3 February 2020

Research

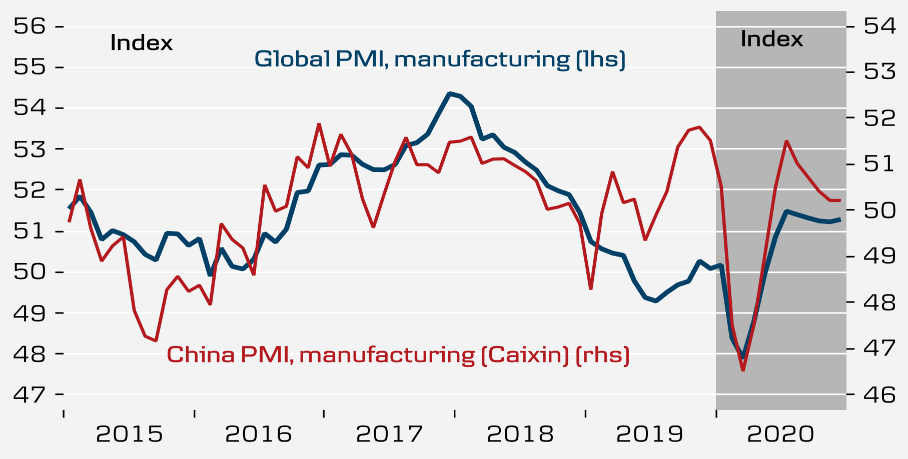
V-shape scenario for global growth on back of coronavirus

- **In this document, we take a closer look at what to expect from economic data in coming months following the spread of the coronavirus.**
- **We expect a big hit to Chinese growth in Q1 and PMI should nosedive in February. However, we look for a sharp rebound of PMI in Q2. Quarter-on-quarter GDP growth could fall to around zero in Q1 but should move up again in Q2 and Q3.**
- **The rest of the world will also feel the impact due to lower Chinese demand and supply-chain disruptions. In particular, a sharp decline in tourism is likely to affect the rest of Asia.**
- **We see signs that global inventory levels were low going into 2020. These could become even lower due to supply disruptions. This points to a decent rebound once the cycle turns up again following an initial dive.**
- **Our scenario assumes that the spread of the virus slows down in February and is contained by March/April. While there are early *signs of a slowing spread* of the disease, uncertainty relating to our predictions is very high.**

The rapid spread of the coronavirus has triggered big uncertainty over the global outlook from the beginning of 2020. The virus has proven more contagious than SARS was in 2003 and the level of infections is already far above the peak of SARS cases (see Chart 3).

While this looks dramatic, we see tentative signs that the rate of increase is slowing down. The daily increase is now below 20%, down from 50% last week. This is in line with views of scientists in China that the rate of increase should peak within a week. Uncertainty is high but we base our scenario on this view.

Chart 1: Look for V-shape development in PMIs



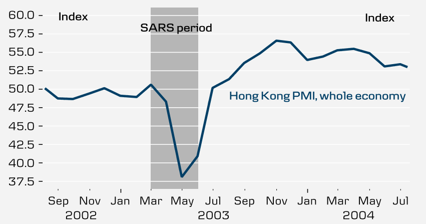
Source: Macrobond Financial, Markit, Danske Bank

Recent coverage of coronavirus

Flash Comment - Early signs of slowdown in spread of virus, 31 January

Research China - Uncertainty on the rise on the back of corona virus, 27 January

Chart 2: Hong Kong PMI development during SARS period



Source: Macrobond Financial, Danske Bank

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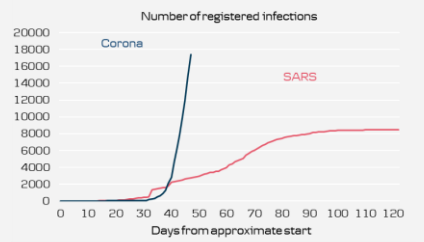
V-shape pattern in global production

Several statistics suggest the shock has hit at a point when global inventories have been run down. The global PMI for the change in inventories has pointed to a reduction in the stock of goods for some time (Chart 4). This is important because the only way to reduce inventories is to cut production below the level of sales. Hence, the data suggests that 2020 has started with companies producing fewer goods than they ship off to their customers. As a result, production would have to be lifted eventually to in order to get back to the level of sales.

