



CORONAVIRUS - TOO EARLY TO RELY ON THE SARS PATTERN

We expect the virus to leave a clear mark on China's economy and stock market in the first quarter. Beyond that, we can only speculate at this stage.

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- _ Despite the interim recovery, financial markets are likely to be burdened by the coronavirus for some time to come. At least until the growth rate of new infections flattens out.
- _ We consider the current data basis to be insufficient to make reliable forecasts. Considering a somewhat more cautious positioning is therefore recommended.
- _ In the case of the SARS epidemic, the effects on economic growth and the stock markets were significant in the short term, but then largely levelled off. However, we would not overstretch the comparison with SARS.

Even about four weeks after it first became headline news, uncertainty prevails over the development of the coronavirus (temporary called "2019-nCoV") epidemic. If one strains the parallels to the probably most comparable virus, SARS (Severe Acute Respiratory Syndrome) from the years 2002/2003, the economic consequences would be mainly of a short-term nature and the market correction would be followed by a recovery once the infection figures had stabilized. However, we would not wish to overstate the parallels. For the time being, the data on coronavirus are not yet sufficiently meaningful. Particularly when an epidemic breaks out, there can be many inaccuracies in data collection. This is particularly true when it comes to the question of how many people were infected and when and where, which is normally used to make forecasts about the further course of infection. On the one hand, the attention that the virus now receives should alone lead to more cases being diagnosed and registered. On the other hand, government measures (such as quarantine) can also lead to cases of infection being deliberately concealed. In addition, there are fundamental problems when comparing different viruses, such as the speed or even the occurrence of mutations, but also the availability and effectiveness of drugs.

However, the diseases themselves are not the biggest economic problems caused by the virus. Rather, the precautionary measures and behavioral changes of governments, populations and companies are of direct importance. Quarantines, travel restrictions and associated

disruptions to supply chains are some of the main causes of economic disruption and the associated loss of growth. Against the background of China's response to the SARS epidemic, which was widely seen as inadequate, China's leadership is now showing much greater commitment and is also more proactive in its cooperation with foreign health experts. However, a certain amount of skepticism should be maintained as it remains to be seen whether all the measures taken by the public authorities - which are, after all, confronted with a similar amount of uncertainty - will be effective, or whether some of them might instead prove counterproductive. This, too, is another reason why a few more weeks could pass before a robust assessment of the economic damage caused by the virus can be made. Our core scenario for the time being is a flattening of the new infection figures within the next two to three weeks and a corresponding reduction in government and private sector measures in the following one to two months. The risk scenario is a resurgence of the infection figures.

COURSE OF THE CORONAVIRUS EPIDEMIC

On January 19, there were 6057¹ infected people worldwide (5970 of them in China) and 132 deaths in China, 125 of them in Hubei province alone, whose capital is Wuhan. So far, the virus is spreading at a rate of 40% - despite all caution in comparison to the previous figures. The first - known - case was registered on December 12, 2019 and officially reported on December 30. The first related death was on January 17. The first case outside of China was registered on January 16.

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As of January 29, 2020 10 AM, Source: https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6

Measures taken so far by the Chinese government:

- January 23: Quarantine of Wuhan and later on adjacent areas.
- _ January 24: The government urges the population to stay at home and to cancel all public and private events, which is tantamount to a nationwide quarantine. In addition, no more group trips should be made.
- _ January 25: Official order to close all restaurants.
- _ January 26: In a press conference, the Deputy Minister of Health declares that:
 - the virus can also be transmitted during the incubation period, which should be two weeks;
 - _ the population should wear mouth guards outdoors;
 - the wildlife trade is prohibited.
- _ January 27: The government effectively extends the New Year holidays by two working days until February 2.
- _ January 28: The government calls for the cancellation of all private travel abroad and announces a shortage of medicines.
- Hong Kong cuts off air and train travel to China.
- Schools, kindergartens and universities in China, Hong Kong, Macao and Mongolia remain closed for varying lengths of time.

EXPERIENCE WITH SARS - SIMILARITIES AND DIFFERENCES

While SARS originated near Hong Kong and only later spread to Beijing, the coronavirus broke out in the middle of a highly industrialized region. As travel and transport to this region was severely restricted, there are likely to be clear traces in some supply chains. This also applies to many international technology companies that have their production facilities in this region. With 5,985 registered cases in mainland China, Macau and Hong Kong alone, the coronavirus has already surpassed the 5,327 registered cases of SARS in these places 17 years ago. In principle, Chinese travel is now much higher than in 2002, particularly due to the Chinese New Year, which fell in the middle of the coronavirus outbreak. Before the outbreak, it was expected that up to three billion trips would be made around the New Year. According to the Chinese Bureau of Statistics, grossdomestic-product (GDP) growth rates in the SARS environment were as follows in the first quarter of 2003: 12.2% (annualized growth compared to the previous quarter), second quarter of 2003: 3.4% and third quarter of 2003: 15.7%. So the slump was quickly made up. China's economy recorded rising growth rates at that time. By contrast, we expect a slight decline in annual growth for both 2019 and 2020. The government's response to the current epidemic is generally considered to be better and faster than in the SARS era, and cooperation with foreign health experts also appears to be much more proactive. As noted above, the effectiveness of many measures will probably only be adequately assessed in hindsight. The Hang Seng Index lost during the SARS era 17.5% at its peak within five months. It only began to reverse when the infection figures reached their third peak and declined. In the following two months, the market recovered its previous losses.

