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Economic implications of the coronavirus

Special
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- **The coronavirus that is currently spreading in China and beyond its borders, has financial markets rattled. Experience with virus outbreaks in the past shows that markets often bounce back quickly**
- **The economic impact on China hinges on the ability of the Chinese government to contain the virus and its policy actions to mitigate the impact**
- **Even if the virus outbreak turns out to be comparable to SARS, its global economic effects are likely to be larger than in 2002/2003, as China has a much bigger share in the global economy nowadays. Moreover, economies are much more interlinked than 17 years ago**
- **With global economic growth already in a deceleration phase, the virus is another risk that supports our view that we will see global recession this year and that central banks in developed markets will probably have more work to do in terms of stimulus**
- **At this point, we don't expect any *permanent* damage of the epidemic to the Chinese economy or other regions across the globe. In the past, economies have shown to make up for temporary losses after the dust had settled**
- **Although the current crisis could make it even harder for China to live up to its recent pledge to crank up US imports of goods and services by USD 200bn goods over the next two years, we don't foresee an additional negative effect on US-China trade relations as the Phase One deal clearly mentions exemptions in case of a natural disaster**
- **However, in case of a further spread of the virus globally or in case of defaults among China's highly indebted non-financial corporates due to the containment measures, the risk of permanent damage increases significantly**
- **For The Netherlands the effects will likely be indirect, via global growth, trade and sentiment. However, specific sectors supplying marine equipment, machinery and chemicals to Wuhan could also be hit**

In this Special, we look at the potential economic impact of the coronavirus that has been plaguing China since late 2019.

What do we know about the 2019 coronavirus?

The 2019 coronavirus started in the city of Wuhan (Hubei province) and belongs to the same group of viruses as SARS and MERS.^[1] In most cases these viruses lead to relatively mild symptoms such as fever, coughing and shortness of breath (according to the [World Health Organization](#)). Because SARS has plagued China

before (in late 2002 and 2003), it seems natural to compare the situation then to now. Before we do that, however, we should emphasize that there could be important differences between SARS and the 2019 coronavirus (Table 1), as we are still in the early stage of recognition.

First, based on the current data, the 2019 coronavirus seems to be less deadly than SARS. Where SARS had a mortality rate (number of deaths per number of affected people) of 10%, the 2019 coronavirus' most recent numbers indicate a significantly lower mortality rate.

Second, although it is not clear yet whether the 2019 coronavirus is more contagious than SARS (they both are assumed to spread through the air), it does seem to be spreading faster than SARS.

The 2002/2003 SARS outbreak led to a total of about 8000 effected cases over a course of 8 months, where the 2019 coronavirus has almost that number in a couple of weeks.

Table 1: A brief comparison of three coronaviruses

	<i>SARS</i>	<i>MERS-CoV</i>	<i>2019-nCoV</i>
Origin	Southern China (Guangdong)	Saudi-Arabia, Middle-East	China (Wuhan)
Fatality rate	9.6% - 11.0% (mostly in China, HK, TW, CA and SG)	~35%	2-5% (mostly China so far)
Total cases	8098-8422	2494	7783 (29/1/2020)
Total fatalities	774-926	858	170
Period of outbreak	16 Nov 2002 – Jul 2003	2012Q4 –	8 Dec 2019 –
–Peak of outbreak	Feb 2003 – May 2003	Mar 2014 – End 2015	20 Jan 2020 -
Reproduction rate/infectiousness	2 – 4 (later reduced to 0.4)	“Does not pass easily human-human”	1.4 – 3.8
Incubation time	2-7 days (CDC)	2- 14 days (~5 avg, CDC)	2 – 14 days

Source: WHO, Wikipedia, CDC, Johns Hopkins University CSSE

The incubation time, which is the time it takes for symptoms of the virus to surface, of the 2019 coronavirus is longer than SARS. This is an important difference, as people can have the coronavirus and pass it on without knowing they are sick. There's been an increasing number of cases reported outside China, notably in Thailand (the NY Times has a good [map](#) showing this). Meanwhile, the WHO Emergency Committee will be reconvened today to decide whether this crisis is a 'public health emergency of international concern'.

