

## Asia: Swine Flu and the 2003 SARS Experience

- The current outbreak of Swine Flu A/H1N1 influenza is still evolving and World Health Organization has escalated the alert level to Phase 5 (“pandemic”). The only recent reference point was the SARS pandemic in 2003 and it is instructive to re-examine the 2003 experience to glean some insights as to the potential impact from the current swine flu outbreak.
- The current situation is remarkably similar to the 2003 outbreak in Asia where economic conditions were generally weak when the disease struck, complicating the economic recovery process.
- From the SARS experience, it is apparent that smaller and open economies were more vulnerable to shocks, and large economy (China) hardly showed any signs of distress. For smaller economies, the extent of declines was large even in GDP headline figures as the outbreak damaged confidence and curbed daily activities. The disruption in economic activities then was intense and lasted some two quarters, about the duration of the outbreak. As the situation was brought under control, subsequent recovery was swift especially in the following year as there was no permanent damage to overall health of the economies.
- In the current H1N1 outbreak, it is still too early to assess the extent of any damage to economic activities. However, the early discovery and disclosure of the disease (unlike during SARS) and relatively high level of preparedness suggest that damage this time round may be limited. In any case, should the current outbreak evolve along the SARS experience, we could see one to two quarters of severe disruption in terms of economic activities, followed by stabilization. However, given that most economies are already strained by the ongoing global recession, the subsequent recovery may not be as swift compared to 2003.

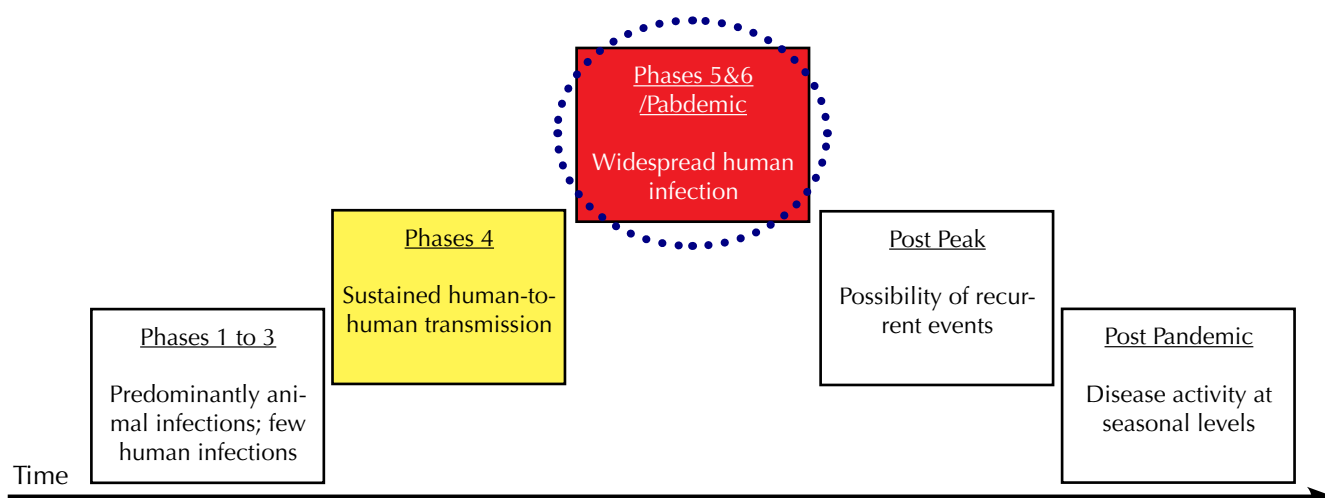
### Current Status

The World Health Organization has on 29 Apr further escalated its pandemic alert level to phase 5 (“widespread human transmission”, see diagram below), after having raised it to phase 4 on 27 Apr.

