



1Q20 Investment Strategy (update)

The impact of the Wuhan corona virus on the global economy
February 5, 2020

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The impact of the Wuhan corona virus on the global economy

- **The impact of SARs to global economy:**
 - GDP, Export, Current Account, Inflation
- **Current economic situation prior to Wuhan crisis**
- **Economic immunization:** Economic connectedness between China and other economies
- **Policy space:** Room for central banks to cut rate
- **Result:** Global economic projection after the impact of Wuhan crisis

Thailand's triple whammy

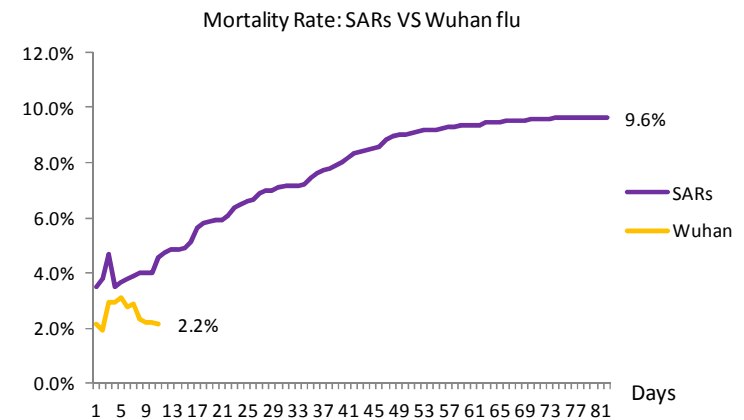
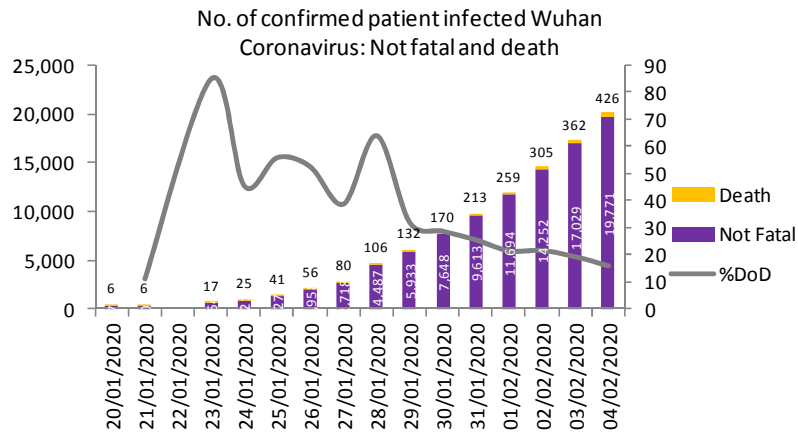
- **New factors affecting Thailand's economy**
- **Tourist projection after effect of Wuhan crisis**
- **2020 Thailand economic projection 2020** by SCBS

Wuhan corona-virus:
What's the impact to global economy?

Projection of severity of Wuhan coronavirus flu

As of February 4, 2020, 20,197 people have already been infected by Wuhan corona virus, 426 people have died, while the Chinese authorities have closed 15 cities, including Wuhan, its neighboring cities and Beijing. Meanwhile, a number of hospitals were set up to take care of patients with this particular disease. In addition, the Chinese authorities have passed the genetic code of the Wuhan virus to the World Health Organization (WHO), which the WHO has passed on to public health agencies around the world. This allows authorities around the world to control the disease when patients suspected of becoming infected Officials will be quarantined immediately. Hence, we set assumption based on 2 scenarios, as follow:

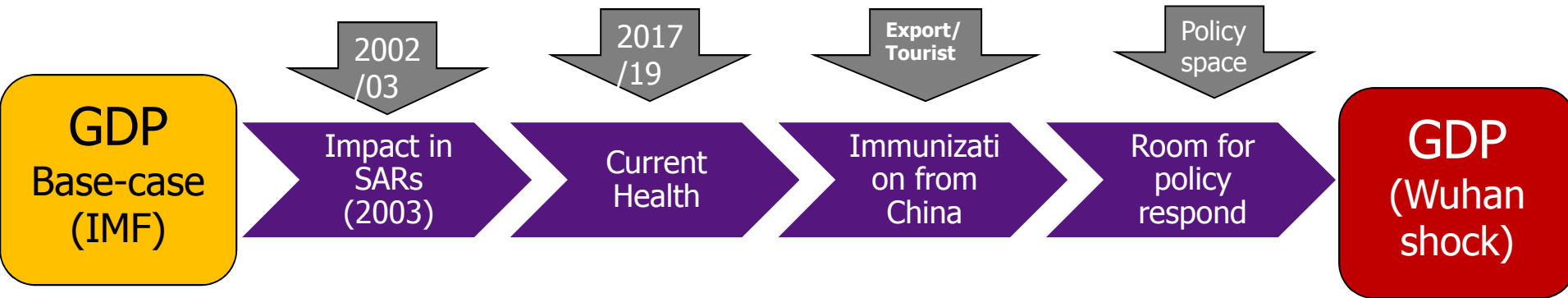
- Mild case:** We estimate that the number of Wuhan flu patients will continue to increase. But the growth rate of the number of patients will begin to decrease on February 7, thanks to disease control measures that the Chinese authorities began to close the city's transportation on January 24, while the incubation period of the disease will be within 14 days. Therefore, it is highly possible that the number of patients will increase at an accelerated rate in the first 1-2 weeks due to being infected with the virus before the closure of the city (25 Jan-7 Feb). But after that, the rate of increase in the number of people infected should be reduced significantly and closing in to 0% growth in February 14. Meanwhile, we believe that the mortality rates of influenza patients in Wuhan will be at 2%, below those SARs rates which increased from 3.5% to 9.6%.
- Severe case:** There is a chance that a flu spread rapidly so that it can be transmitted more easily through the breath (Airborne transmission). If this case happens, it will lead to "Super spreader" patients or patients that can infect many others. In this case, the severity of the crisis will be continue to 3 months.



Source: WHO, SCBS Research

Impact of Wuhan corona virus to the world economy

- To measure the impact of Wuhan flu on the global economy, we have done 4-step procedure, as follows



- Assumption

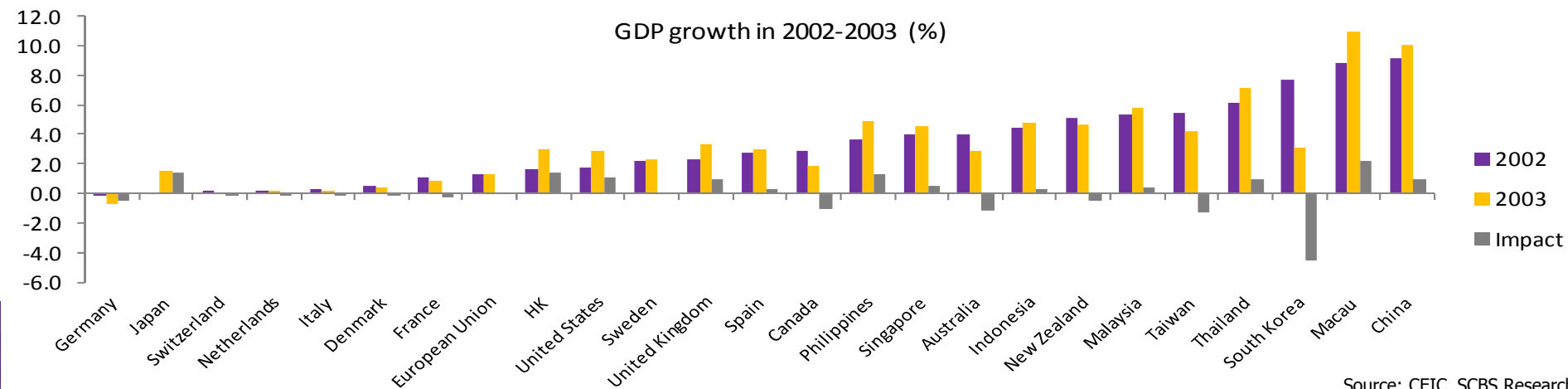
1. The Wuhan flu crisis intensified in mid-February and severely affected the Chinese economy in the first quarter of 2020. GDP growth will be cut from 6% to 5%. But in the next 2-4 quarter, growth will recover because the Chinese government will implement aggressive economic stimulus measures. In all, the Chinese economy in 2020 will grow at the rate of 5.3-5.4% per year, decelerated from the previous estimate of 5.9%.
2. The spread of corona virus in other countries is not widespread. This is because, we believe that, the authorities in each country implement a strict control measure to quarantine the infected. Hence, we believe that most of the impact will be on the decline in exports to, and tourist from, China.
3. Each country is ready to stimulate the economy after the Wuhan flu crisis ends (if there are remaining “policy spaces”).

Source: SCBS Research

The impact of SARs to global economy: GDP Growth

- If comparing the impact of SARs on GDP from 2002-03, we found that **the impact in the first quarter of the crisis will be very severe, with the GDP shrinking from the previous quarter 50-200% on average (on the percentage term)**. But after that, GDP Growth will start to recover. This is in part due to production activities that began to return back to normal level.

GDP	03/2002	06/2002	09/2002	12/2002	03/2003	06/2003	09/2003	12/2003	03/2004	06/2004	09/2004	12/2004	03/2005	06/2005	09/2005	12/2005	Effect 1Q	Effect 1Y	yr 2002	yr 2003	yr 2003-05
Australia	3.4	5.1	4.2	3.3	2.4	2.0	2.6	4.5	4.5	4.6	4.1	2.7	2.9	3.1	3.1	3.1	-17.0	-28.6	4.0	2.9	3.3
China	8.9	8.8	9.6	9.1	11.1	9.1	10.0	10.0	10.6	11.6	9.8	8.8	11.1	11.1	10.8	12.4	-18.0	10.4	9.1	10.1	10.5
Hong Kong SAR (China)	-0.6	0.5	2.4	4.1	3.9	-0.6	4.0	4.7	7.9	12.1	6.9	8.2	6.4	7.3	8.3	7.4	-114.5	87.6	1.6	3.0	6.4
Indonesia	3.5	4.2	5.6	4.7	4.9	5.0	4.6	4.6	4.1	4.4	4.5	7.2	6.0	5.9	5.8	5.1	2.5	6.5	4.5	4.8	5.2
Japan	-1.6	-0.2	0.9	1.3	1.5	1.4	1.3	1.9	3.2	2.2	2.4	1.0	1.1	1.5	1.8	2.2	-9.1	1279.7	0.1	1.5	1.8
Macau SAR (China)	5.4	10.4	5.0	14.3	13.7	-9.5	21.6	18.2	23.9	54.3	22.8	15.8	7.8	6.5	5.1	12.3	-169.3	25.4	8.8	11.0	16.0
Malaysia	2.7	4.7	7.1	6.9	6.3	5.9	4.6	6.5	8.2	7.9	6.4	4.9	5.6	4.3	5.6	5.9	-6.7	8.5	5.3	5.8	6.0
New Zealand	5.8	3.4	5.5	5.7	5.5	4.6	4.7	3.7	5.3	5.6	4.2	2.8	0.7	3.2	3.2	3.1	-17.0	-9.7	5.1	4.6	3.9
Philippines	3.6	3.8	2.8	4.3	4.2	4.0	5.8	5.8	7.2	7.9	6.1	5.8	5.1	5.4	4.2	4.5	-4.8	36.1	3.6	4.9	5.5
Singapore	-1.1	4.2	6.6	6.1	4.2	-0.3	5.3	8.9	10.3	13.4	8.3	7.7	5.2	6.2	8.6	9.4	-107.1	14.6	4.0	4.5	7.3
South Korea	7.2	7.6	8.2	7.8	4.2	2.3	2.1	4.0	5.8	6.7	5.2	3.3	3.0	3.9	5.0	5.3	-44.8	-59.1	7.7	3.2	4.2
Taiwan	1.8	6.8	7.0	6.2	5.2	-1.2	5.4	7.3	6.9	10.8	7.1	3.6	3.8	4.8	5.1	7.6	-122.2	-23.5	5.5	4.2	5.5
Thailand	4.6	6.4	6.9	6.8	7.6	6.3	6.8	7.9	6.5	6.3	5.6	6.6	3.9	4.3	4.7	3.9	-17.3	16.6	6.2	7.2	5.9
European Union	0.3	1.6	1.7	1.5	1.5	0.7	1.2	1.7	2.6	2.9	2.4	2.2	1.3	2.4	2.3	2.4	-54.5	0.9	1.3	1.3	2.0
Denmark	0.1	1.7	0.3	-0.2	1.2	-1.1	-0.3	1.8	1.7	3.5	3.2	2.3	0.7	3.9	2.8	1.9	-192.7	-18.1	0.5	0.4	1.8
France	0.6	1.2	1.6	1.1	1.2	0.1	0.6	1.4	2.3	3.6	2.8	2.6	1.6	2.0	1.5	1.5	-91.7	-26.7	1.1	0.8	1.8
Germany	-1.7	0.0	0.8	0.0	-0.5	-1.4	-0.8	-0.2	1.7	1.9	0.4	0.8	-0.7	1.1	1.2	1.2	-202.8	239.9	-0.2	-0.7	0.4
Italy	-1.2	0.1	1.1	0.9	0.5	-0.2	0.0	0.3	1.1	1.9	1.7	1.0	0.2	1.0	1.3	0.8	-143.4	-43.0	0.2	0.1	0.8
Netherlands	0.1	0.3	0.6	-0.1	0.7	-0.3	-0.2	0.5	1.3	2.0	2.3	2.3	0.9	2.2	2.6	2.4	-147.8	-30.9	0.2	0.2	1.4
Spain	2.5	3.1	2.6	2.7	3.6	2.7	2.8	2.7	2.8	3.1	3.5	3.1	3.2	4.0	3.6	3.8	-24.6	9.7	2.7	3.0	3.3
Sweden	0.3	3.1	3.5	2.0	3.6	0.7	2.3	2.5	3.8	4.9	3.8	4.8	1.5	3.8	3.3	3.0	-79.5	1.8	2.2	2.3	3.2
United Kingdom	1.6	3.0	2.0	2.7	3.5	2.5	3.3	3.7	3.5	2.1	2.4	1.5	1.8	3.4	3.3	4.2	-28.3	40.9	2.3	3.3	2.9
Switzerland	-0.3	0.2	0.6	0.2	-0.5	-1.0	0.0	1.6	3.4	3.4	2.7	1.7	1.8	3.2	3.4	4.1	88.2	-77.8	0.2	0.0	2.0
United States	1.3	1.3	2.2	2.1	2.4	2.1	2.9	4.0	4.3	4.3	3.3	3.4	3.4	3.5	4.2	3.0	-14.0	63.6	1.7	2.8	3.4
Canada	1.7	3.3	3.3	3.2	2.7	1.9	1.7	1.2	1.4	2.5	4.3	3.7	3.5	2.9	3.2	3.3	-30.7	-35.1	2.9	1.9	2.7