How have financial markets reacted to the outbreak?

Financial markets have reacted relatively strongly to the virus outbreak, but certainly not out of the ordinary yet. Stock markets first levelled off in Asia, but other markets followed quickly. In the meantime, the Hang Seng Index has lost about 6% since last Friday (Figure 2). For the S&P the loss is a much more modest 1%. Losses are more significant when compared to the peak in many equity markets, seen on 17 January – as sentiment was riding high on the US-China trade deal and a positive macro backdrop. As result of the risk-off sentiment, demand for safe haven assets such as US Treasuries was fuelled, pulling 10 year US Treasury yields down below 1.6%, where levels above 1.8% were still recorded in the first weeks of January (Figure 3), although the decline yesterday (-5bp) was largely down to the FOMC meeting.

Moreover, the US dollar and Japanese Yen have strengthened, while many emerging market currencies have weakened. Oil prices have also declined sharply, reflecting a combination of weaker sentiment and concerns that the virus outbreak and its containment measures will lead to lower demand for oil and other raw materials by China (Figure 4).

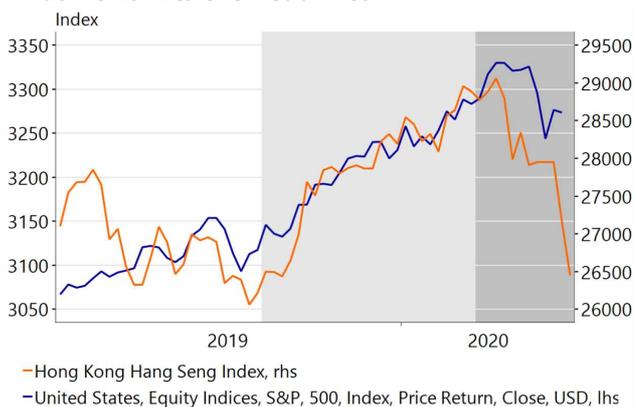
All in all, markets have clearly been rattled. Given the uncertainty about the severity and global spread of the outbreak, it is too soon to judge whether markets will recover from these losses anytime soon.

Figure 1: Market sentiment quickly recovered after SARS



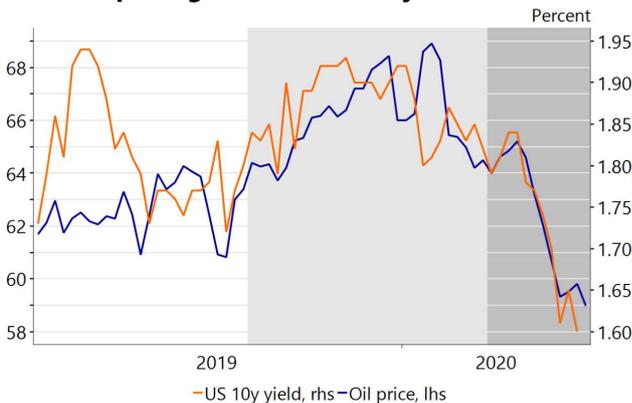
Source: Macrobond Dark grey = peak of crisis

Figure 2: Equity markets correct as 2019-nCoV virus news hits the headlines



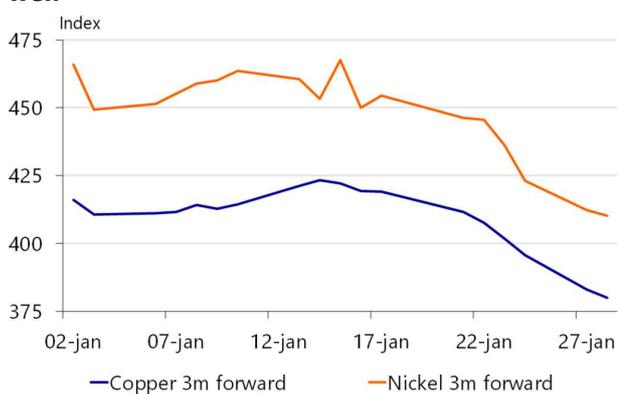
Source: Macrobond Dark grey: 2019-nCoV news hits headlines

