Economic Impact of SARS: The Case of Hong Kong*

Alan Siu
Associate Professor
School of Economics and Finance
The University of Hong Kong
K. K. Leung Building
Room 1021
Pokfulam Road
Hong Kong, SAR, China
asiu@econ.hku.hk

Y. C. Richard Wong
Professor of Economics and Dean
Faculty of Business and Economics
The University of Hong Kong
Meng Wah Complex, 7/F
Pokfulam Road
Hong Kong, SAR, China
rycwong@fbe.hku.hk

Abstract
SARS is the first deadly infectious disease of the 21st century. It started in the Chinese province of Guangdong in November 2002, and by August 2003, it had spread to 29 countries and 3 regions, with a cumulative total of 8,422 cases and 916 deaths. This paper describes the spread of the disease in Hong Kong and discusses its impact on the economy. SARS was an unexpected negative shock. The most significant negative effects were on the demand side, with local consumption and the export of services related to tourism and air travel severely affected in the short run. The economy did not experience a supply shock, as the manufacturing base in the Pearl River Delta was unaffected, and goods continued to be exported through Hong Kong normally. Initial alarmist reports and estimates about the negative economic impacts were not borne out. Fear and panic subsided quickly once the outbreak was under control, and the economy rebounded rapidly.

1. Introduction

The World Health Organization (WHO) issued a global alert about a deadly new infectious disease on 12 March 2003. Three days later WHO named the disease severe acute respiratory syndrome (SARS). By 7 August 2003, the disease had spread to 29 countries and 3 regions, with a cumulative total of 8,422 cases and 916 deaths. The most severely affected areas were mainland China, Hong Kong, Taiwan, and Singapore. Within mainland China, the areas

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hardest hit were Guangdong, Beijing, Shanxi, and Inner Mongolia. The outbreak started in the Chinese province of Guangdong and was carried to Hong Kong, and from there SARS spread to other parts of the world, including Beijing and other parts of China.

WHO set up a collaborative network of research labs to identify the virus causing SARS. Within weeks of the outbreak in Hong Kong, scientists at The University of Hong Kong had identified a new strain of coronavirus as the probable culprit. This virus is highly contagious and can be fatal. Health care workers are particularly at risk of infection. The exact mechanisms of transmission are still in doubt, but the virus seems to be spread by intimate contact through transmission of droplets. One is unlikely to contract SARS from merely being in the vicinity of an infected individual, because the virus does not appear to be airborne; however, the virus can survive on objects such as doorknobs or elevator buttons for more than 24 hours. Hence, it is possible to catch the disease by touching contaminated objects. Wearing face masks and washing hands vigorously using liquid soap are recommended as precautionary measures. There has been no report of transmission of the disease across international borders via contaminated cargo. These features of the virus suggest that quick and effective isolation of infected individuals and quarantine of those who have been in close contact with them are the key measures for limiting the spread of the disease.

2. Spread of SARS in Hong Kong

SARS first broke out in November 2002 in Foshan, which is near Guangzhou, in the Chinese province of Guangdong. The virus made its way to other parts of the Pearl River Delta by February 2003. China's Ministry of Health informed WHO in mid-February 2003 of the occurrence in Guangdong province of 305 cases of "atypical pneumonia" and reported that the spread of the illness was "under control." Local media reported the outbreak, and the news spread around the Pearl River Delta region through thousands of cell phone text messages. Hong Kong was alerted by the news that people across the border were stocking up on Chinese herbal medicines and boiling vinegar as a folk remedy to ward off the deadly unknown illness.

Because the world was kept in the dark about the seriousness of the outbreak in Guangdong, Hong Kong was caught unprepared when SARS first appeared in the territory via an elderly medical doctor from Guangzhou who had been treating "atypical pneumonia" patients. The doctor checked into room 911 of the Metropole Hong Kong Hotel on 21 February 2003 to attend a wedding reception, and he was admitted to a nearby hospital the next day. He informed the medical staff that he

was highly infectious, and he was promptly isolated. He later died after infecting a nurse in the hospital.