The impact of SARs to global economy: Export

- Comparing the impact of SARs on export value in 2002-03. We found that the export growth will continued to contract for the first two quarters, but then began to recover in the second half, causing YoY growth of many countries to be positive.

	4Q02	1Q03	2Q03	3Q03	4Q03	1Q04	2Q04	3Q04	4Q04	yr2002	yr2003	Effect1Q	Effect 2Q	Effect 1Y
Australia	-0.4	-2.3	-10.2	-12.1	-12.6	-8.8	13.4	16.7	17.1	-2.7	-9.3	-3.4	-4.2	-2.5
Hong Kong SAR (China)	15.6	17.5	12.2	7.0	11.4	14.1	17.7	17.2	15.3	5.2	12.0	-0.3	-0.6	1.3
India	21.2	19.9	11.0	7.8	30.9	35.2	31.9	28.1	27.0	16.8	17.4	-0.4	-0.6	0.0
Indonesia	15.7	18.1	4.7	1.9	4.8	-0.7	9.7	27.9	32.1	2.2	7.4	-0.7	-0.9	2.4
Japan	16.2	5.4	2.8	7.1	4.0	11.6	13.4	12.3	11.3	6.6	4.8	-0.5	0.3	-0.3
Macau SAR (China)	7.0	11.0	9.5	7.1	8.6	15.3	8.6	15.6	7.2	2.2	9.1	-0.1	-0.4	3.1
Malaysia	13.8	12.2	10.8	7.3	15.5	17.8	22.7	27.7	16.0	7.0	11.5	-0.1	-0.4	0.6
New Zealand	-8.1	-9.8	-11.6	-7.6	-4.5	2.9	16.7	2.6	9.5	-5.1	-8.4	-0.2	-0.2	0.7
Philippines	10.4	6.6	0.1	-0.8	6.2	6.5	11.1	8.7	11.7	10.1	3.0	-1.0	-1.1	-0.7
Singapore	10.8	30.9	17.9	22.6	27.9	13.8	23.4	25.2	17.3	3.9	24.8	-0.4	-0.3	5.4
South Korea	24.7	21.0	14.7	15.9	25.6	37.9	39.0	29.1	21.3	8.6	19.3	-0.3	-0.2	1.2
Taiwan	11.8	11.8	5.1	12.6	14.7	19.7	24.6	20.4	10.1	10.1	11.0	-0.6	0.1	0.1
Thailand	10.9	19.6	14.3	10.8	11.8	8.8	14.2	21.6	20.9	1.4	14.2	-0.3	-0.4	9.2
Vietnam	14.4	40.4	17.9	17.4	9.4	19.4	20.9	26.4	35.3	2.4	21.3	-0.6	-0.6	8.0
Denmark	6.2	2.8	-6.8	-3.1	-4.7	-0.2	6.3	6.8	9.1	4.6	-3.0	-3.5	-2.1	-1.6
European Union	0.8	-2.2	-6.6	-1.6	0.2	5.6	13.0	9.8	10.6	0.8	-2.6	-2.0	-0.3	-4.3
Finland	1.8	1.3	-2.6	-3.0	-1.2	4.1	0.7	8.7	10.9	-1.0	-1.4	-3.0	-3.3	0.3
France	2.0	0.1	-5.6	-3.6	1.9	2.8	8.3	6.5	4.4	-0.3	-1.8	-64.6	-41.9	4.3
Germany	5.2	4.4	0.0	2.0	2.2	8.0	13.6	8.3	10.6	2.1	2.2	-1.0	-0.5	0.0
Italy	0.7	-0.5	-4.9	-3.2	1.7	1.8	13.4	13.1	3.5	-1.5	-1.7	9.5	6.0	-0.2
Netherlands	0.2	4.9	-3.0	-1.5	2.1	1.5	10.6	13.4	11.8	-3.5	0.6	-1.6	-1.3	-1.2
Portugal	3.8	7.4	-2.1	3.1	2.8	1.8	9.0	5.3	7.2	2.3	2.8	-1.3	-0.6	0.2
Russian Federation	26.1	41.9	23.6	19.9	20.9	19.9	36.4	40.0	45.4	6.9	26.6	-0.4	-0.5	2.8
Spain	6.6	5.4	9.2	2.6	3.7	4.4	5.2	7.9	8.1	2.0	5.2	0.7	-0.5	1.6
United Kingdom	-2.6	-0.6	-5.0	2.5	6.8	-1.0	0.2	0.4	5.7	-1.4	0.9	-7.6	-5.3	-1.7
United States	1.9	4.7	1.6	2.5	9.7	12.2	13.6	13.8	10.1	-4.6	4.6	-0.7	-0.5	-2.0
Canada	6.7	5.3	-5.9	-6.7	-6.5	-3.6	15.0	13.1	6.8	-1.2	-3.4	-2.1	-2.3	-2.0

Source: CEIC, SCBS Research

The impact of SARs to global economy: Current Account and Inflation

- In term of stability indicators, there were no significant changes before and after the SARs epidemic.

	yr2002	Yr 2003	Yhr 2004
Australia	-3.8	-5.4	-6.3
China	2.4	2.4	3.2
Hong Kong SAR (China)	7.8	10.7	9.7
Indonesia	4.5	3.9	0.6
Japan	2.7	3.1	3.8
Malaysia	7.9	12.1	12.1
New Zealand	-2.1	-2.5	-4.6
Philippines	-0.3	0.2	1.6
Singapore	14.9	24.3	19.2
South Korea	0.6	1.5	3.7
Taiwan	7.9	8.9	5.0
Thailand	3.5	3.1	1.5
Belgium	4.4	3.3	3.1
Denmark	1.9	3.2	2.4
France	1.2	0.7	0.5
Germany	1.9	1.4	4.5
Italy	-0.5	-0.8	-0.5
Netherlands	2.5	4.9	7.5
Poland	-2.8	-2.6	-5.6
Canada	1.7	1.2	2.3
United States	-4.1	-4.5	-5.2

	Yr 2002	Yr 2003	Yr 2004
China	-0.8	1.2	3.9
Hong Kong SAR (China)	-3.1	-2.6	-0.4
India	4.3	3.8	3.8
Indonesia	12.0	6.8	6.1
Japan	-0.9	-0.3	0.0
Malaysia	1.8	1.1	1.4
Philippines	2.7	2.3	4.8
Singapore	-0.4	0.5	1.7
South Korea	2.8	3.5	3.6
Taiwan	-0.2	-0.3	1.6
Thailand	0.7	1.8	2.8
Vietnam	4.2	3.2	7.7
Macau SAR (China)	-2.6	-1.6	1.0
Denmark	2.4	2.1	1.2
European Union	2.1	2.0	2.0
France	1.9	2.1	2.1
Finland	1.6	0.9	0.2
Germany	1.4	1.1	1.7
Ireland	4.6	3.5	2.2
Italy	2.5	2.7	2.2
Netherlands	3.3	2.1	1.3
Spain	3.5	3.0	3.0
United Kingdom	1.3	1.4	1.4
United States	1.6	2.3	2.7
Canada	2.3	2.8	1.9

Source: CEIC, SCBS Research

Current economic situation prior to Wuhan crisis: GDP

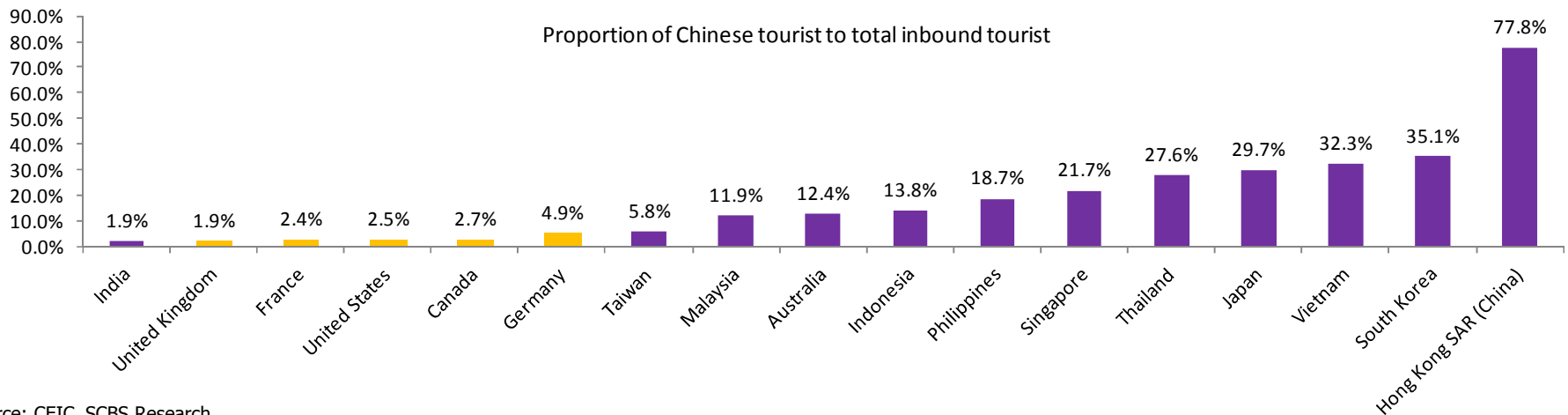
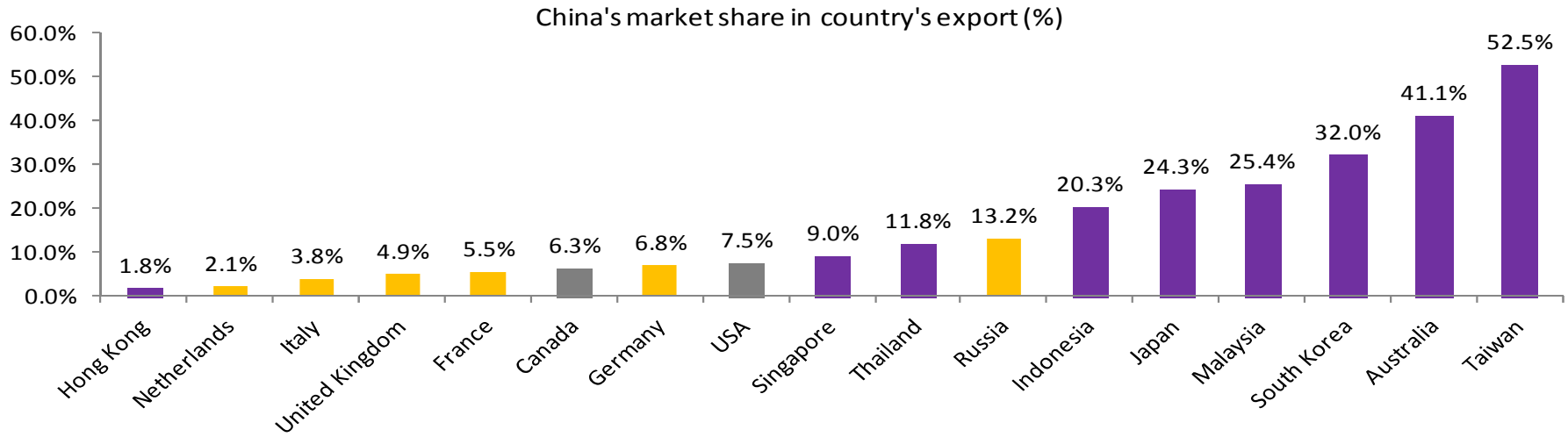
- Prior to the Wuhan crisis, Global economy is in the "late cycle" stage, but as we indicates in prior publication, we believe there will be a cyclical upswing in 1Q20.