However, **many global companies will now face disruptions to delivery** of components from China due to the extended holiday and factory shutdowns. Thus, companies are being forced to reduce production even further and draw down inventories more. However, when disruptions to the supply are over, there will be catching up to do in terms of production. **The bottom line is we are likely to see a month or two of lower production followed by a fairly sharp increase in production in the following months**.

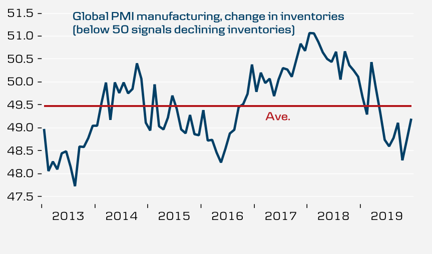
We illustrate this dynamic in Chart 5, which is a stylised illustration. In February, inventories decline even if we assume a hit to sales from China. In March, production is ramped up but still not enough to meet sales demand. Hence, inventories are reduced further. It takes an additional increase to move above sales and rebuild the replenished inventories. As shown, **it triggers a V-shape development in production even with flat sales**. In the chart, we assume sales catch up with lost ground in March and April before levelling off a bit again. However, the important factor is where production is relative to sales.

Chart 3: Coronavirus spreading much faster than SARS



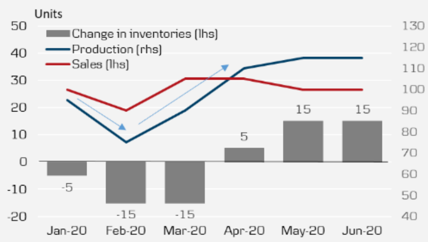
Source: WHO, Danske Bank

Chart 4: Global inventories reduced ahead before coronavirus hit



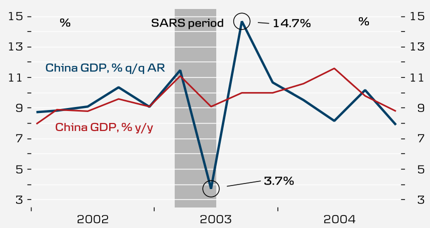
Source: Macrobond Financial, Markit

Chart 5: Stylised illustration of inventory and production dynamics



Source: Danske Bank

Chart 6: Chinese GDP at time of SARS illustrates 'catch-up' effect



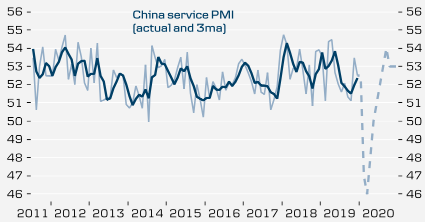
Source: Macrobond Financial, Danske Bank

China to see big short-term hit to growth but recovery set to follow

With China being the epicentre of the coronavirus outbreak, we expect the above pattern to be even more pronounced for China. We do not have PMIs for China from the SARS period in 2003 but the numbers for Hong Kong, which was hit very hard during the SARS outbreak, shows this clearly.

Looking at Chinese GDP growth during SARS shows a very clear initial hit from 11.5% q/q annualised growth to 3.7% q/q annualised growth. The ear-on-year growth rate fell around two percentage points from 11.0% to 9.1%. We look for PMI manufacturing to nosedive in February but it may recover as soon as March as production is ramped up again (see Chart 7). Bear in mind that PMI measures the *change* in output. Hence, even if production declines in March, the PMI could increase if the production decline is smaller than in February.