The Guangzhou doctor, during his 1-day stay at the hotel, infected at least 10 other guests staying on the same floor of the hotel. All these guests were overseas visitors except for a Hong Kong resident who was visiting the hotel. The infected visitors subsequently ignited outbreaks in Vietnam, Singapore, and Toronto, and the local resident (an airport worker) became the index patient at the Prince of Wales Hospital. The airport worker developed SARS symptoms on 24 February but did not seek treatment at the hospital until 4 March. He was admitted into Ward 8A, where he infected over 100 people, including patients, visitors, medical students, nurses, and doctors. Hospital emergency services had to be suspended temporarily.

In mid-March 2003, the Hong Kong public was told that the outbreak was confined to hospitals and was not spreading in the community. No isolation measures were adopted; for instance, Prince of Wales Hospital was not cordoned off. The authorities had to face reality when SARS broke out in a multistoried housing estate, Amoy Gardens. On 29 March, 22 of the 45 new SARS cases hospitalized in Hong Kong were residents of Amoy Gardens. On the following day, 36 of the 60 new patients admitted to the hospital with probable SARS were residents of Amoy Gardens, bringing the cumulative total of infected residents to 213. Of these 213 patients, 107 resided in Block E of Amoy Gardens. In addition, most of them lived in flats that were oriented vertically relative to each other, which suggested that besides close person-to-person contact, SARS might have been spreading by other environmental means.

The Hong Kong Department of Health issued an unprecedented quarantine order to prevent the further spread of SARS in the community. The isolation order required residents of Block E of Amoy Gardens to remain in their flats for 10 days. When the police carried out the order, they found no one home in well over half of the block's 264 apartments. Residents had learned about the Amoy Gardens outbreak via the media and many had left their homes long before the authorities arrived. SARS was clearly spreading in the community.

Fear of the SARS virus took root in the whole city. Face masks were selling briskly and could be seen everywhere. Public places were disinfected several times a day. People washed their hands much more frequently and avoided going out to crowded places. Restaurants, shops, cinemas, and other entertainment venues were deserted. Many businesses suffered severe losses of income. Schools were finally closed to limit the spread of the virus.

Table 1. Cumulative number of SARS cases in Hong Kong (as of 11 September 2003)

	Infected	Dead
Overall cases	1,755	299
Medical staff	386	6
Community	1,369	293
Cases in Amoy Gardens	321	>40

Source: *Department of Health, Hong Kong SAR Government. Available at www.info.gov.hk/info/sars/e_news.htm Information on the number of cases in Amoy Gardens was pieced together from press releases.*

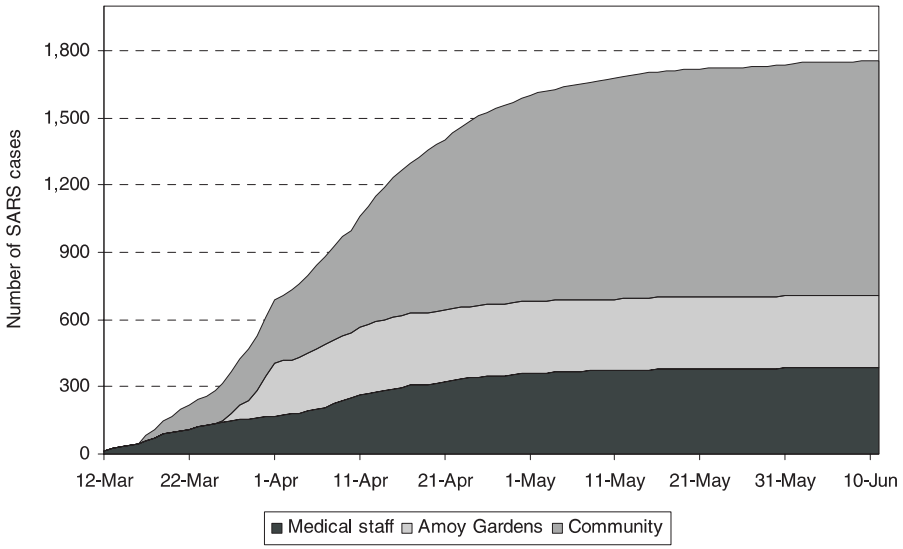
All household contacts of confirmed or suspected SARS patients were required to remain isolated in their homes for monitoring and treatment, up to a maximum of 10 days. At the end of the outbreak, a total of 1,262 persons from 493 households were affected by this isolation order, and 34 of them subsequently came down with SARS (SARS Expert Committee 2003). The government did not compensate the individuals for their confinement, but it did provide daily necessities and financial assistance. The police enforced the order by checking up on confined individuals at their homes. Violators were sent warning letters.