	03/2016	06/2016	09/2016	12/2016	03/2017	06/2017	09/2017	12/2017	03/2018	06/2018	09/2018	12/2018	03/2019	06/2019	09/2019 (f)	12/2019	2016	2017	2018	2019
Australia	2.7	3.4	2.1	2.8	2.3	2.3	3.3	2.2	3.0	3.2	2.5	2.2	1.9	1.4	1.6	1.6	2.8	2.5	2.7	1.6
China	6.9	6.8	6.8	6.9	7.0	7.0	6.9	6.8	6.9	6.9	6.7	6.5	6.4	6.2	6.0	6.0	6.9	6.9	6.8	6.2
HK	1.1	1.8	2.3	3.4	4.4	4.0	3.6	3.5	4.6	3.6	2.8	1.2	0.6	0.4	-2.9	-3.0	2.1	3.9	3.1	-1.2
India	9.1	9.4	8.9	7.5	7.0	6.0	6.8	7.7	8.1	8.0	7.0	6.6	5.8	5.0	4.5	5.1	8.7	6.9	7.4	5.1
Indonesia	4.9	5.2	5.0	4.9	5.0	5.0	5.1	5.2	5.1	5.3	5.2	5.2	5.1	5.1	5.0	5.0	5.0	5.1	5.2	5.0
Japan	0.2	0.2	0.5	1.2	1.8	2.0	2.4	2.5	0.8	1.0	-0.3	-0.2	0.8	0.9	1.7	1.1	0.5	2.2	0.3	1.1
Macau	-11.0	-5.5	5.2	9.0	11.6	12.2	8.1	8.2	9.5	6.8	2.6	3.2	-3.8	-2.2	-4.5	-3.5	-0.6	10.0	5.5	-3.5
Malaysia	4.3	4.2	4.5	4.8	5.5	5.6	6.1	5.7	5.3	4.5	4.4	4.7	4.5	4.9	4.4	4.6	4.4	5.7	4.7	4.6
New Zealand	4.6	4.7	3.9	3.4	3.1	3.6	4.1	4.3	4.1	3.5	2.7	2.7	2.4	2.2	2.4	2.4	4.2	3.8	3.2	2.4
Philippines	6.8	7.0	7.1	6.7	6.4	6.6	7.2	6.6	6.5	6.2	6.0	6.3	5.6	5.5	6.0	6.4	6.9	6.7	6.2	5.9
Singapore	3.1	2.5	2.4	3.9	3.7	3.0	4.6	3.6	4.6	4.2	2.6	1.3	1.1	0.2	0.7	0.8	3.0	3.7	3.2	0.7
South Korea	2.8	3.6	2.8	2.7	3.1	2.8	3.9	2.8	2.8	2.9	2.1	2.9	1.7	2.0	2.0	2.2	3.0	3.2	2.7	2.0
Taiwan	-0.1	1.7	3.0	3.9	3.2	2.6	3.6	3.7	3.2	3.4	2.5	2.0	1.8	2.6	3.0	3.4	2.1	3.3	2.8	2.7
Thailand	3.5	3.8	3.1	3.1	3.5	4.2	4.5	4.0	5.0	4.7	3.2	3.6	2.8	2.3	2.4	2.5	3.4	4.0	4.1	2.5
Vietnam	5.5	5.8	6.6	6.7	5.2	6.3	7.5	7.7	7.5	6.7	6.8	7.3	6.8	6.7	7.5	7.0	6.1	6.6	7.1	7.0
European Union	2.0	2.6	1.6	1.9	3.0	2.1	2.8	2.5	2.2	2.3	1.9	1.7	1.7	1.2	1.7	1.5	2.0	2.6	2.0	1.5
Denmark	1.7	3.7	3.4	4.0	4.2	2.2	0.8	1.1	1.0	2.3	3.2	3.0	2.3	2.0	2.3	2.2	3.2	2.1	2.4	2.2
France	1.3	1.5	0.5	1.0	1.7	1.7	2.6	3.0	2.2	1.8	1.7	1.3	0.9	1.5	1.7	1.4	1.1	2.3	1.8	1.4
Germany	2.0	3.7	1.9	1.4	3.6	1.0	2.5	2.8	1.6	2.5	1.1	0.9	0.9	-0.1	1.0	0.6	2.2	2.5	1.5	0.6
Italy	1.4	1.5	1.2	1.0	2.4	1.5	1.4	1.6	1.1	1.0	0.5	0.6	-0.2	0.0	0.6	0.1	1.3	1.7	0.8	0.1
Netherlands	2.1	2.3	2.1	2.2	3.2	3.1	2.8	2.6	2.8	3.0	2.5	2.2	1.7	1.8	1.9	1.8	2.2	2.9	2.6	1.8
Spain	3.7	3.4	3.0	2.1	2.5	3.2	2.7	3.2	2.6	2.4	2.0	2.4	2.5	1.7	1.9	2.0	3.0	2.9	2.4	2.0
Sweden	2.7	3.5	1.4	1.9	2.8	1.5	2.8	2.7	2.9	3.4	0.7	1.8	1.4	0.5	2.0	1.3	2.4	2.4	2.2	1.3
United Kingdom	2.1	2.9	1.3	1.5	3.0	1.5	2.3	0.8	1.1	1.1	1.6	1.6	2.6	1.1	1.2	1.7	1.9	1.9	1.3	1.7
Switzerland	1.0	2.3	1.9	1.6	1.7	1.5	1.7	2.3	3.4	3.8	2.5	1.3	0.9	0.2	1.1	0.7	1.7	1.8	2.8	0.7
United States	1.7	1.5	1.5	1.9	1.4	2.3	2.6	3.2	3.5	3.0	2.9	2.4	2.7	2.3	1.9	2.1	1.6	2.4	2.9	2.3
Canada	0.5	-1.2	1.9	1.9	1.9	4.5	4.7	3.3	3.1	2.1	2.0	2.1	1.8	2.2	1.0	1.7	0.8	3.6	2.3	1.7

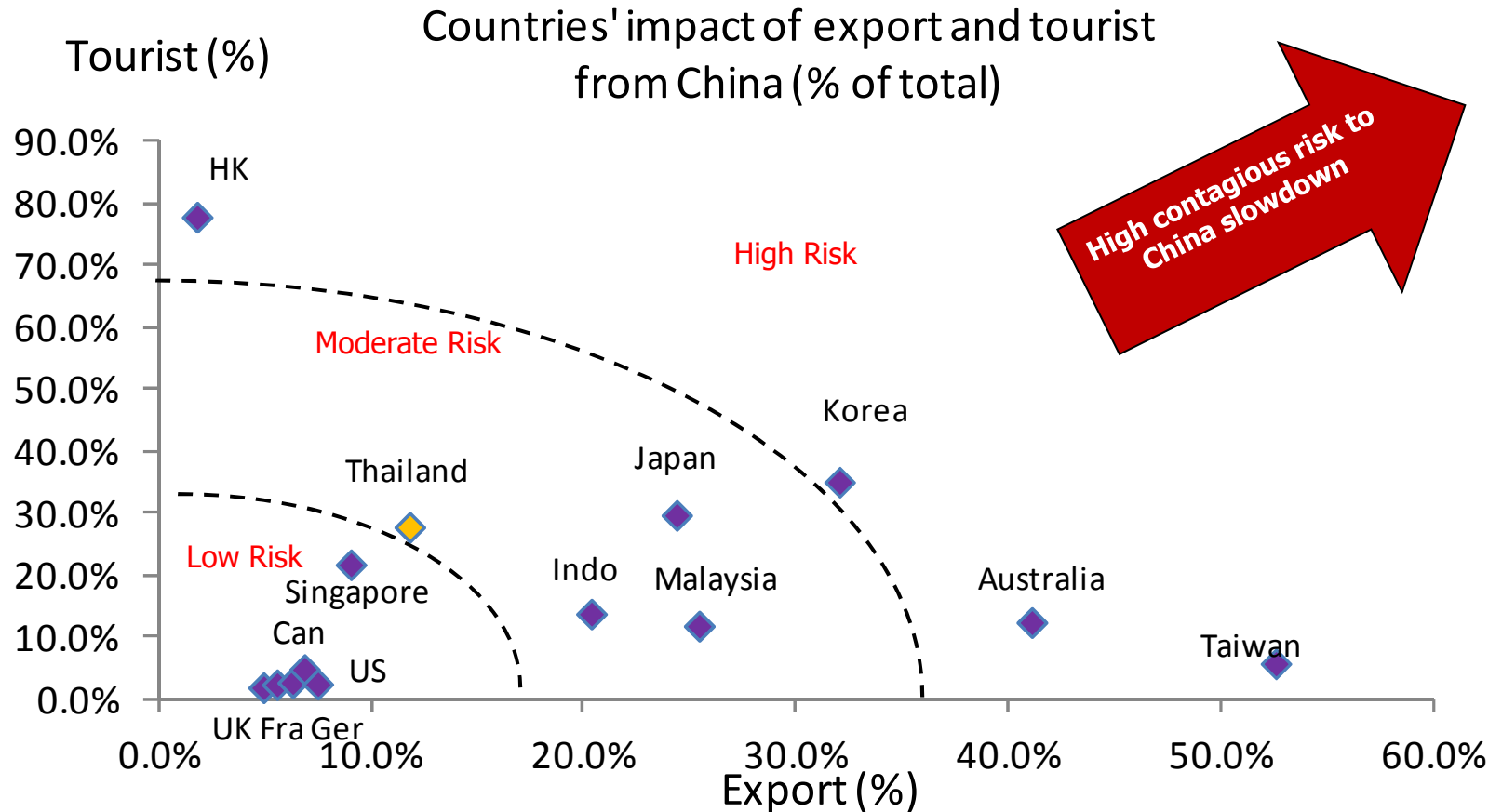
Source: CEIC, SCBS Research

Economic connectedness between China and other economies

- In terms of exports, China is a large export market for the Asian economy, ranging from 9% of total exports in the case of Singapore to 52.5% in the case of Taiwan (except Hong Kong, which is a port city), while the China's market share in Europe and America are smaller.
- In term of tourism, Chinese tourists have a greater proportion of the Asian tourist market than in Europe and America as well.



(Extra) Economic connectedness between China and other economies



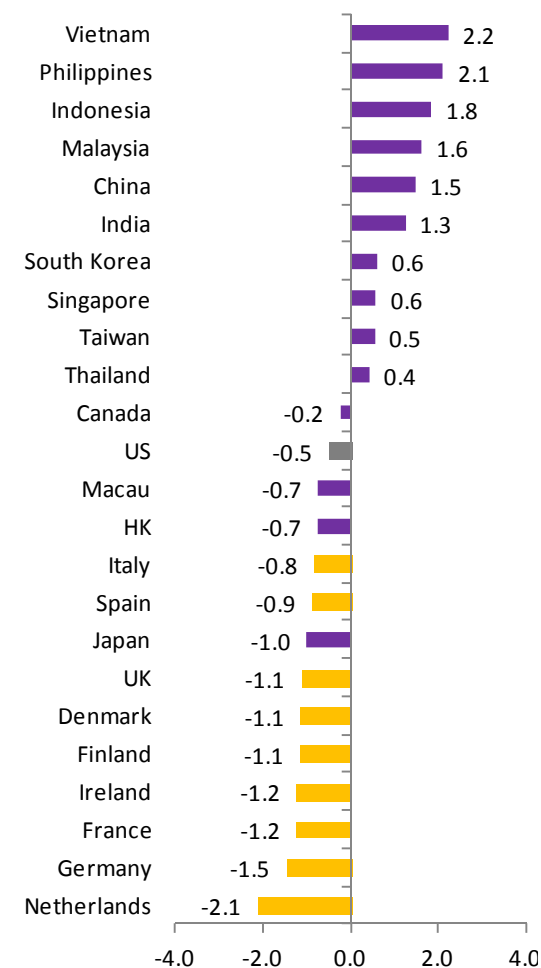
Source: CEIC, SCBS Research

Policy space: Room for central banks to cut rate

- If the policy interest is higher than the inflation expectations, this implies that the central bank has "policy space" to cut interest rate in order to stimulate the economy.
- The study shows that Asian countries have policy spaces more than those in Europe and America.