WHO raised the alert after outbreak of swine influenza A/H1N1 infection was confirmed for 148 cases in 9 countries, with 8 deaths as of 29 Apr, or a fatality rate of 5%. Note that there are more than 2500 cases of suspected infection and 159 deaths awaiting laboratory confirmation, and WHO cautioned that the pandemic is in the process of moving towards phase 6.

At its 29 Apr press statement, WHO urged countries to make “final preparations” to deal with a virus that has the capacity to sweep across the globe, as the disease is still “poorly understood” and that influenza viruses are “notorious for their rapid mutation and unpredictable behaviour.” A number of countries has taken precautionary steps in response to the outbreak. For example, France is looking to ask European countries to suspend flights to Mexico, where the first confirmed H1N1 case was reported. Banning of pork imports have been imposed in others. Asia has been maintaining stockpiles of tamiflu/anti-viral medications and a number of countries such as Singapore, Hong Kong, and Thailand have begun temperature screening at entry points.

### Current WHO Phase of Pandemic Alert (as of 29 Apr 2009)



Source: World Health Organization; UOB Econ-Treasury Research

### SARS as a Reference Point

With the impending H1N1 pandemic, the SARS outbreak in 2003 provides the only clear reference point in recent history. We present below a brief look at some of the key statistics that swept past the period, in the hope of picking up some clues as to the extent of damage that may inflict Asia and elsewhere should the H1N1 turn into a global pandemic.

### SARS Outbreak

Against a backdrop of a recovery from the 2000/01 tech bubble burst/Sep 11 event/second Gulf war (Mar-May 2003), the Severe and Acute Respiratory Syndrome ("SARS") broke out in China in late 2002. WHO declared SARS a pandemic in March 2003 before lifting it in June 2003.

2003 SARS Cases						
	Cumulative Number of Cases	Number of Deaths	Case Fatality Ratio (%)	Date of First Probable Case	Date of Last Probable Case	Duration (Months)
China	5,327	349	6.6%	16-Nov-02	3-Jun-03	6.6
HK	1,755	299	17.0%	15-Feb-03	31-May-03	3.5
Macao	1	0	0.0%	5-May-03	5-May-03	0.0
Taiwan	346	37	10.7%	25-Feb-03	15-Jun-03	3.7
India	3	0	0.0%	25-Apr-03	6-May-03	0.4
Indonesia	2	0	0.0%	6-Apr-03	17-Apr-03	0.4
Malaysia	5	2	40.0%	14-Mar-03	22-Apr-03	1.3
Philippines	14	2	14.3%	25-Feb-03	5-May-03	2.3
Korea	3	0	0.0%	25-Apr-03	10-May-03	0.5
Singapore	238	33	13.9%	25-Feb-03	5-May-03	2.3
Thailand	9	2	22.2%	11-Mar-03	27-May-03	2.6
Vietnam	63	5	7.9%	23-Feb-03	14-Apr-03	1.7
Total Asia	7,766	729	9.4%			
Total Non-Asia	330	45	13.6%			
World Total	8,096	774	9.6%			

Source: World Health Organization; UOB Econ-Treasury Research estimates

Median = 2.0  
Mean = 2.1  
Max = 6.6  
Min = 0.0

As shown in the table below, the duration of the SARS outbreak averaged around 2 months, with China having the longest duration and highest number of confirmed/fatality cases (accounting for more than half of the total). This was partly due to Chinese authorities' initial reaction, which delayed responses from other countries as well. Outside China, the bulk of the confirmed and fatality cases was concentrated in HK, Taiwan, and Singapore. Note that the fatality rate was less than 10%, but still twice the current H1N1's rate of 5% so far.

## Economic/Market Data

With spread of SARS an unknown nature at initially, there was a sense of panic that curtailed spending, travel, business activity/production, among others. This came on top of economic performances that were already weakened by the above-mentioned events (viz. Sep 11, tech bubble burst, second Gulf War). These are reflected in a number of headline figures, as shown below.

