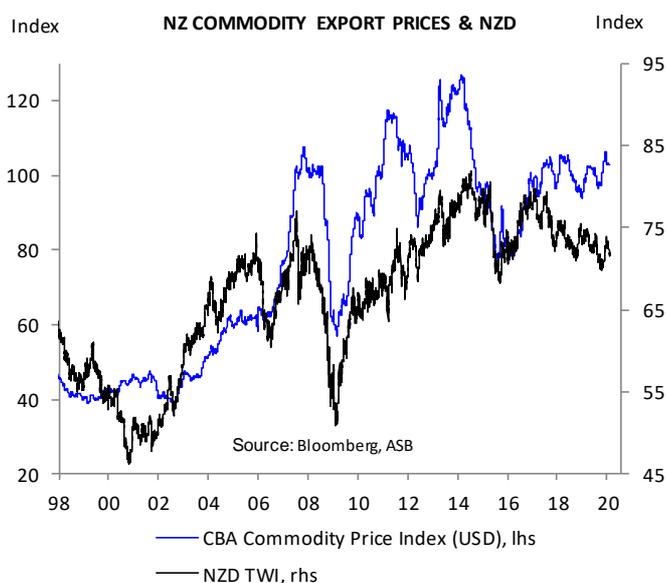


There will also be the occasional small silver lining within the cloud. Delays in the shipping of dairy products and fruit would increase demand for warehousing and cool stores until demand/transportation recovers. One of the more obscure export benefits from the SARS outbreak was added demand for cheese as households in affected countries hunkered down and ordered pizza for delivery rather than venturing outside.

Financial channel

Our interpretation is that financial markets largely expect the virus to have a modest and short-lived impact. The NZD is slightly down on a trade-weighted basis, with the lower Chinese yuan having weighed on the NZD and AUD. Despite recent slippage, the NZD remains well above where it was at the time of the SARS outbreak, as do NZ export commodity prices. Interest rate markets have been volatile, with market pricing oscillating from pricing in a full 25bp OCR cut to only partially pricing in a cut.

Equity markets initially sold off on virus fears, but have subsequently recovered on hopes that the impact of the virus will be contained and that policymakers would be prepared to act to offset the adverse impacts of the virus if need be. There are also few signs of higher risk being priced into the NZ economy. Credit spreads have not markedly widened. NZ government bond yields remain well below US counterparts, and spreads have barely budged. However, a severe outbreak of the virus in NZ could trigger sharper falls to the NZD and could see markets price in greater risks to the NZ economy. This could impact the cost of funds for NZ households, firms and the NZ government.



Wider economic impacts

At present, there do not appear to be any confirmed cases of the coronavirus in New Zealand, with most kiwis appearing to be going around their everyday lives with little disruption. Domestic consumer and business confidence have shown improving signs of late, but are likely to be vulnerable to a virus-related hit if the virus continues to attract extensive media coverage.

If the virus was to gain a foothold in NZ it would likely result in more significant disruption and a more prolonged

hit to the NZ economy. Measures to limit the spread of the outbreak within NZ would significantly impact the mobility of persons, goods and services. Stricter requirements could be imposed on NZ exports overseas, and access to key markets may close. Costs would also ratchet up. Many major public events would likely be cancelled. Households would hunker down and would limit outside trips. Schools may temporarily shut, with students learning from home. Some non-essential workplaces would close/scale back operations and more workers (where possible) would work remotely.

The 'what if it keeps spreading' scenario

Our analysis of the impacts is based around the usual impact of viral outbreaks: a short and sharp economic impact while fear of the unknown and containment measures ramp up, followed by a fairly sharp return to normal human activity once the risks of infection abate.

But what if the normal pattern doesn't occur and the impact is drawn out? The [Spanish Influenza](#) pandemic, arguably the most deadly killer since the Black Plague, sets the benchmark for the pessimistic end of possibilities. Spanning three waves over two or more years, the Spanish Flu is estimated to have infected up to 30% of the world population and killed 3-6% of the world population. If current coronavirus containment and avoidance measures continued even to some degree for a couple of years, that would do permanent damage to industries leveraged to free movement and mass gatherings of people (such as tourism and hospitality). However, in many respects life will need to go on.

There are many reasons to be confident that the toll and duration of the coronavirus outbreak will fall well short of the extreme of the Spanish Flu, even though the number of infected people has already well exceeded the SARS epidemic. Spanish Flu is thought to have originated from French battlefields during World War One, in a war environment of malnourishment, poor hygiene, overcrowded conditions and widespread censorship (the reason it isn't called the French Flu). Current conditions are very different. Spanish Flu's death rate amongst those infected was estimated at 10-20% (compared to around 2% for the coronavirus). Moreover, medical capability has advanced immeasurably over the past 100 years.