	2018	2019	2020-base	2020 proj.	Policy Rat	Real Pol
China	2.1	2.9	2.4	2.7	4.15	1.5
Hong Kong SAR (China)	2.4	2.9	2.6	2.7	2.00	-0.7
India	4.0	3.7	4.1	3.9	5.15	1.3
Indonesia	3.2	3.0	3.3	3.2	5.00	1.8
Japan	1.0	0.5	1.3	0.9	-0.10	-1.0
Malaysia	1.0	0.7	2.1	1.4	3.00	1.6
Philippines	5.2	2.5	2.3	2.4	4.50	2.1
Singapore	0.4	0.6	1.0	0.8	1.36	0.6
South Korea	1.5	0.4	0.9	0.6	1.25	0.6
Taiwan	1.4	0.6	1.1	0.8	1.38	0.5
Thailand	1.1	0.7	0.9	0.8	1.25	0.4
Vietnam	3.5	2.8	3.8	3.3	5.50	2.2
Macau SAR (China)	3.0	2.8	2.7	2.7	2.00	-0.7
Denmark	0.8	0.8	1.5	1.1	0.00	-1.1
France	1.9	1.1	1.3	1.2	0.00	-1.2
Finland	1.1	1.0	1.3	1.1	0.00	-1.1
Germany	1.7	1.4	1.5	1.5	0.00	-1.5
Ireland	0.5	0.9	1.5	1.2	0.00	-1.2
Italy	1.1	0.6	1.0	0.8	0.00	-0.8
Netherlands	1.7	2.6	1.6	2.1	0.00	-2.1
Spain	1.7	0.7	1.0	0.9	0.00	-0.9
United Kingdom	2.5	1.8	1.9	1.9	0.75	-1.1
United States	2.4	1.8	2.3	2.0	1.55	-0.5
Canada	2.3	1.9	2.0	2.0	1.75	-0.2

"Policy Space" in selected economies (%)



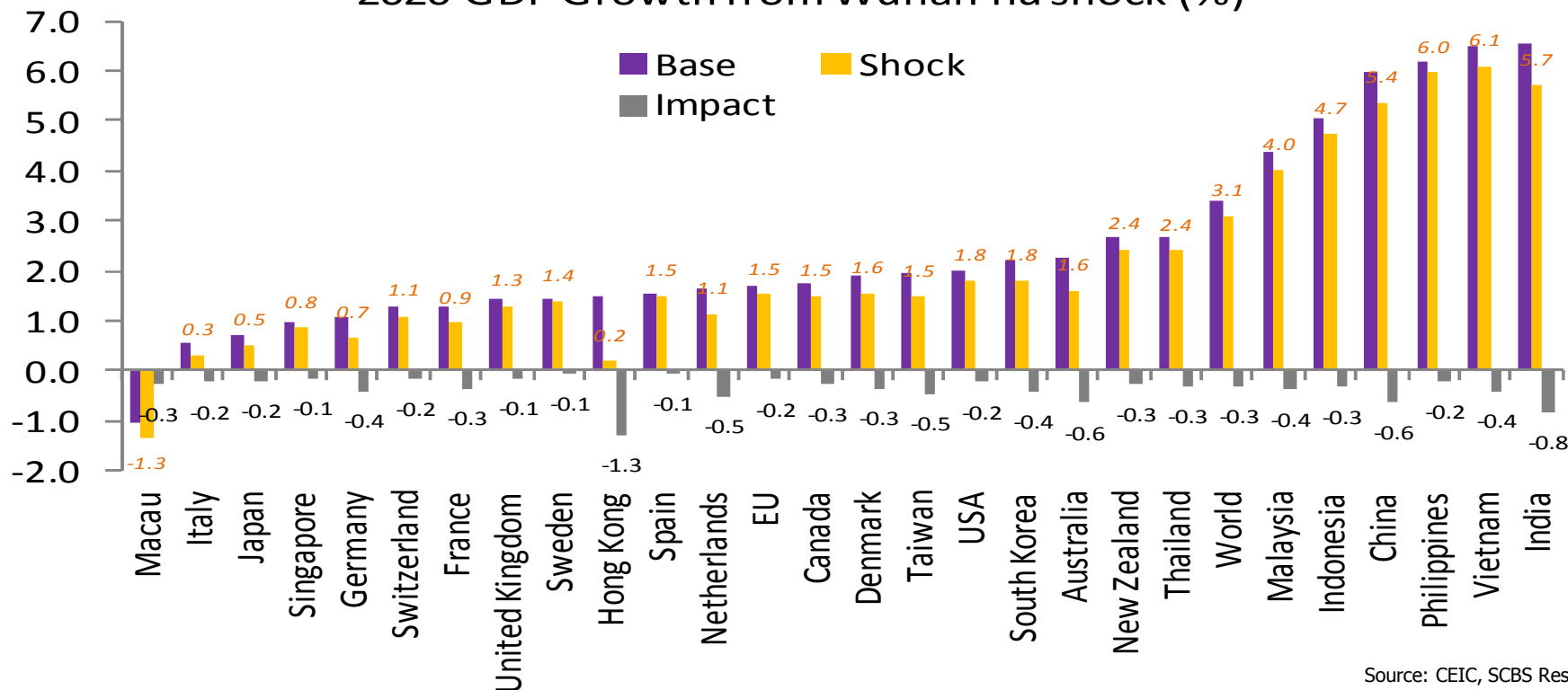
Source: CEIC, SCBS Research

Global economic projection after the impact of Wuhan crisis

• We found that:

1. Although Asian economies have a greater degree of connectedness to China, but with a stronger fundamental (than Europe and America), the growth rate of Asian economies will still be higher than those in DM.
2. In case of DM, the US economy is stronger than those in Europe or even Canada.
3. Asian NICS & Greater China will be greatly affected by Wuhan crisis due to their connectedness to China, while their stimulus measures will lessen the impact somewhat. The economy that are greatly affected from the crisis are (ranging from its severity) Macau, Hong Kong, Japan, Singapore, Taiwan and South Korea.
4. We believe the effects will be severe in the first half, and will recover in the second half.

2020 GDP Growth from Wuhan flu shock (%)



Source: CEIC, SCBS Research

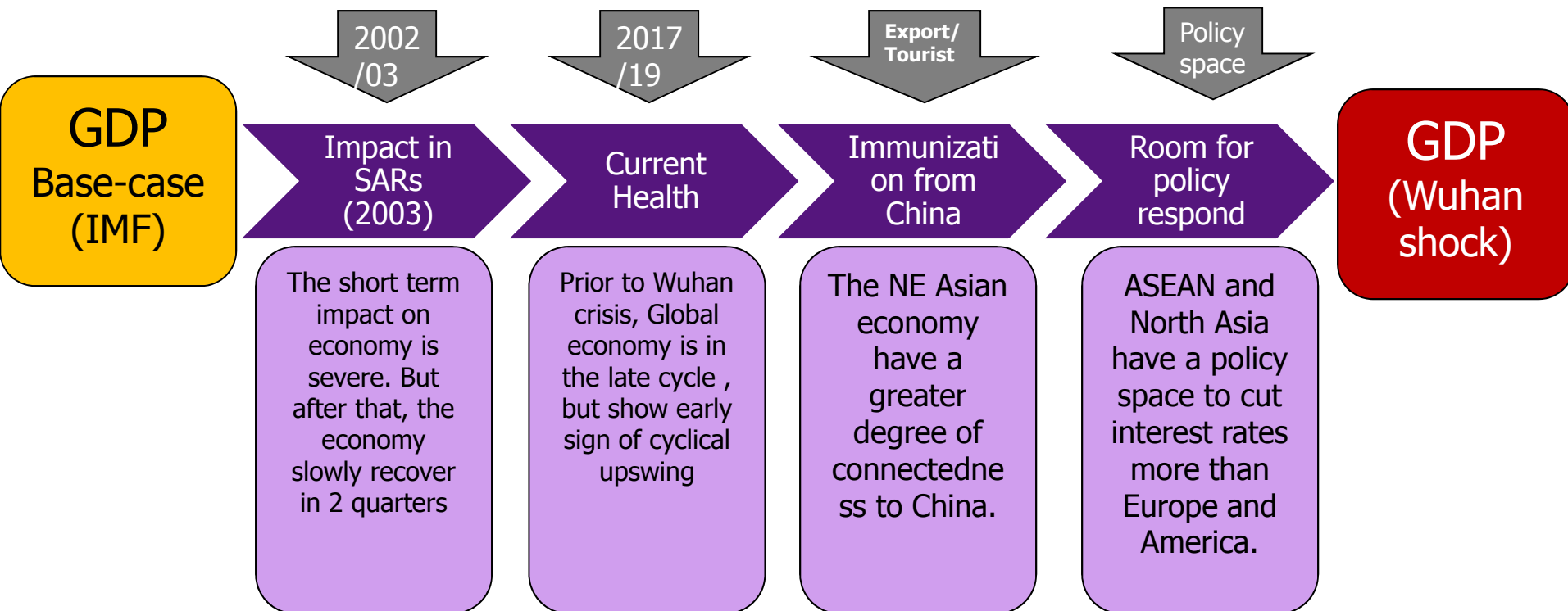
Global economic projection after the impact of Wuhan crisis

GDP Growth	2019 (WEO Oct'19)	2020 (WEO Jan'20)	2020 (SCBS)
World	2.9	3.3	3.1
US	2.3	2.0	1.8
Euro Area	1.2	1.3	1.0
Germany	0.5	1.1	0.7
China	6.1	6.0	5.4
Thailand	2.9	3.0	2.4

Source: IMF, SCBS Research

Result: Global health check, Economic immunization and impact from Wuhan Crisis

- In considering the impact of Wuhan flu on the global economy We have summarized the following

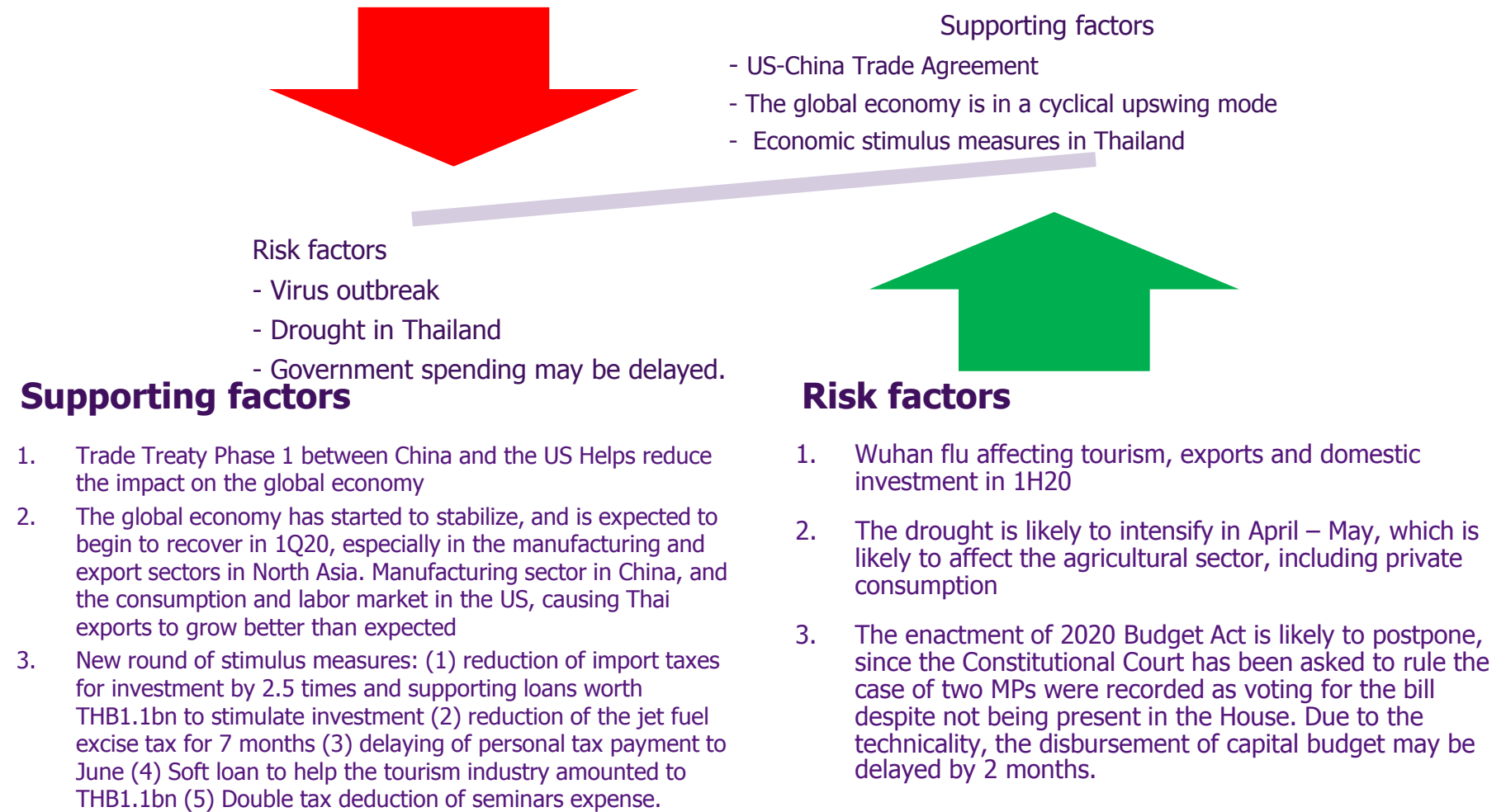


Investment Implications

- Wuhan-flu economic crisis will intensify in the first quarter, but Chinese economy will start to recover in the second quarter due to the rebound from pent-up demand and government stimulus. While in the long-term, the Chinese economy will remain strong, especially the consumer sector.
- In Asia, Asian NICS and Greater China have more economic impact from Wuhan flu than any other group. But the governments will relax the economic policy to support the economy, while ASEAN such as Thailand, Malaysia, Indonesia, Philippines and Vietnam are less affected and have more policy space to accommodate.
- In the developed economy, the US is more interesting than Europe and Japan because (1) has less economic links with China, (2) has good economic fundamental, and (3) has a policy space to stimulate the economy. We also believe that it is possible to see global coordinated stimulus in the second quarter.