Figure 3: Oil prices down sharply, safe-haven demand pulling down US bond yields



Source: Macrobond Dark grey: 2019-nCoV news hits headlines

Figure 4: Other commodities have suffered as well



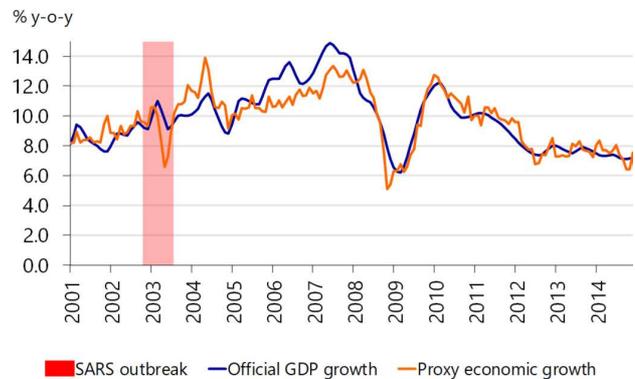
Source: Macrobond

The economic implications: is this time different?

During the SARS outbreak China experienced a sharp dip in economic activity (Figure 5). Our calculations show that monthly growth dropped from roughly 10% (y-o-y) early 2003 to 6.6% at the peak of the SARS crisis. Land, water and rail travelling dropped by 50% (y-o-y), freight volume dropped by 15% (y-o-y). The

tourist sector also took a hit. However, the economy rebounded quite quickly after the outbreak was contained, making up for previous losses. This underlines that the SARS epidemic did not have any negative impact on production capacity.

Figure 5: The economic damage was temporary in the past, but will it also be this time?



Source: Rabobank, Macrobond, CSO

Expected economic impact of 2019 coronavirus

The question now is whether the current epidemic will result in (only) temporary limited economic effects. For starters, economic growth in the first quarter of this year will most likely get hurt since the virus outbreak coincides with the period surrounding the Chinese New Year (January 25th), which tends to be a strong period for retail sales. In addition, the Hubei province (where most of the affected cities are located) represents a sizable part of Chinese GDP (4%) and its capital (Wuhan) is an important transportation hub and the second largest car manufacturer of China.

Based on the SARS experience and on the information we have right now, we think that a temporary impact of around 1-2% on GDP is a reasonable estimate. If this is largely offset by higher growth in the second half of 2020 the overall impact on annual GDP growth could still be relatively limited (to a few tenths of a percentage point).

What happens beyond the first quarter depends on the severity of the virus outbreak, the Chinese government's ability to contain it, and government stimulus to make up for the economic damage.

Taking these factors together, the picture does not look particularly rosy. The severity of the outbreak is still uncertain and the government's shutdown of major cities in Hubei (although pro-active and swift) might not have much effect if the virus has infected many people outside the containment areas. In addition, even though we expect the Chinese government to stimulate the economy (either via monetary or fiscal policy), we wonder how effective it will be if consumer sentiment suffers greatly.

How about the trade tensions?

Finally, we do not expect the coronavirus to create further trade tensions between the US and China. In the recently signed [Phase One agreement](#) between China and the US, China has pledged to increase imports of US goods and service by 200bn over the next two years (vis-à-vis 2017 import levels of US goods and services). With a possibly sharp slowdown ahead caused by the virus, China might not be able to live up to this promise. If this is the case, we expect a mild response by the US. The Phase One deal is [clear cut](#) about the occurrence of unexpected events or disasters (Article 7.6): "In the event that a natural disaster or other unforeseeable event outside the control of the Parties delays a Party from timely complying with its obligations under this

Agreement, the Parties shall consult with each other.”