It is apparent that smaller economies were more vulnerable to shocks, and large economy (China) hardly showed any signs of distress. For smaller economies, the extent of declines was significant even in GDP headline figures as the outbreak damaged confidence and curbed daily activities. One reason is the openness of these smaller economies, with tourism representing a relatively large part of the GDP (e.g. Hong Kong's tourism receipts were 6.1% of GDP in 2006, comparable to Thailand's and more than 4x Asia's average).

GDP Growth								
%y/y change	2001	3Q02	4Q02	1Q03	2Q03	3Q03	4Q03	2004
China	8.1	8.1	8.1	10.8	7.9	9.6	9.9	10.4
HK	0.5	2.8	4.8	4.1	-0.9	3.8	4.7	8.5
TW	-2.2	6.7	5.7	3.6	-0.2	4.1	6.3	6.2
SG	-2.4	6.5	6.2	3.7	-1.6	4.5	8.5	9.3
MY	0.5	7.1	6.9	6.3	5.9	4.6	6.5	6.8
TH	2.2	5.8	6.0	6.9	6.6	6.7	8.3	6.3
ID	3.6	5.6	4.7	4.9	5.0	4.6	4.6	5.0
Average				5.8	3.3			
Max				10.8	7.9			
Min				3.6	-1.6			

Source: CEIC; UOB Econ-Treasury Research estimates; ■ = SARS Period

Visitor Arrivals								
%y/y change	2001	3Q02	4Q02	1Q03	2Q03	3Q03	4Q03	2004
China	9.9	30.0	29.2	16.8	-58.4	-21.5	-1.7	48.6
HK	5.1	22.1	33.9	19.7	-57.9	4.1	7.3	40.4
TW	-0.3	12.3	34.7	3.2	-71.5	-19.7	-11.1	31.2
SG	-2.2	-2.7	9.2	-1.9	-61.9	-12.8	-1.2	35.9
MY	25.0	3.9	42.9	-6.5	-51.6	-24.2	3.9	48.5
TH	5.8	5.3	10.9	-1.7	-40.4	0.5	7.6	16.5
ID	-0.1	3.4	-9.8	-13.3	-31.9	-9.9	30.7	24.6
Average				2.3	-53.4			
Max				19.7	-31.9			
Min				-13.3	-71.5			

Source: CEIC; UOB Econ-Treasury Research estimates; ■ = SARS Period

Tourism Receipts					
% of GDP	1990	1995	2000	2005	2006
East and North-East Asia	0.4	0.4	0.5	0.8	0.8
China	0.5	1.2	1.4	1.3	1.2
Hong Kong	6.1	5.4	3.5	5.8	6.1
Japan	0.1	0.1	0.1	0.1	0.2
South Korea	1.3	1.0	1.3	0.7	0.7
South-East Asia	4.1	3.9	4.2	3.5	3.7
Indonesia	1.7	2.4	3.0	1.6	1.2
Malaysia	3.6	4.3	5.3	6.2	6.7
Philippines	2.9	1.5	2.8	2.3	3.0
Singapore	13.4	9.1	5.5	4.9	5.2
Thailand	5.1	4.8	6.1	5.4	6.5
Asia and the Pacific	0.8	0.9	1.0	1.3	1.3
Europe	1.8	2.1	2.4	2.2	2.2
North America	0.8	1.5	0.9	0.7	0.7
World	1.3	1.4	1.5	1.5	1.5

Source: UN; UOB Econ-Treasury Research estimates;

Private Property Index								
%y/y change	2001	3Q02	4Q02	1Q03	2Q03	3Q03	4Q03	2004
China*	28.9	32.8	23.1	39.8	29.4	28.8	28.8	30.3
HK	-10.9	-11.5	-11.5	-17.4	-21.4	-10.8	3.1	30.5
TW**	-3.5	0.8	1.9	5.1	-4.3	10.1	7.5	13.9
SG	-11.8	-5.7	-1.8	-1.6	-1.4	-2.3	-2.0	0.9
MY***	1.1	5.9	4.0	1.3	0.5	3.0	2.5	6.2
Average				5.5	0.6			
Max				39.8	29.4			
Min				-17.4	-21.4			