Thailand's triple whammy :
Wuhan, Drought, Budget delay

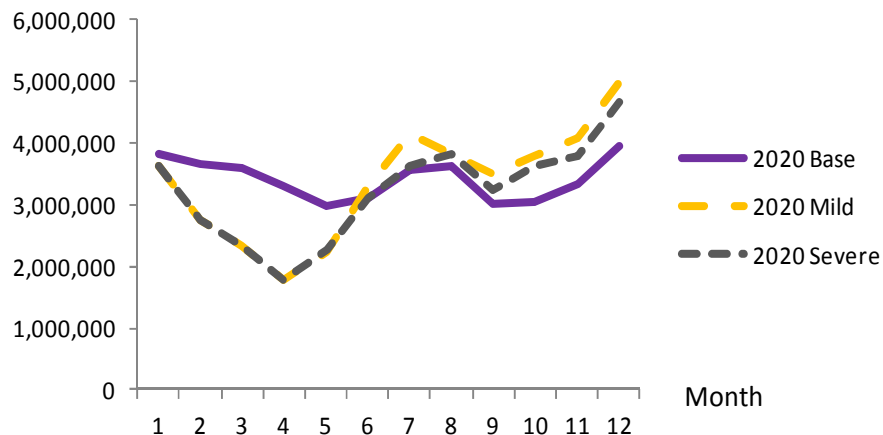
New factors affecting the Thai economy in 2020



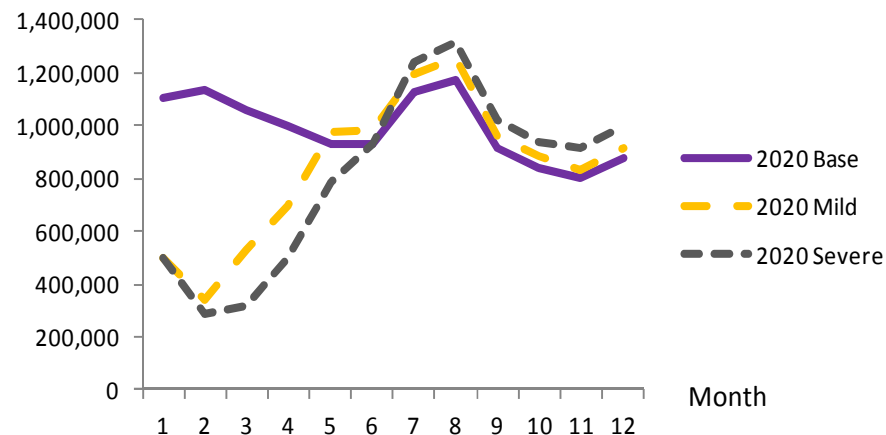
Source: SCBS Research

Tourist projection after effect of Wuhan crisis

No. of Tourist arrival projection--Total (Wuhan flu shock)



No. of Tourist arrival projection--China (Wuhan flu shock)



Due to the Wuhan flu crisis, we have revised our domestic arrivals estimates as follows

Mild case: We believe that the number of Chinese tourists in the first quarter of the year will decrease by 56% from the year 2019 at 3.1 million (1.9 million persons), which is close to the TAT's forecast. This is because the Chinese authorities prohibit group tours from traveling, while the individual travelers will postpone their travel. Nevertheless, we believe that the decrease in tourists will be simply postponing the flight to wait for the Wuhan flu crisis to ease. We hence expect the number of Chinese tourists in 2020 to be 10.1 million, down from 11.0 million in 2019 by 8.6%.

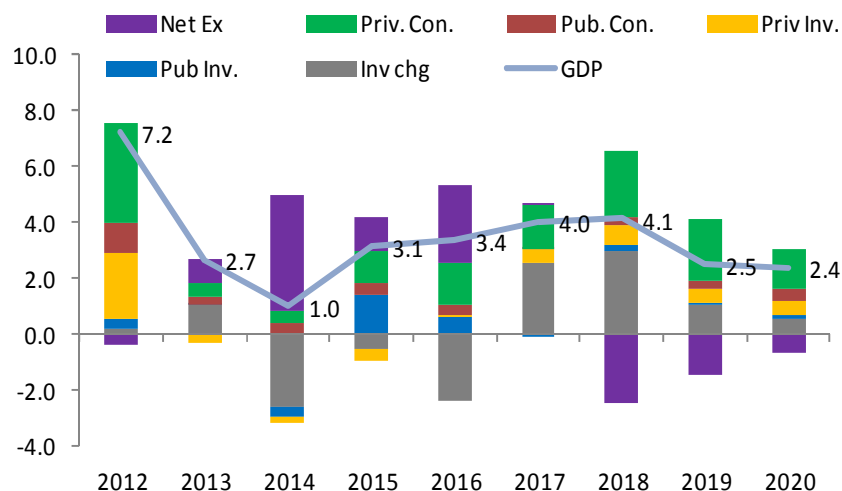
As for the total number of tourists, we believe that it will drop around 20% in the first half of the year compared to the same period last year, or around 16.8 million persons from 19.8 million persons in the first half of 2019, but will return to grow 18% and 24% in the third and fourth quarter respectively. For 2020, the total number of tourists will be 40.4 million persons (1.5% YoY).

Severe Case: Chinese tourists will shrink in the first 2 quarters at 65% and 12% per year respectively, due to the assumption that Wuhan flu crisis will last for 2-3 months. The Chinese people will stop traveling in the first 2 quarters, while in the second half of the year, Chinese tourism began to recover. As a result, the number of tourists in the year stood at 9.7 million, contracting 11.4% from 2019. The overall number of tourists is expected to contract by 3% to 38.6 million from 39.8 million in 2019.

Source: CEIC, SCBS Research

SCBS revised the Thai economic forecast for 2020 down from 2.7% to 2.4%

Contribution to Thailand's GDP Growth



- SCBS lowered 2020 economic forecast from 2.7% to 2.4%. In term of quarterly, the GDP growth will continue to slow down from the 4Q19 growth of about 2.4% and the bottom in 2Q20 before recovering in 2H20.
- Private consumption and private investment were affected by (1) the lost of tourist arrival in the first quarter (2) the drought that will affect the farm income (3) the delay budget act that would begin to disburse in the middle of 2Q20.
- Exports may recover somewhat from the global demand recovery but the Wuhan crisis will give a headwind to the export recovery in the first half.

Thailand's GDP growth and its component

	2018				2019e				2020f				2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Domestic D.	5.2	4.7	3.2	3.5	2.9	3.2	3.4						
Priv. Cons.	3.8	4.1	5.2	5.4	4.9	4.6	4.2						2.9
Public. Cons.	1.8	2.3	1.9	1.4	3.4	1.1	1.8						3.0
Priv. Inv.	3.1	3.1	3.8	5.5	4.4	2.1	2.4						1.5
Public. Inv.	4.0	4.9	4.2	-0.1	-0.1	1.4	3.7						3.1
X of G&S	8.0	9.6	-0.9	0.7	-6.1	-7.9	-1.0						0.8
M of G&S	9.1	8.8	11.0	5.7	-0.1	-2.6	-6.8						0.2
GDP Growth	5.0	4.7	3.2	3.6	2.8	2.3	2.4						2.4

Source: NESDB, CEIC, SCBS Research

Thai Economic Projections for 2020 by SCBS

Component (% YoY)	2018	2019 (F)	2020 (F) (Dec '19)	2020 (F) (Jan'20)
GDP	4.1	2.5	2.7	2.4
Priv Con	4.6	4.4	3.2	2.9
Priv Inv	3.9	2.7	4.0	1.5
Pub Con	1.8	2.0	3.0	3.0
Pub Inv	3.3	1.1	6.8	3.1
Export Value	7.2	-3.0	0.5	0.8
No. of Tourist	7.5 (39.7mn)	4.0 (39.8mn)	3.0 (41.0mn)	1.5 (40.4mn)
Import Value	14.3	(-3.6)	1.4	0.6
HL Inflation	1.1	0.8	1.0	0.8
Current Account (% GDP)	5.6	6.7	5.1	5.5
USDTHB (avg.)	32.3	30.5	30.5-31.5	30.5-31.5
RP (% , eoy)	1.75	1.25	1.00	0.75-1.00

Source: NESDB, CEIC, SCBS Research



Market update

February 5, 2020

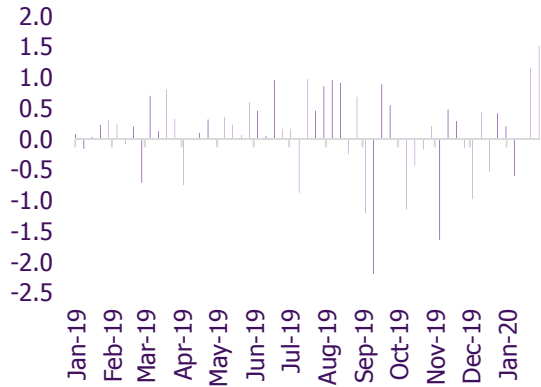


Executive summary

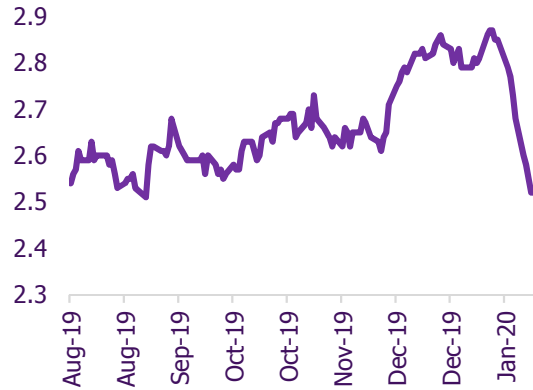
- 1) After the Wuhan coronavirus outbreak, the concerns about the economic impacts have weighed on risk appetite. The pattern of market reaction is straightforward. Safe-haven demand is rising, while risky asset positions are shrinking.
- 2) Investors have reacted swiftly and rationally to the virus news flow, with greatest selling pressure in the markets and sectors that are most fundamentally exposed.
- 3) The fallout from the Wuhan coronavirus outbreak put an end to a 16-week stream of flows into emerging market ETF. We do, however, see early signs of a buyback.
- 4) In previous virus outbreaks, markets tended to trough several weeks after the outbreak started spreading and coincident with the pace of new infections.
- 5) Compared to previous virus outbreaks, China is now much larger in economic and equity market terms. The aggressive action by the Chinese government have hit AEJ and Thailand and therefore had a much greater impact on price performance.
- 6) We think the overall situation is manageable. As the number of cases is stable (expected to stabilize Feb 7-14), risky assets should outperform.
- 7) After a strong recovery, we expect another round of high volatility on the back of earnings downgrades after the release of weak operating metrics.
- 8) Based on historical drawdown, the short-term SET recovery target is 1,570.
- 9) We maintain our view on cyclical stocks on the back of economic recovery despite a delay of 1-2 quarters.
- 10) We identify SCBS Buy rated names that have corrected meaningfully over the past 2 weeks as potential rebound candidates when the momentum of the news flow improves. We suggest: 1) Safe bound (expected returns 4-5%): AOT, CPN, PTTEP and 2) Strong bounce (expected returns 13-14%): ERW, KCE, TOP, TKN, SPA
- 11) We believe there have been changes in short-term fundamentals of some stocks (HMPRO, CENTEL) rather than feeling the impact from the coronavirus.

Rising risk aversion

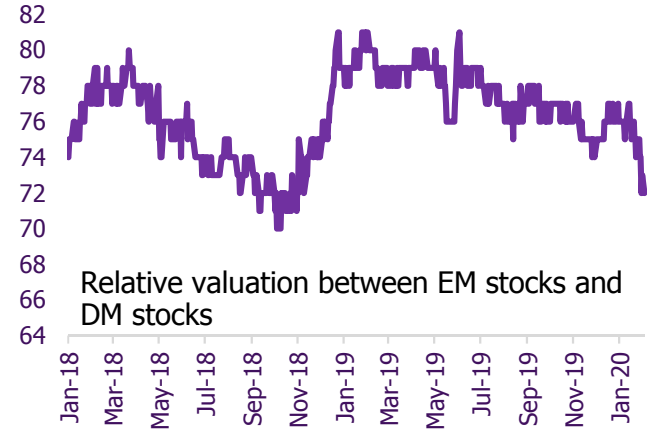
Bloomberg Barclays negative-yielding debt index weekly change



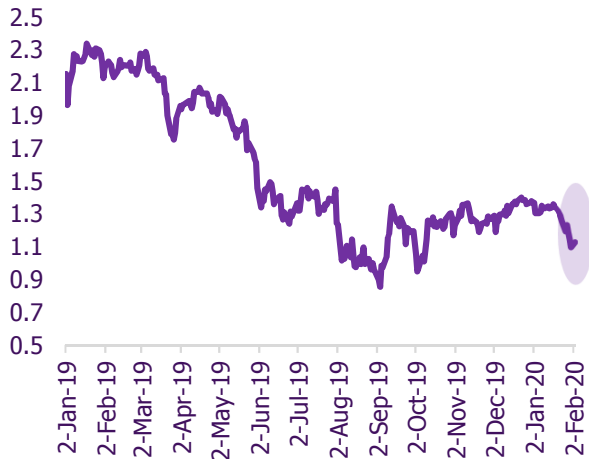
Copper falls to 5M low in the longest slump on record



EM stock valuation plunges relative to DM



Hope for rate cut



Due to growing concerns about the Wuhan coronavirus, we see rising risk aversion. When investors are risk-averse, volatility is expected to increase. Investors are shifting their focus from risky assets such as copper and EM markets to safer assets such as gold, bonds and DM markets. Market participants expect the Fed to cut policy rate in 2H20 after placing the virus as a global risk.