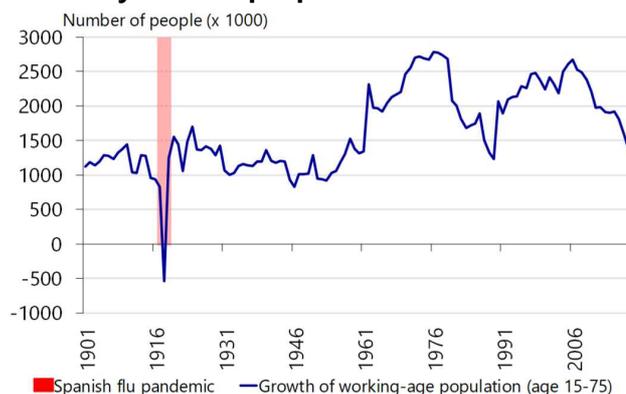
Indeed, one could even argue that the virus outbreak could be the perfect excuse for China to not live up to its pledges, although that may still be to the detriment of the US-China relationship from a medium-term perspective.

Permanent damage?

The question is whether the current epidemic can leave a permanent mark on the Chinese economy or, if it spreads further, the global economy. Permanent economic damage often occurs in case of a supply-side shock in the economy. This means supply-side factors, i.e. capital, labor and technology, are permanently affected by drastic events, such as an armed war, natural disasters, financial crises or a global epidemic or *pandemic*. At this point, the corona outbreak is nowhere near a pandemic and such a pandemic should be considered as a worst case scenario. But under such a scenario, there is a high risk of permanent economic damage. Pandemics in the past, such as the Plague in the mid-14th century or the Spanish flu in 1918-1920, illustrate how these events can leave economies crippled. Due to the Spanish flu, for instance, the US working-age population shrank by half a million people over the course of one year (Figure 6).

Another important channel through which permanent economic damage could occur is through lower capital levels per worker or capital destruction. In China this could for instance happen if heavily-indebted non-financial corporates (especially ones in the manufacturing sector) would go bankrupt as a result of the quarantine. The debt load of Chinese non-financial corporates has ballooned over the past 20 years to more than 150% of GDP.

Figure 6: Working-age population in the US shrank by 500.000 people



Source: US Census Bureau, Macrobond, Rabobank

These companies rely on high economic growth to keep servicing this debt. If this high growth levels off, even for a relatively modest short period, such highly indebted companies could find it difficult to stay honour their obligations, without massive government support. Indeed the government might give this support, perhaps by letting the Chinese central bank pump liquidity in the system, although then it would also risk (possibly much) higher inflation.

Lastly, if human capital mobility, foreign investor sentiment and trade are negatively affected over a longer period of time, this also has negative impact on productivity growth and technological catching-up.

How will the global economy be affected?

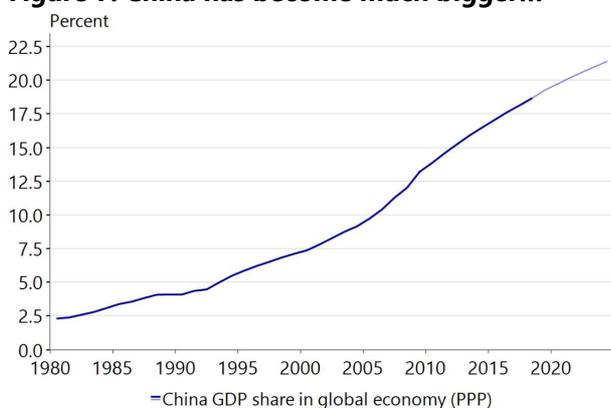
Compared to the 2002/2003 SARS outbreak, the global economic effects of the 2019 coronavirus are likely to be more severe. Simply put, China is (i) much bigger, (ii) more intertwined with the global economy and (iii) more vulnerable than it was 17 years ago.

In 2003 China represented only about 7.5% of world GDP, while it now represents more than 20% (Figure 7).

Thus an economic effect on China is likely to have more global consequences that it would have had 17 years ago. China has also become more intertwined in the world economy, China international air traffic was only 5 million in 2000, while it is almost 55 million now (Figure 8). Chinese tourists account for a large part of tourism in, for example, Thailand (30%) and Australia (15%). China has also become a major part of global value chains, which (if disrupted) could have major implications for international companies. In addition, China is more vulnerable now than it was 17 years ago: it has much higher debt, trade tensions with a major trading partner and its growth has been steadily slowing down for a number of years, which gives a weak starting point to face such a crisis.