Policy implications

The rapid onset of the coronavirus impact is coming at a time when the NZ economy was showing signs of responding to the 75bps of OCR cuts delivered over 2020. Given still-heightened uncertainties over the outbreak we doubt that the RBNZ will incorporate its impacts into its central forecasts at the February Monetary Policy Statement (MPS). We expect the OCR to be held at 1% on February 12th. The RBNZ will likely seek to look through the short-term impacts of the outbreak and will concentrate on the medium-term implications. The virus will likely figure in the RBNZ's policy deliberations and assessment of risks and it is likely that the MPS will include a box discussing how the virus could impact the RBNZ's policy outlook.

If the virus has a longer-lasting impact on economic activity we expect the RBNZ to follow-through and cut the OCR. Fiscal policy will play more of a supportive role, via the automatic stabilisers, and potentially more targeted assistance to affected industries/sectors to help tide them over until economic activity starts to recover.

Appendix: what is 2019-nCoV?

The latest virus outbreak, formerly known as 2019-nCoV, belongs to the coronavirus family, which includes SARS (severe acute respiratory syndrome) and MERS (Middle East respiratory syndrome), and spreads via airborne droplets. The number of confirmed cases – around 40,300 persons (as at February 10) – has easily exceeded the roughly 8,000 worldwide cases reported in the 2003 SARS outbreak. The timeline of the coronavirus below illustrates how quickly the outbreak has escalated. It is thought that the timing of the outbreak – coinciding with the peak travel season around the Lunar New Year (LNY) holiday - amplified the spread of the virus.

Coronavirus Timeline

Dec 31. Several people in Wuhan, the capital and largest city in Hubei province, report virus symptoms.
 Jan 1. US Centre for Disease Control and Prevention has identified the Huanan seafood market in Wuhan as the suspected hub of the outbreak, with the seafood market closed.
 Jan 3. Passenger screening begins at Wuhan airport.
 Jan 7. Chinese health authorities announced they had isolated the 2019-nCoV pathogen, which belonged to the coronavirus family, which includes SARS and the common cold.
 Jan 9. First fatality in China.
 Jan 13-16. Health officials in Thailand and Japan announce that they have confirmed 2019-nCoV infections in travellers in their respective countries.
 Jan 17. US authorities begin airport health checks on all travellers from Wuhan and, later, all travellers from China.
 Jan 21. First cases confirmed in the US and Australia.
 Jan 23. Chinese officials suspend travel in and out of Wuhan, with similar travel bans in other cities in Hubei province.
 Jan 24. Chinese government starts construction of two new hospitals in Wuhan to cope with influx of patients.
 Jan 30. US Centre for Disease Control and Prevention confirms the first known person-to-person transmission of the virus within the US.
 Jan 31. World Health Organisation declares a global emergency. The number of confirmed cases approaches 10,000 in China, with the first suspected case in NZ (subsequently negative).
 Feb 2. NZ closes border to foreign nationals travelling from, or transiting through, China, joining approximately 20 countries that had imposed travel restrictions. Travel advisories warnings against travelling to China and for foreign citizens to leave China issued. First death reported outside of China.
 Feb 5. Launch of USD675m coronavirus preparedness and response global plan by the World Health Organisation.
To date. Number of confirmed cases around 40,300, with the disease confirmed in 28 countries and territories. Over 900 deaths as at February 10.
 Source: ASB

The mortality rate for people contracting 2019-nCoV, at around 2%, looks to be much lower than the SARS outbreak (close to 10%). However, scientists know little about the virus and its incubation period is highly variable – official [estimates](#) place this between 2 to 14 days – until symptoms become evident. **This can make it difficult to track and contain the virus.** Efforts at developing a vaccine have stepped up (none have yet to be confirmed) with some claims The World Health Organisation is convening a global research and innovation [forum](#) on 11-12 February to mobilise international action in response to the virus.

What have authorities done?

The Chinese government has taken unprecedented measures to contain the spread of the virus. It extended the LNY holidays by 3 days until 2 February, with the holiday extended to February 17 in the Hubei province. The city-wide lock-down has spread from Wuhan to the majority of Hubei province (population: 60 million) and a few other heavily-affected cities. Transport has been limited nationwide. There have been a number of industrial shut-downs. Citizens have been asked to stay home and avoid travel during the LNY, which has been extended to some affected areas to contain the outbreak.

Chinese policymakers have been proactive in trying to support the Chinese economy. The People's Bank of China has not been idle and has already provided additional liquidity and cut some policy interest rates. More is likely to follow. Additional Chinese fiscal stimulus is to be expected, with infrastructure spending and additional support likely to be offered to directly-impacted sectors. **There have also been efforts to co-ordinate a global response to tackle the outbreak,** with the World Health Organisation launching an USD675m preparedness and response [plan](#) through to

April 2020. Key objectives include the containment, treatment and actions to minimise the social and economic impacts of the virus.

There have been swift actions by a number of countries to try and limit the spread of the outbreak. On February 2, the NZ Government announced it would be refusing entry to NZ from foreign travellers who have left or transited through mainland China. To date, a total of around 20 countries (including Australia and the US) have already imposed travel restrictions on China. Global central banks have the coronavirus on their radar, and some (the Bank of Thailand) have cited the coronavirus as reasons for cutting policy interest rates.

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