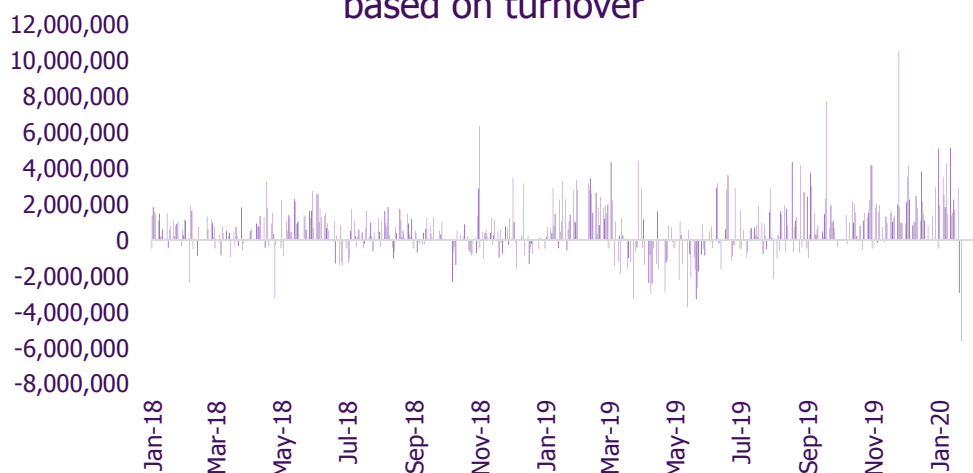
Fund flow after the outbreak



The fallout from the Wuhan coronavirus outbreak put an end to a 16-week stream of flows into emerging market ETF that reached US\$19bn. Investors withdrew US\$2.5bn in the week ended Jan 31, the first net weekly outflow since Oct 2019 and the largest outflow since mid-Aug 2019. China/HK –US\$680mn, Taiwan –US\$218mn, India – US\$210mn, S. Korea –US\$204mn, Thailand –US\$101mn, Indo – US\$61mn, Malaysia –US\$72mn, Philippines –US\$34mn

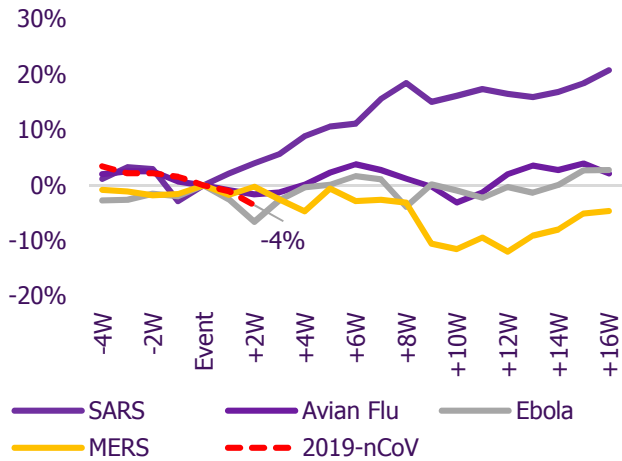
Foreign investors bought Chinese stocks as stocks plunged. If flows are sustained, this could signal a potential sentiment reversal.