Chart 7: Service PMI to plummet in the short term



Source: Macrobond Financial, Danske Bank

It is hard to quantify the exact hit to GDP this time, not least because we do not yet know how long factory shutdowns will last. However, **we expect the total effect on GDP to be at least as big as during SARS, as China has taken more drastic measures to stop the virus this time.**

T**he extended holiday in many key manufacturing provinces will have a direct impact** on production as there will be one week less of production in January/February than usual (the list keeps growing but at least six provinces have extended the holiday). However, some of the lost ground should be recovered in March and Q2 (assuming the virus becomes under control). **The service sector is likely to take an even bigger hit this time**, as many areas have already felt a more or less complete stop. The lockdown of most of the Hubei province and transport limitations has caused a sharp decline in transportation such as trains and air travel. Cinemas and tourist attractions have closed and hotels are more or less empty. Restaurants have closed in many areas as well. The service sector is far bigger today (55% of GDP) than in 2003 (42%). **Retail is another sector that is feeling the pain as people** stay home instead of visiting shopping malls. Online sales are likely to mitigate this but from what we hear, there are not enough delivery drivers, as people are also ordering food and other things online more frequently to avoid going to supermarkets.

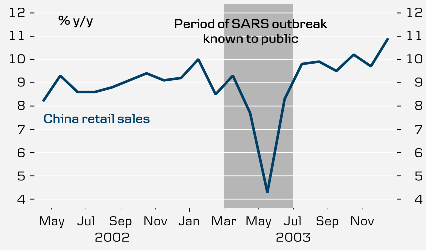
One can only guess how big a hit GDP growth will take but we estimate a reduction of at least two percentage points in year-on-year growth is on the cards, as this is what we saw during the SARS outbreak. This would lower Q1 GDP growth to 4% y/y or lower. This could trigger a negative quarter-on-quarter rate in Q2, followed by a sharp turn in Q2 and Q3 as production catches up and consumers make up for the money saved in Q1 by spending more in the following quarters. In Chart 9, we show what it might look like. However, uncertainty about what the exact numbers will be is high. **For 2020 as a whole, we lower our forecast to 5.8% y/y from 6.0% y/y**, as some of the lost service sector 'output' is harder to regain fully – such as transportation. For 2021, we keep our forecast unchanged at 6.1% y/y.

We expect the Chinese authorities to add some stimulus to support the economy, especially in the provinces hit the most and the sectors suffering a great deal from the hit to revenues. The People's Bank of China has also added liquidity and cut repo rates and we expect to see further monetary stimulus. If the stock market decline continues, state funds may start to buy up stocks to facilitate financial stability.

The rest of Asia takes a hit from lower tourism and transport

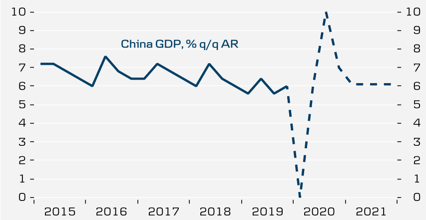
The coronavirus is already having an impact on the rest of Asia as well. **The tourism industry in particular is vulnerable.** Thailand has been the country worst hit outside China, with 19 people infected so far. While this is not a lot in a country with 70 million people, it is enough to create uncertainty and fears for potential tourists. Some may look for other destinations instead. Other countries are set to face the same stigma in the short term. In addition to this, Chinese tourists have added most to the growth in the industry in recent years. Thailand and Vietnam has benefitted from this. With people avoiding trains and air travel, tourism is bound to suffer from this in the short term during a season that is popular for Western tourists looking for warmer weather in Asia during the winter.

Chart 8: Chinese retail sales during SARS



Source: Macrobond Financial, Danske Bank

Chart 9: Possible profile for China q/q annualised GDP



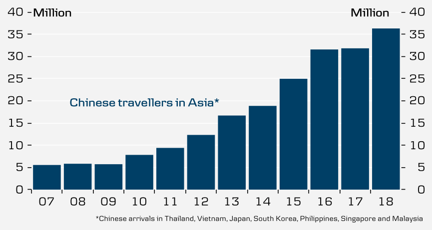
Source: Macrobond Financial, Danske Bank

Updated forecasts for 2020 (2021 left unchanged)