Since 29 March 2003, health officials tried to identify travelers who displayed SARS symptoms at the airport and other border control points. All incoming travelers are now required to complete a health declaration form. Temperature checks for all arriving, departing, and transit passengers at the airport were implemented in mid-April 2003. Temperature-screening devices were installed at other border control points in late April of that year. As of 7 September, 83 persons had been referred to hospitals for suspected SARS, and 2 of them were later confirmed to have been infected (SARS Expert Committee 2003). Since these measures were implemented, no SARS cases have been reported as having originated from Hong Kong.

The SARS outbreak among Amoy Gardens residents and medical staff in Hong Kong peaked by late April 2003 (figure 1). At the final count, Hong Kong had a cumulative total of 1,755 SARS cases, accounting for 20.8 percent of the world total of 8,422 cases. Of Hong Kong's total cases, 386 were health care workers, 321 were Amoy Gardens residents, and the rest were from the general community (table 1). The high number of infected health care workers suggests that to minimize the risk of exposure, all hospital staff must meticulously follow stringent infection control measures. The number of infected health care workers each day was very high during the early days of the outbreak but later declined substantially.

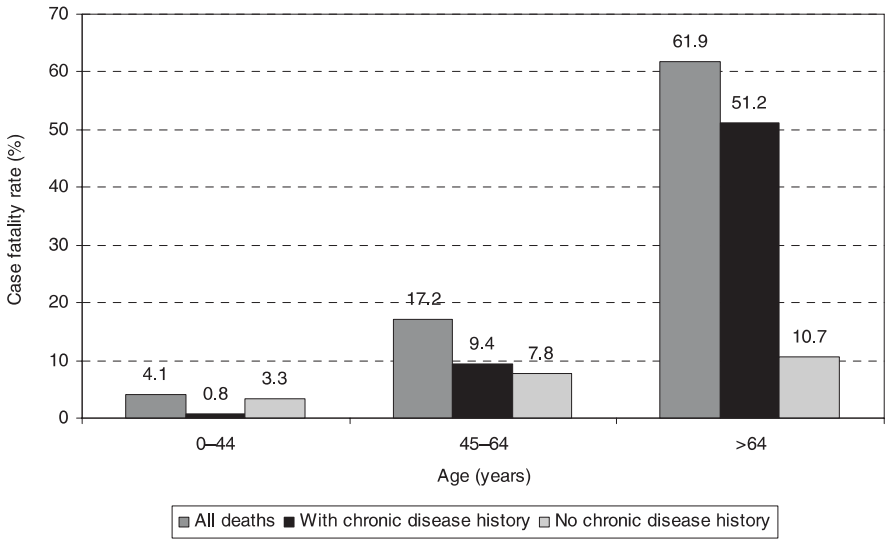
The case mortality rate in Hong Kong, computed by dividing the cumulative number of deaths by the cumulative number of infected cases at the end of the outbreak (the end of June 2003), was 17.0 percent. As a comparison, 13,480 people caught

Figure 1. Cumulative number of SARS cases in Hong Kong (12 March 2003 to 11 June 2003)