IMPACT ON THE ECONOMY AND MARKETS

So far, the markets have largely reacted as expected: the sectors affected (whether directly or indirectly via the growth effect) luxury goods, energy, transport, finance and commodities have fallen disproportionately. So-called safe havens such as government bonds (German government bonds and U.S. Treasury yields have decreased by around 20 basis points over the past two weeks), gold, yen and francs have benefited, while corporate bonds in the investment-grade segment have hardly moved at all, and only in the high-yield segment has a more substantial yield expansion been discernible.

Anyone wishing to draw comparisons, particularly with the SARS epidemic of 2002/2003, should bear in mind, however, that the market was then close to its low point and that the mood among companies and investors was generally very weak. This time the virus has been hitting a capital market that has had one of its best starts of the year, with new record highs, especially in (growth) stocks, low volatility and, most recently, investors who are once again very optimistically positioned. Since statements on the continuation of the epidemic at this time are still associated with a very high degree of uncertainty, the following model calculations for the Chinese economy should be taken with a grain of salt. Our base assumption is a flattening out of new infections within 2-3 weeks. In our opinion, the sectors most affected, together with their contribution to GDP in 2018 and the slowing effect they triggered on 2020 GDP, are: transport (still contributing 4.5% of GDP in 2018, it could be 0.25 percentage points lower in 2020), hotels and restaurants (1.2% and 0.1 percentage points or less), and wholesale and retail trade (9.3% and 0.25 percentage points or less). Added to this is the macroeconomic impact of the two additional public holidays, which in turn could affect GDP by 0.55 percentage points, which in total corresponds to a GDP impact of -1.15%. However, this is a purely gross figure and does not include possible later catch -up effects or government compensation programs. Even though it is far too early to think about concrete government measures, whether monetary or fiscal policy, at this point in time, we expect the government to do everything it can to achieve GDP growth of just under 6% for the current year. We stick to our 2020 GDP growth forecast of 5.8% for the time being.

In addition to China, those countries that benefit strongly

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from Chinese tourism will also be affected economically. 90% of the Chinese who travel do so within Asia. Ten million of them travel to Japan alone, where they generate more than half of tourism revenues, and the latter is also likely to apply to South Korea. China recorded around 150 million trips abroad in 2018. In addition, many (international technology) companies have parts produced in the Wuhan area, which could lead to delays in global production chains. Basically, we think that it will be at least until the end of next week before more reliable statements can be made. Until then, capital markets, especially in Asia, are likely to remain volatile and susceptible to incoming news about the epidemic. We believe that there could still be

waves of selling in the coming days, initially affecting the entire market. Then we will have to analyze whether this has unduly penalized some stocks. However, not all sectors may be able to make up the lost sales later on, and we will likely see some substantial declines in earnings estimates in such instances. Finally, we would like to point out once again the risks associated with a too early re-entry into the market on the basis of supposedly declining infection figures. This is because the course of most epidemics (including SARS, as described above) is not necessarily uniform, but may have a tendency to elude many forecasts by repeatedly re-emerging in the infection figures.

GLOSSARY

One basis point equals 1/100 of a percentage point.

Fiscal policy describes government spending policies that influence macroeconomic conditions. Through fiscal policy, the government attempts to improve unemployment rates, control inflation, stabilize business cycles and influence interest rates in an effort to control the economy.

The gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

The Hang Seng Index (HSI) is a freefloat-adjusted market-capitalization-weighted stock-market index in Hong Kong. It tracks the 50 biggest and most traded companies on the Hong Kong stick exchange.

High-yield bonds are issued by below-investment-grade-rated issuers and usually offer a relatively high yield.

Investment grade (IG) refers to a credit rating from a rating agency that indicates that a bond has a relatively low risk of default.

The Japanese yen (JPY) is the official currency of Japan.

Monetary policy focuses on controlling the supply of money with the ulterior motive of price stability, reducing unemployment, boosting growth, etc. (depending on the central bank's mandate).

A safe-haven investment is an investment that is expected to retain or even increase its value in times of market turbulence.

The Swiss franc is the currency used in Switzerland.

Treasuries are fixed-interest U.S. government debt securities with different maturities: Treasury bills (1 year maximum), Treasury notes (2 to 10 years), Treasury bonds (20 to 30 years) and Treasury Inflation Protected Securities (TIPS) (5, 10 and 30 years).

Volatility is the degree of variation of a trading-price series over time. It can be used as a measure of an asset's risk.

APPENDIX: PERFORMANCE OVER THE PAST 5 YEARS (12-MONTH PERIODS)

	12/14 - 12/15	12/15 - 12/16	12/16 - 12/17	12/17 - 12/18	12/18 - 12/19
Hang Seng Index	-7.2%	0.4%	36.0%	-13.6%	9.1%
U.S. Treasuries (10-year)	1.7%	0.8%	2.6%	0.9%	8.5%
German Bunds (10-year)	0.8%	4.3%	-0.8%	2.7%	3.2%

Past performance is not indicative of future returns. Sources: Bloomberg Finance L.P., DWS Investment GmbH as of 1/28/20

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