	Now	Previously
China	5.8	6.0
US	1.7	1.7
Euro	0.8	0.9
Japan	0.4	0.5

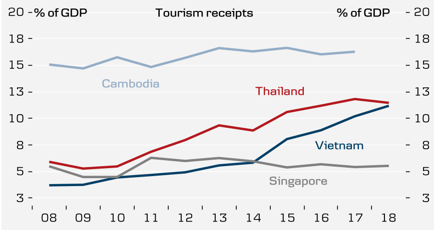
Source: Danske Bank

Chart 10: Chinese tourists increasingly important for other Asian countries



Source: Macrobond Financial, Danske Bank

Chart 11: Tourism important sector for many Asian countries



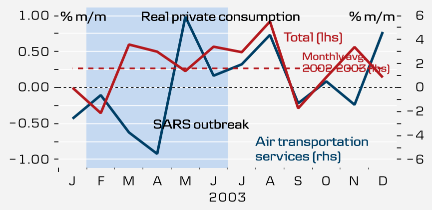
Source: Macrobond Financial, Danske Bank

The Japanese economy saw no significant impact on production during the SARS outbreak but Japanese companies could experience supply disruptions this time. More important, though, is the tourism industry in Japan. In 2002, only 450,000 Chinese tourists visited Japan. By 2019, the number had risen to 7.4 million and 30% of tourists in Japan now visit from China. Overall, we expect a reduction in Japanese growth of 0.1-0.2 percentage points due to the coronavirus.

US set to see supply disruptions but otherwise moderate effect

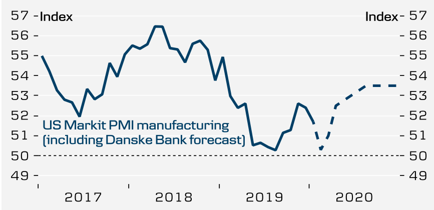
In our view, the impact on the US economy will be fairly muted as long as the coronavirus does not spread to the US. Given the US-China trading relationship has changed significantly since the SARS outbreak in 2002-03, it is difficult to compare the current situation to 2002/03, partly because Iraq war uncertainty hit the US simultaneously. Overall, the combination of the Iraq war and the SARS outbreak postponed the brewing economic recovery following the 2001-02 slowdown and we saw a quite sharp rebound after both SARS and Iraq war fears diminished. We are not yet changing our macro outlook for the US significantly on the back of the virus outbreak. We believe private consumption will remain the main growth driver but it may postpone a potential rebound in investments by one to two months, depending on when things improve again.

Chart 12: US consumption growth was not affected during the SARS outbreak



Source: BEA, Macrobond Financial

Chart 13: US PMI manufacturing set to decline temporarily



Source: Markit, Macrobond Financial, Danske Bank

We expect no major impact on US private consumption. During the SARS outbreak and Iraq war, real private consumption continued to grow around 0.25% m/m (despite the higher oil prices caused by the Iraq war) but there was a sharp decline in consumption on air transportation services. What the Americans did not spend on air travel, they spent on something else. Consumer confidence fell slightly but rebounded quickly afterwards. We expect the same thing to happen again this time. Lower oil prices are likely to cushion the effect on consumer spending as this provides a small lift to real wage growth.

It is probable that Chinese tourist spending in the US will decline. During the SARS outbreak, international flight arrivals fell 20%. International arrivals have been trending upward ever since, driven partly by more Chinese tourists. This could potentially hit tourist-oriented industries (e.g. restaurants) but total tourist spending in the US accounts for only 1.2% of GDP. There are already signs that fewer Chinese are choosing the US as their travel destination due to the derailed US-China relationship over the past year.

Looking at core capex orders and shipments, they moved more or less sideways from 2002 and into 2003. In our view, it is probable that the rebound in investments would have come earlier in 2003 if it were not for the SARS outbreak and the Iraq war. Business sentiment deteriorated somewhat but rebounded quickly. Industrial production also moved sideways in early 2003, after declining in the 2001-02 slowdown.