Northbound (Shanghai and Shenzhen) net based on turnover

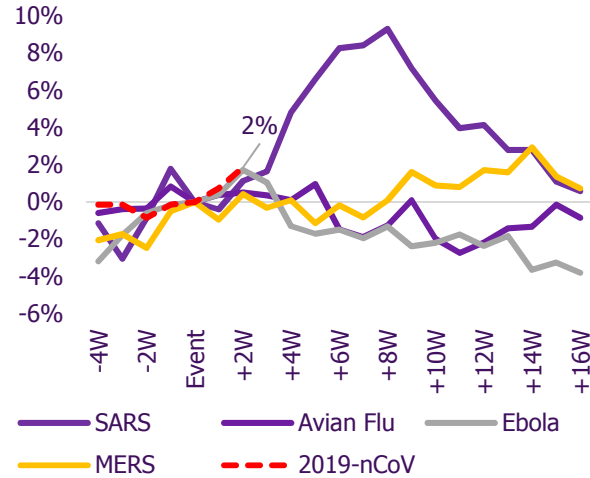


Asset class price performance during virus outbreaks

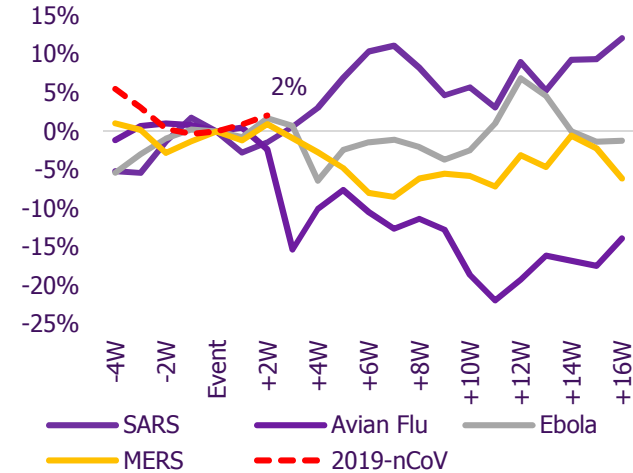
MSCI World Index



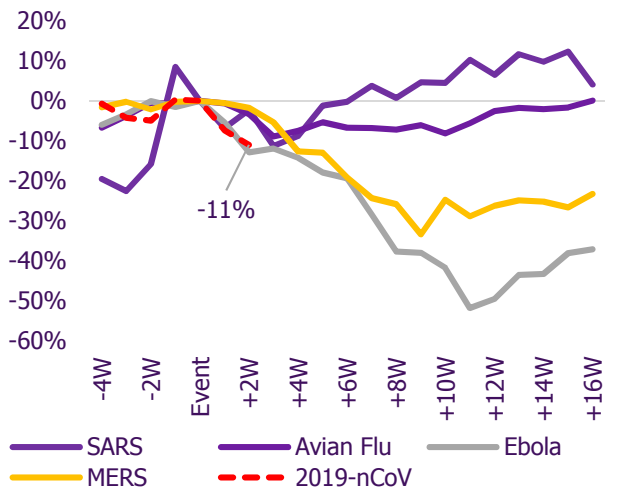
Global Treasuries



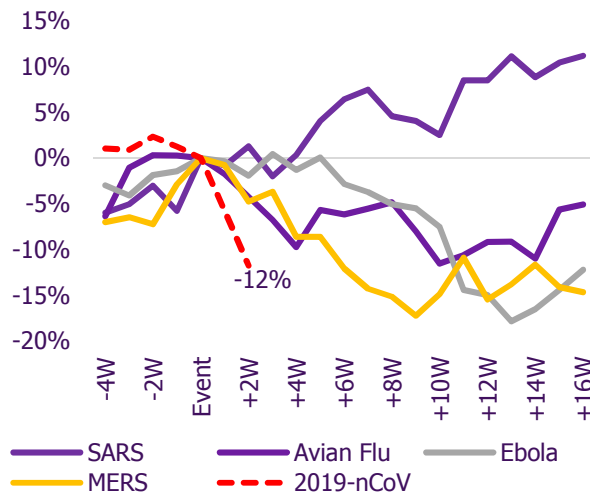
Gold price



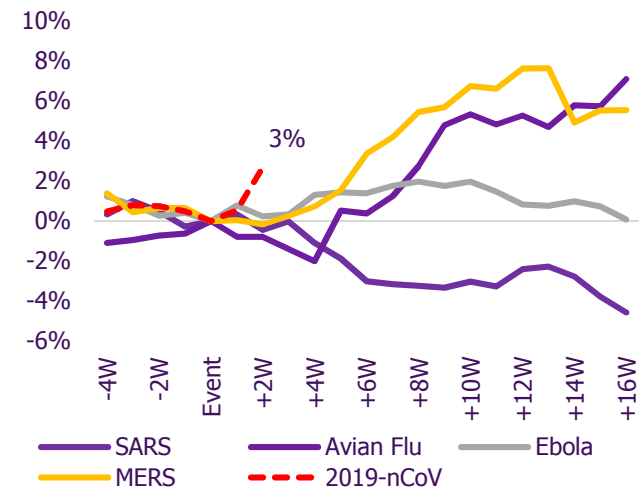
Oil price



Copper price

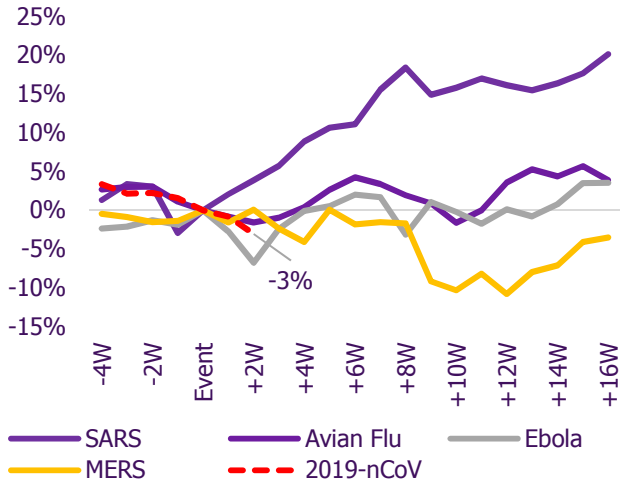


Baht

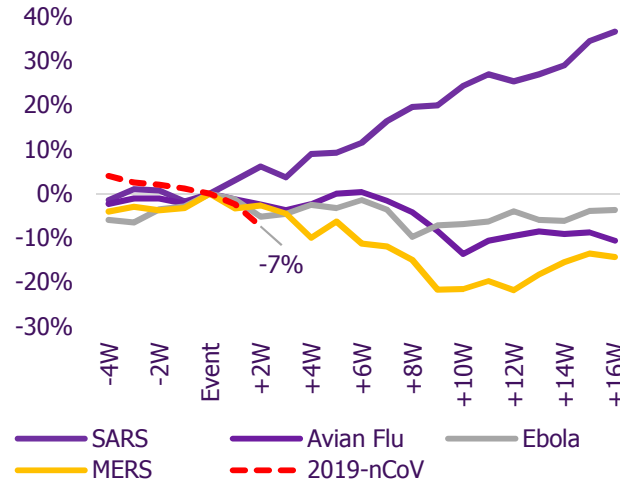


Index performance during virus outbreaks

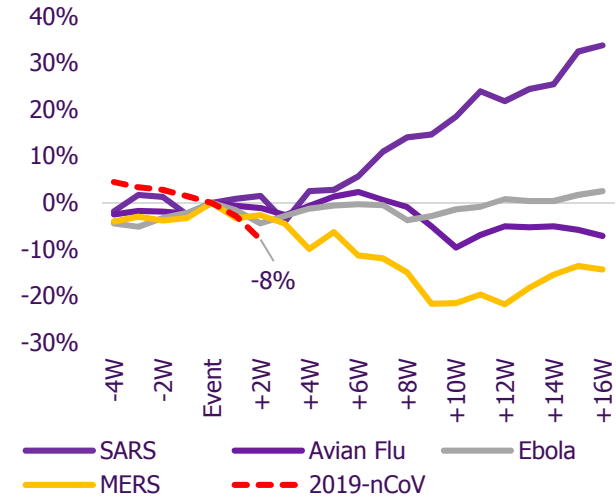
MSCI DM Index



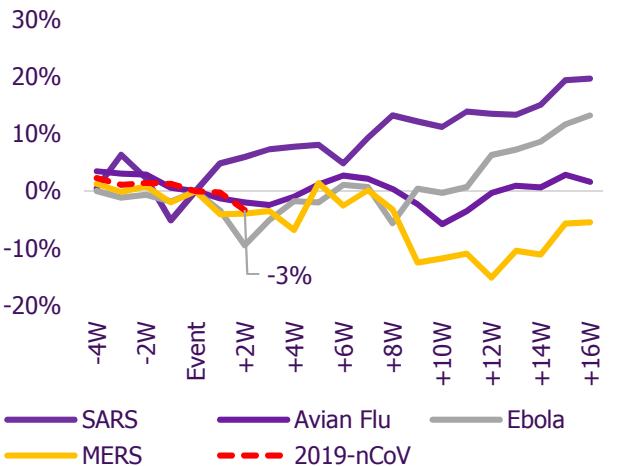
MSCI EM Index



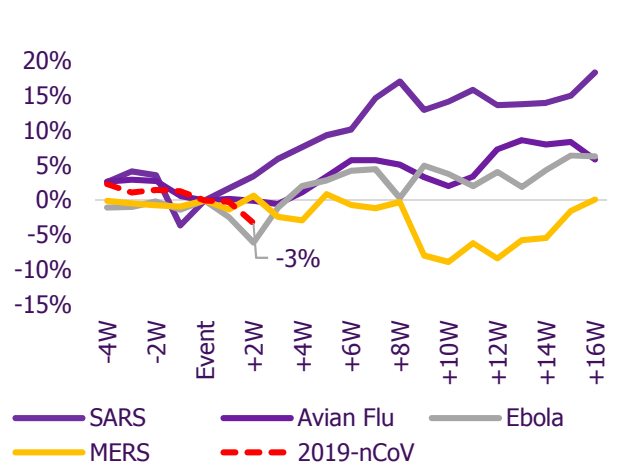
AEJ Index



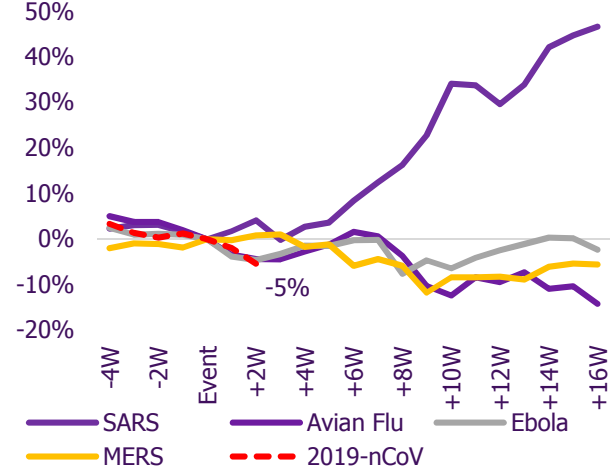
STOXX 600 Index



S&P500

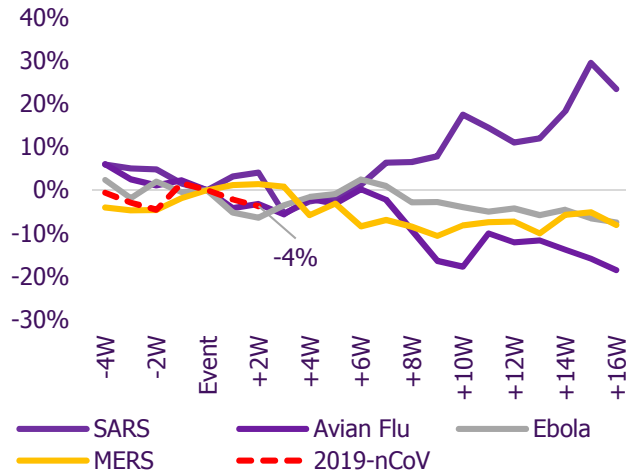


SET Index

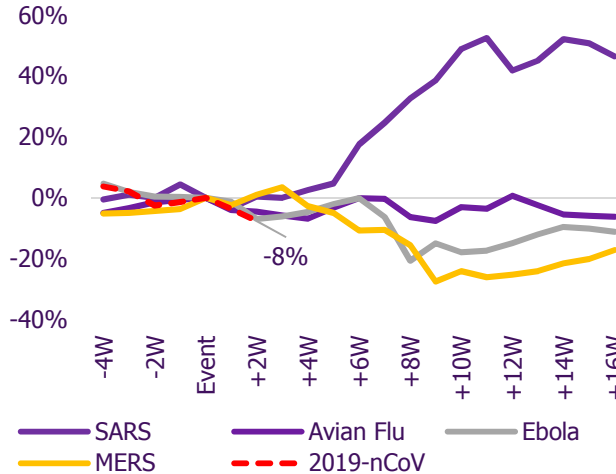


Cyclical sector performance during virus outbreaks

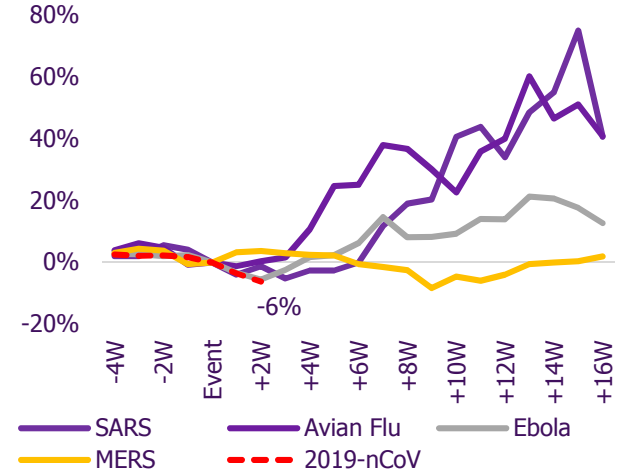
Financial Index



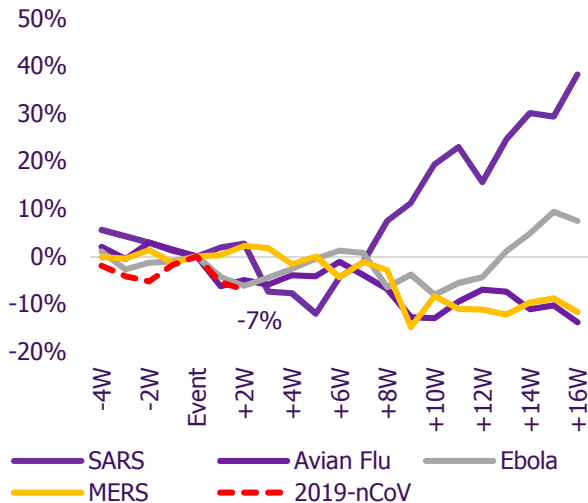
Energy Index



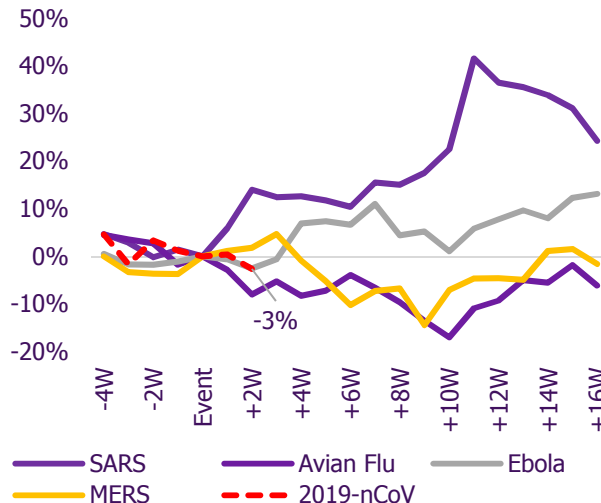
Industrial Index



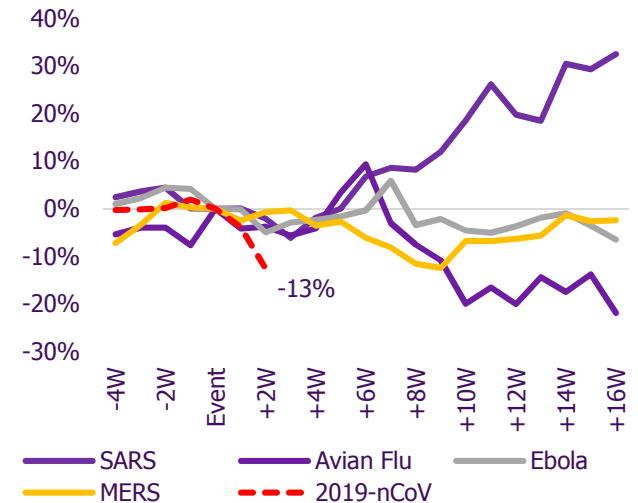
Materials Index



Electronics Index

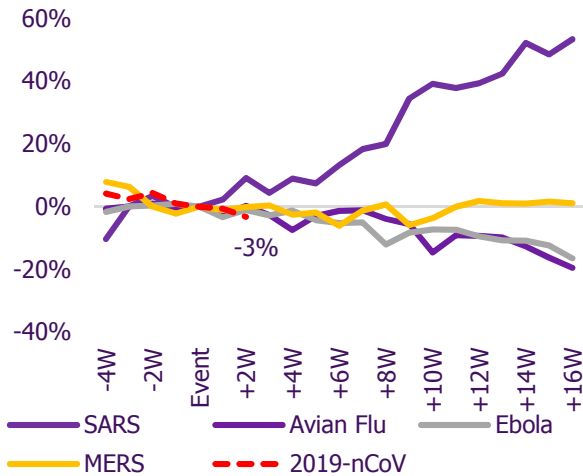


Consumer Discretionary Index

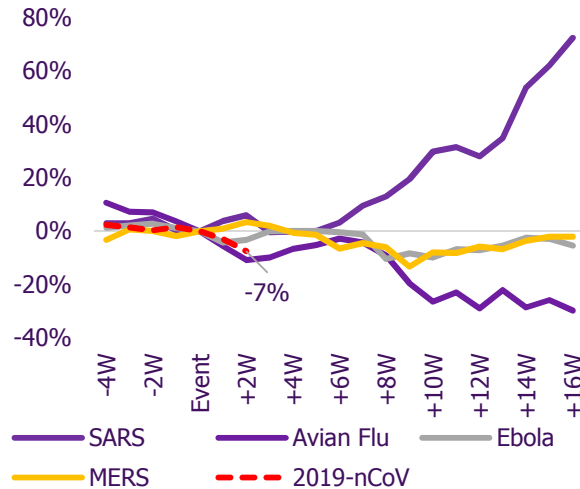


Defensive sector performance during virus outbreaks

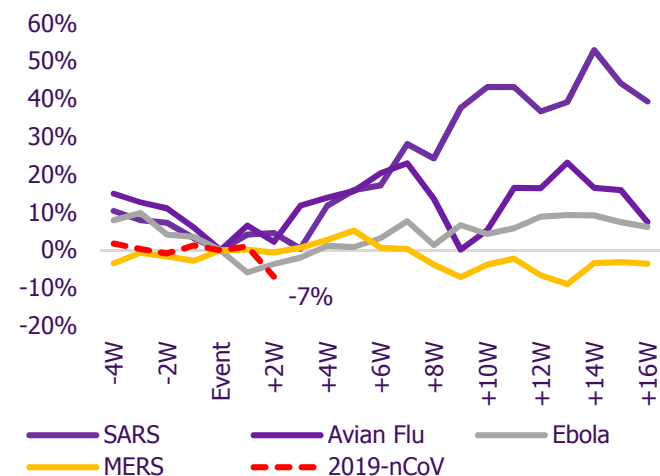
Consumer Staple Index



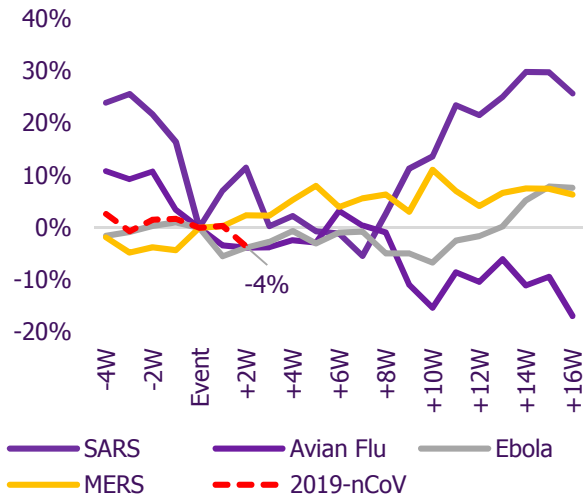
Real estate



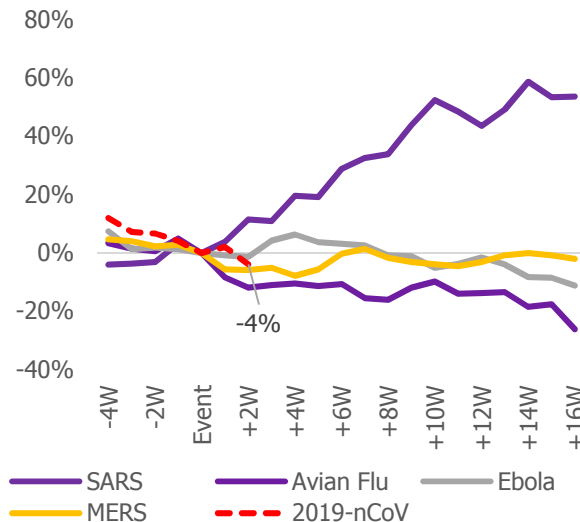
ICT Index



Healthcare Index



Utilities Index



Starting valuation and EPS growth conditions differ across episodes

	SARS	Avian flu	Ebola	MERS	Wuhan
	Feb-03	Mar-13	Sep-14	May-15	Jan-20
GDP growth	7.0%	4.1%	1.1%	2.9%	2.5%
Starting valuation (P/E)	10.5	12.6	13.8	13.2	14.7
+1M	10.1	13.0	14.0	13.4	13.8
+3M	12.6	12.0	13.7	12.9	
+6M	13.5	12.0	13.0	13.3	
Starting EPS growth	12.0%	5.1%	9.1%	7.0%	16.3%
+1M	14.0%	4.5%	8.4%	6.2%	16.2%
+3M	11.0%	2.9%	7.3%	1.1%	
Earnings revision					
+1M	-3.0%	-1.0%	-1.6%	-1.2%	-0.8%
+3M	-8.0%	-2.3%	-5.2%	-5.3%	
Starting valuation (P/B)	1.7	2.2	2.1	1.8	1.6
+1M	1.7	2.2	2.0	1.8	1.5
+3M	1.8	2.0	1.9	1.7	
+6M	2.1	2.0	1.8	1.7	
Starting ROE	16.7%	16.3%	13.9%	12.9%	9.9%
+1M	17.0%	15.9%	13.3%	12.8%	9.8%
+3M	18.1%	14.8%	12.8%	12.3%	
Performance post outbreak					
+1M	-7.4%	2.4%	-0.1%	0.2%	-6.5%
+3M	1.1%	-7.0%	-5.6%	-7.9%	
+6M	35.4%	-11.4%	-5.0%	-9.4%	
Drawdown					
3M performance post trough	20.4%	3.9%	3.6%	4.8%	
6M performance post trough	60.0%	-2.7%	2.8%	2.4%	