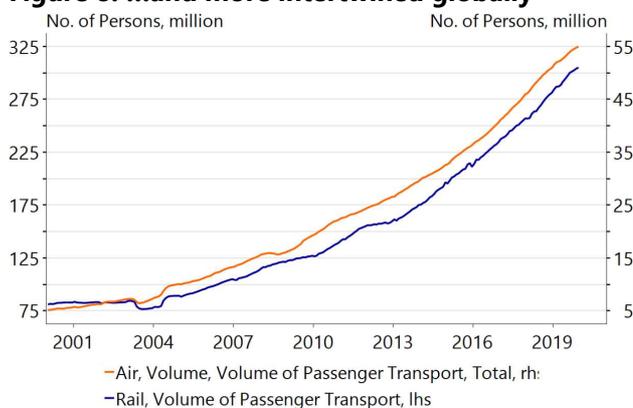
Together, these ingredients do not bode well for the world economy, if the coronavirus outbreak persists, the effects will be felt through global growth, trade and global value chains as well as in specific sectors such as transport and tourism. **All in all, with global economic growth already in a deceleration phase, the virus is another risk that supports our view that we will see global recession this year and that central banks of developed markets will probably have more work to do in terms of stimulus.**

Figure 7: China has become much bigger...



Source: Macrobond

Figure 8: ...and more intertwined globally



Source: Macrobond

Could the Netherlands get hurt?

As of yet, there are no confirmed cases of the virus in the Netherlands. We think the effect of the outbreak on Dutch companies will mainly be indirect, via global economic growth and sentiment. As a relatively small open economy, the Netherlands is sensitive to global trade (which will get hurt). Given the Netherlands' role as gateway to Europe for China, the transport sector specifically could suffer. But also other companies in sectors that have exposure to cities that have been shut down such as Wuhan. The Netherlands for example (according to the [Netherlands Enterprise Agency](#)) imports textile, mobile phones and medical equipment from Wuhan and exports marine equipment, machinery and chemicals to the city. Dutch companies importing or supplying these goods will likely be hit.

F&A: Impact on Food and Agriculture might be short-lived

The coronavirus raises uncertainties to China's massive food and agri sector. As neither the pace and scale of escalation of the virus nor the timeframe until the situation is fully under control is known it is worthwhile to review some of the experiences made during the SARS outbreak. During that incident mainly the food service sector faced negative impacts. And this can also be expected in parts with the coronavirus outbreak as e.g. already several coffee chains announced a temporary closure of a large number of their stores. During SARS the negative impact on the food service sector benefited the retail sector as consumers ate more at home. With the improvements since SARS in E-

commerce and food delivery some parts of the food service sector might benefit more than during SARS. Even so there might be a temporary shift of how people consume, we do not expect a decline in overall consumption levels.

Considering SARS experience, but clearly depending on the scale and length of the coronavirus outbreak, the impact on F&A might be short-lived. A look at key consumption and import data for China show that during SARS no significant demand slowdown for e.g. meat, vegetable oils and grains and oilseeds was noted and imports for most agri commodities continued their growth path.

Still, global prices of some agri commodities have in recent days reacted volatile due to the coronavirus. Often in line with the moves seen in other asset classes, particularly crude oil prices. Palm oil prices at the Malaysian exchange reacted with a sharp price drop followed by some recovery which can be explained by 1) China is the third largest importer of palm oil in the world importing 14% of all trade palm oil and thus a key demand and price driver; 2) palm oil is used to produce biofuels (1/3rd of the global biodiesel production uses palm oil as a feedstock) and with changes in energy and crude oil prices also prices of biofuels and raw materials used to produce those biofuels move.

Footnote

[1] SARS stands for Severe Acute Respiratory Syndrome and MERS for Middle East Respiratory Syndrome.

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