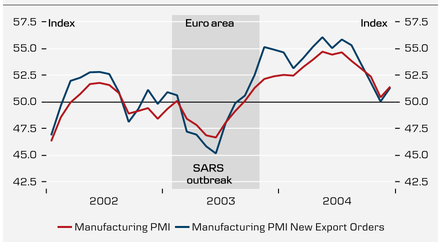
Based on US monthly trade data with China, it is difficult to draw firm conclusions. Exports to China declined in the first half of 2003 but rebounded sharply after this. **The economic impact may be larger for companies this time, as the world is now more integrated.** US goods imports from China account for 2.5% of GDP while goods exports to China account for 0.50% of GDP. If the virus outbreak is short-lived, inventories are probably likely to be sufficient to cover the US need for imports. We still believe that ISM and Markit PMI manufacturing will take a hit. We pencil in a 1 index point decline over coming months (see Chart 13).

The Fed is under increasing pressure to cut rates, as investors are nearly pricing in two cuts over the next year and the US 3M10s yield curve has inverted again, indicating more than a 50% risk of a US recession within the next 12 months. **We have said for some time that the Fed needed to do more than the three summer cuts and we still expect a cut by April (50% priced at this point).** Fed Chair Jerome Powell highlighted the downside risks, including the coronavirus, at the latest meeting but we believe it is too early for the Fed to make another U-turn, assuming the Fed also expects a V-shaped recovery in China, when things stabilise and uncertainty declines. However, if the Fed makes a U-turn sooner than we expect, it may help support the fragile markets.

Euro area rebound delayed, not derailed

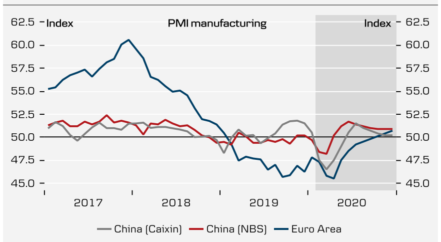
In the absence of a wider spread of the disease to Europe, **we expect economic activity in the euro area to feel the impact mainly through the manufacturing channel.** Drawing historical parallels to the SARS outbreak in 2003, PMI manufacturing dipped some 2-3 index points (though driven partly by the Iraq war and euro strength dampening foreign demand). The slump in Chinese activity is hitting at a time when European industry is still in a fragile state. Apart from the effect on export order books, euro area production is likely to feel the pinch from bottlenecks in global supply chains, with **China accounting for some 8% of intermediate goods imports to the euro area.**

Chart 14: Euro area export orders dipped under SARS outbreak



Source: Markit, Macrobond Financial, Danske Bank

Chart 15: Manufacturing PMI set to see some setback near term



Source: Markit, Macrobond Financial, Danske Bank

That said, we see a range of factors that could dampen the adverse effects on the European economy. While we expect a setback in PMI manufacturing in coming months, the impact on actual net exports and GDP growth might be more ambiguous. During the SARS outbreak in 2003, export volumes to China stayed remarkably stable. Furthermore, **over half of euro area exports to China are machinery and transport equipment**. For such investment goods, order dynamics are usually of a more long-term nature and hence could prove more resilient to temporary supply shocks such as the coronavirus outbreak. That said, we expect the hit to be more pronounced in the case of manufactured goods and chemicals, which are used as input factors to (stalled) production or will feel the heat from weaker Chinese retail sales.

In summary, **we lower our forecast for Q2 20 GDP growth slightly to 0.2% q/q** (from 0.3% q/q previously). However, we see the coronavirus outbreak as a factor that is delaying rather than derailing the mild industry rebound that has taken shape at the start of 2020. **We are still looking for a quickening of the quarterly growth pace to 0.3% q/q in H2 20, leading to annual growth of 0.8% in 2020 (previously 0.9%).** In our base case where the spread to Europe is contained, we believe the coronavirus outbreak will not have a material impact on ECB policy, other than that it could further delay a change to a balanced growth risk assessment.

Disclosures

This research report has been prepared by Danske Bank A/S ('Danske Bank'). The authors of this research report are Allan von Mehren (Chief Analyst), Mikael Olai Milhøj (Senior Analyst), Aila Mihr (Senior Analyst), Bjørn Tangaa Sillemann (Analyst) and Jakob Christensen (Head of Macro & Emerging Markets Research).

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