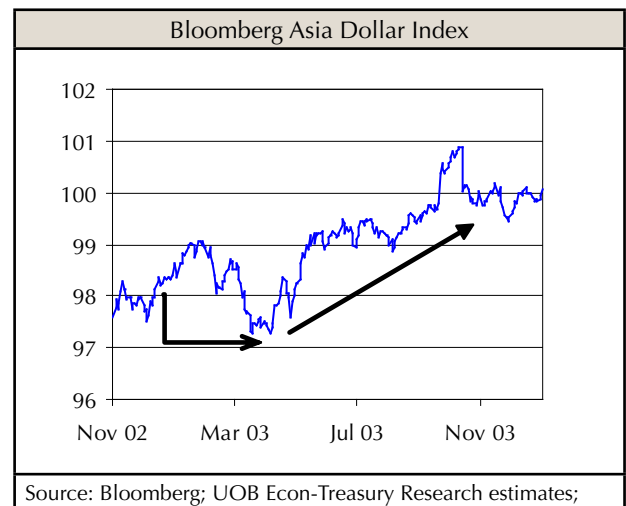
\* Real Estate Investment in Residential Buildings; \*\*Price index for Taipei city; \*\*\*Price index for Kuala Lumpur  
Source: CEIC; UOB Econ-Treasury Research estimates; ■ = SARS Period

Office Rental Index								
%y/y change	2001	3Q02	4Q02	1Q03	2Q03	3Q03	4Q03	2004
China*	8.7	20.9	19.2	18.9	28.9	39.9	34.2	28.2
HK**	-8.0	-18.1	-16.3	-13.3	-16.6	-17.0	-9.4	12.6
TW***	-	-	-	-	-	-	-2.0	6.9
SG	-7.8	-15.6	-12.3	-13.4	-11.4	-12.1	-10.6	3.5
Average				-2.6	0.3			
Max				18.9	28.9			
Min				-13.4	-16.6			

\* Real Estate Investment in Office Buildings; \*\*Grade A office; \*\*\*Taipei city  
Source: CEIC; UOB Econ-Treasury Research estimates; ■ = SARS Period

The disruption in economic activities during SARS was intense and lasted some two quarters, about the duration of the outbreak. This is shown clearly in visitor arrivals data, which fell an average of 53% at the peak of the outbreak. Property prices and rental data also show that smaller centers like Singapore and HK were vulnerable to such shocks. However, as a whole, Asian currencies (represented by Asia Dollar Index, ADXY) were not significantly impacted, falling about 1% at the peak of the outbreak before recovering subsequently.

As the SARS pandemic was brought under control (through quarantines, treatment, restrictions on travels, etc), subsequent recovery was swift especially in the subsequent quarters as there was no permanent damage to overall health of the economies.



In the current H1N1 outbreak, it is still too early to assess the extent of any damage to economic activities. However, the early discovery and disclosure of the disease (unlike in SARS) and relatively high level of preparedness suggest that damage this time round may be limited.

In any case, should the current outbreak evolve along the SARS experience, we could see one to two quarters of severe disruption in terms of economic activities, followed by stabilization. However, given that most economies are already strained by the ongoing global recession, the subsequent recovery may not be as swift compared to 2003.

Given the widespread nature of the current outbreak, the current situation should be monitored closely for any impact on real economic activities. Some useful information sources related to the H1N1 influenza are listed below.

Useful information sources:

Bloomberg (key in EXT3 at terminal);

Reuters (<http://www.reuters.com/news/globalcoverage/swineflu>)

World Health Organization (<http://www.who.int/csr/disease/swineflu/en/index.html>)

US Centers for Disease Control and Prevention (<http://www.cdc.gov/swineflu/>)

Singapore Ministry of Health (<http://www.moh.gov.sg/mohcorp/default.aspx>)

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