Coronavirus update; Prepare for after-shock effect

	Confirmed cases	Chg	%Chg	Death		%Chg	Fatality rate
21/01/2020	332			6			1.8%
22/01/2020	555	223	67%	17	11	183%	3.1%
23/01/2020	653	98	18%	25	8	47%	3.8%
24/01/2020	941	288	44%	41	16	64%	4.4%
25/01/2020	2019	1,078	115%	56	15	37%	2.8%
26/01/2020	2760	741	37%	80	24	43%	2.9%
27/01/2020	4473	1,713	62%	106	26	33%	2.4%
28/01/2020	6057	1,584	35%	132	26	25%	2.2%
29/01/2020	7783	1,726	28%	170	38	29%	2.2%
30/01/2020	9776	1,993	26%	213	43	25%	2.2%
31/01/2020	11947	2,171	22%	259	46	22%	2.2%
01/02/2020	14552	2,605	22%	305	46	18%	2.1%
02/02/2020	17384	2,832	19%	362	57	19%	2.1%
03/02/2020	20627	3,243	19%	427	65	18%	2.1%

Although the Wuhan coronavirus looks increasingly like a pandemic, the growth rate of total confirmed cases is declining and mortality rate has stabilized. We believe the overall situation is manageable. As the number of cases is stable (expected in Feb 7-14), risky assets should outperform.

	SARS (Feb 2003)						
	Outbreak	+1M	+2M	+3M	+4M	+5M	+6M
HK Retail	18%	-4%	-15%	10%	12%	8%	65%
Macau Gaming							
HK property	-2%	-6%	-14%	11%	5%	10%	26%
HK financial	-3%	0%	7%	9%	4%	0%	7%
Thai Hotel	2%	0%	-6%	-6%	3%	5%	16%
AsiaPac hotels							
Thai airlines	-6%	-6%	-15%	-8%	20%	49%	82%
AsiaPac airlines	-6%	-14%	-13%	-7%	-1%	2%	10%
Thai airport							
China airports	0%	-1%	-5%	-1%	-4%	4%	2%

	Avian Flu (Apr 2013)						
	Outbreak	+1M	+2M	+3M	+4M	+5M	+6M
HK Retail	-8%	1%	-10%	9%	5%	9%	10%
Macau Gaming	6%	12%	-2%	-3%	11%	12%	20%
HK property	0%	2%	-11%	3%	0%	-3%	0%
HK financial	-5%	7%	-7%	2%	3%	0%	0%
Thai Hotel	0%	-3%	-12%	-16%	-23%	-6%	-2%
AsiaPac hotels	-2%	2%	-5%	-7%	-8%	-3%	9%
Thai airlines	0%	1%	-19%	-24%	-39%	-28%	-26%
AsiaPac airlines	0%	0%	-10%	-12%	-13%	-6%	-7%
Thai airport	19%	52%	39%	47%	35%	55%	74%
China airports	-5%	-1%	-11%	-12%	3%	0%	4%

After a strong recovery, we expect another round of high volatility on the back of earnings downgrades.

Recommendation

Existing portfolio

We believe the growth of Wuhan coronavirus cases has peaked. Even though the impact of the coronavirus will hit growth in the short-term, the overall economy will stage a recovery and enter early expansion.

Fundamentals remain unchanged; this simply delays growth.

We maintain our positive view on cyclical plays such as IVL and TOP. We keep buying high earnings visibility stocks such as BCH. We also like BBL and TCAP.

Fast recovery

Due to an aggressive response to the epidemic from China, many sectors in Thailand such as Energy, Petrochemical, Airport, Airlines, and Hotel. We identify SCBS Buy rated names that have corrected meaningfully over the past 2 weeks as potential rebound candidates when the momentum of the news flow improves.

- 1) Safe bound (expected returns 4-5%) : AOT, CPN, PTTEP
- 2) Strong bounce (expected returns 13-14%) : ERW, KCE, TOP, TKN, SPA

Avoid in 3-6 months

We believe short-term fundamentals of some stocks (HMPRO, CENTEL) have changed rather than been impacted by the coronavirus.

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Corporate Governance Report

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To recognize well performers, the list of companies attaining "Good", "Very Good" and "Excellent" levels of recognition

(Not including listed companies qualified in the "no announcement of the results" clause from 1 January 2018 to 25 October 2019) is publicized.

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Anti-corruption Progress Indicator

Certified (ได้รับการรับรอง)

ADVANC, AIE, AKP, AMANAH, AP, APCS, AQUA, ARROW, ASK, ASP, AYUD, BAFS, BANPU, BAY, BBL, BCH, BCP, BCPG, BGRIM, BJCHI, BKI, BLA, BROOK, BRR, BSBM, BTS, BWG, CEN, CENTEL, CFRESH, CGH, CHEWA, CIG, CIMBT, CM, CNS, COM7, CPALL, CPF, CPI, CPN, CSC, DCC, DEMCO, DIMET, DRT, DTAC, DTC, EASTW, ECL, EGCO, FE, FNS, FSS, GBX, GC, GCAP, GEL, GFPT, GGC, GJS, GOLD, GPSC, GSTEEL, GUNKUL, HANA, HARN, HMPRO, HTC, ICC, IFS, INET, INSURE, INTUCH, IRPC, IVL, K, KASET, KBANK, KBS, KCAR, KCE, KGI, KKP, KSL, KTB, KTC, KWC, L&E, LANNA, LHK, LPN, LRH, M, MAKRO, MALEE, MBAX, MBK, MBKET, MC, MCOT, MFC, MINT, MONO, MOONG, MSC, MTI, NBC, NINE, NKI, NMG, NNCL, NSI, OCC, OCEAN, OGC, PAP, PATO, PB, PCSGH, PDG, PDI, PDJ, PE, PG, PHOL, PL, PLANB, PLANET, PLAT, PM, PPP, PPS, PREB, PRG, PRINC, PSH, PSTC, PT, PTG, PTT, PTTEP, PTTGC, PYLON, Q-CON, QH, QLT, QTC, RATCH, RML, ROBINS, S & J, SABINA, SAT, SC, SCB, SCC, SCCC, SCG, SCN, SE-ED, SELIC, SENA, SGP, SIRI, SIS, SITHAI, SMIT, SMK, SMPC, SNC, SNP, SORKON, SPACK, SPC, SPI, SPRC, SRICHA, SSF, SSI, SSSC, SST, STA, SUSCO, SVI, SYNTEC, TASCO, TCAP, TFG, TFI, TFMAMA, THANI, THCOM, THIP, THRE, THREL, TIP, TIPCO, TISCO, TKT, TMB, TMD, TMILL, TMT, TNITY, TNL, TNP, TNR, TOG, TOP, TPA, TPCORP, TRU, TRUE, TSC, TSTH, TTCL, TU, TVD, TVI, TWPC, U, UBIS, UEC, UKEM, UOBKH, VGI, VIH, VNT, WACOAL, WHA, WICE, WIIK

Declared (ประกาศเจตนารมณ์)

S, ABICO, AF, AI, AIRA, ALT, AMA, AMARIN, AMATA, ANAN, B, BM, BPP, BUI, CHG, CHO, CHOTI, CHOW, CI, CMC, COL, DDD, DELTA, EFORL, EPCO, ESTAR, ETE, FPI, FTE, ICHI, INOX, IRC, ITEL, JAS, JSP, JTS, KWG, LDC, LIT, META, MFEC, MPG, NEP, NOK, NWR, ORI, PRM, PSL, ROJNA, RWI, SAAM, SAPPE, SCI, SEOIL, SHANG, SKR, SPALI, STANLY, SYNEX, TAE, TAKUNI, TMC, TOPP, TPP, TRITN, TVO, UV, UWC, WHAUP, XO

N/A

7UP, A, A5, AAV, ABM, ACAP, ACC, ACE, ACG, ADB, AEC, AEONTS, AFC, AGE, AH, AHC, AIT, AJ, AJA, AKR, ALL, ALLA, ALUCON, AMATAV, AMC, AOT, APCO, APEX, APP, APURE, AQ, ARIN, ARIP, AS, ASAP, ASEFA, ASIA, ASIAN, ASIMAR, ASN, ATP30, AU, AUCT, AWC, B52, BA, BAM, BAT-3K, BC, BCT, BDMS, BEAUTY, BEC, BEM, BFIT, BGC, BGT, BH, BIG, BIZ, BJC, BKD, BLAND, BLISS, BOL, BR, BROCK, BSM, BTNC, BTW, CAZ, CBG, CCET, CCP, CGD, CHARAN, CHAYO, CHUO, CITY, CK, CKP, CMAN, CMO, CMR, CNT, COLOR, COMAN, COTTO, CPH, CPL, CPR, CPT, CPW, CRANE, CRD, CSP, CSR, CSS, CTW, CWT, D, DCON, DCORP, DOD, DOHOME, DTCI, EA, EASON, ECF, EE, EIC, EKH, EMC, EPG, ERW, ESSO, EVER, F&D, FANCY, FLOYD, FMT, FN, FORTH, FPT, FSMART, FVC, GENCO, GIFT, GL, GLAND, GLOBAL, GLOCON, GPI, GRAMMY, GRAND, GREEN, GSC, GTB, GULF, GYT, HFT, HPT, HTECH, HUMAN, HYDRO, ICN, IFEC, IHL, III, ILINK, ILM, IMH, INGRS, INSET, IP, IRCP, IT, ITD, J, JCK, JCKH, JCT, JKN, JMART, JMT, JUBILE, JUTHA, JWD, KAMART, KC, KCM, KDH, KIAT, KKC, KOOL, KTECH, KTIS, KUMWEL, KUN, KWM, KYE, LALIN, LEE, LH, LHFG, LOXLEY, LPH, LST, MACO, MAJOR, MANRIN, MATCH, MATI, MAX, M-CHAI, MCS, MDX, MEGA, METCO, MGT, MIDA, MILL, MITSIB, MJD, MK, ML, MM, MODERN, MORE, MPIC, MTC, MVP, NC, NCH, NCL, NDR, NER, NETBAY, NEW, NEWS, NEX, NFC, NOBLE, NPK, NTV, NUSA, NVD, NYT, OHTL, OISHI, OSP, OTO, PACE, PAE, PAF, PERM, PF, PICO, PIMO, PJW, PK, PLE, PMTA, POLAR, POMPUI, PORT, POST, PPM, PPPM, PR9, PRAKIT, PRECHA, PRIME, PRIN, PRO, PROUD, PTL, RAM, RBF, RCI, RCL, RICH, RICHY, RJH, ROCK, ROH, RP, RPC, RPH, RS, RSP, S, S11, SAFARI, SALEE, SAM, SAMART, SAMCO, SAMTEL, SANKO, SAUCE, SAWAD, SAWANG, SCP, SDC, SE, SEAFCO, SEG, SF, SFLEX, SFP, SGF, SHR, SIAM, SIMAT, SINGER, SISB, SKE, SKN, SKY, SLP, SMART, SMT, SOLAR, SONIC, SPA, SPCG, SPG, SPORT, SPVI, SQ, SR, SSC, SSP, STAR, STARK, STC, STEC, STHAI, STI, STPI, SUC, SUN, SUPER, SUTHA, SVH, SVOA, SWC, SYMC, T, TACC, TAPAC, TBSP, TC, TCC, TCCC, TCJ, TCMC, TCOAT, TEAM, TEAMG, TGPRO, TH, THAI, THANA, THE, THG, THL, THMUI, TIGER, TITLE, TIW, TK, TKN, TKS, TM, TMI, TMW, TNDT, TNH, TNPC, TOA, TPAC, TPBI, TPCH, TPIPL, TPIPP, TPLAS, TPOLY, TPS, TQM, TR, TRC, TRT, TRUBB, TSE, TSF, TSI, TSR, TSTE, TTA, TTI, TTT, TTW, TVT, TWP, TWZ, TYCN, UAC, UMI, UMS, UNIQ, UP, UP, UP, UPF, UPOIC, UREKA, UT, UTP, UVAN, VARO, VCOM, VI, VIBHA, VL, VNG, VPO, VRANDA, WAVE, WG, WIN, WINNER, WORK, WORLD, WP, WPH, WR, YCI, ZIGA, ZMICO

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