Source: *Department of Health, Hong Kong SAR Government. Available at www.info.gov.hk/info/sars/e_news.htm*

Figure 2. Fatality rates of SARS cases in Hong Kong by age group (as of 1 September 2003)



Source: *Clinical Trials Centre, Faculty of Medicine, The University of Hong Kong. Available at www.hku.hk/ctc/sars_graphs.htm*

Table 2. Fatal SARS cases in Hong Kong (as of 11 September 2003)

	Number of fatal cases		
	Total	With history of chronic disease	No history of chronic disease
Overall fatal cases	299	201	98
Male	168	108	60
Female	129	91	38
Unknown	2	2	0
Fatal cases aged 0–64 years	108	43	65
Fatal cases aged 65 years or older	191	158	33

Source: *Department of Health, Hong Kong SAR Government. Available at www.info.gov.hk/info/sars/e_news.htm*

pneumonia in Hong Kong in 2002, and the case mortality rate was 17.5 percent (SARS Expert Committee 2003). The SARS mortality rate for young people (less than 44 years of age) was low, whereas fatality rates were significantly higher for the elderly population, particularly older patients with a history of chronic disease (figure 2). Of the 299 SARS patients from Hong Kong who died, 191 were 65 years or older, and 158 of these cases had a history of chronic disease (table 2).

3. Hong Kong's economy when SARS arrived

Since the onset of the Asian financial crisis, Hong Kong's economy has faced an unfavorable external environment. Financial liquidity in Asia drained away in the crisis and its aftermath. Hong Kong's link to the U.S. dollar through a currency board arrangement did not improve matters. The Hong Kong dollar appreciated in value along with the strengthening U.S. dollar during 1999–2002. Investment demand for housing collapsed at the same time that the housing supply began to soar. Although nominal mortgage interest rates were kept low in a globally low-interest-rate environment, the true borrowing cost was high in real terms, with deflation plodding along at 2–4 percent per year (table 3). Households were struggling to pay down their mortgage debts after the housing-market bubble burst. Domestic consumption was shrinking, and the economy was contracting. Hong Kong's unemployment rate hit record levels, exceeding 7 percent by the end of 2002. The unemployment problem was made worse by the continuous inflow of low-skilled immigrants from mainland China.

Beginning in 2003, signs of economic recovery had appeared. Real GDP in Hong Kong grew at 3.4 percent in 2002:Q3 and at 5.1 percent in 2002:Q4. In late spring of 2003, exports from China picked up very strongly, and cargo movement in Hong Kong ports and airports showed good growth. Thus, the outbreak of SARS hit Hong Kong at a very bad time. Domestic demand collapsed before it had an opportunity to recover from the recession in 2001. Alarmed by the outbreak at the Amoy

Table 3. Hong Kong's economy before the SARS outbreak (1998–2002)

Economic indicator	1998	1999	2000	2001	2002
Real GDP growth (%)	−5.0	3.4	10.2	0.5	2.3
Nominal GDP growth (%)	−4.8	−2.6	3.4	−1.4	−0.8
Consumer price deflation (%)	2.8	−4.0	−3.8	−1.6	−3.0
Unemployment rate (%)	4.7	6.2	4.9	5.1	7.3
Property price index (domestic)	117.1	100.0	89.6	78.7	69.9
Budget surplus/deficit (HK$ billion)	−23.2	10.0	−7.8	−63.3	−61.7
Fiscal reserves (HK$ billion)	434.3	444.3	430.3	372.5	311.4

Source: *Census and Statistics Department, Hong Kong (2003c).*

Gardens and by the news that several foreign businessmen might have contracted SARS in Hong Kong and returned with it to their home countries, WHO issued a travel advisory on 2 April 2003, urging people to postpone nonessential trips to Hong Kong and Guangdong. WHO's travel warning and the reluctance to travel by air devastated travel and tourism in the Asian region, particularly in Hong Kong. Many companies worldwide banned business travel to infected areas. Restrictions on travelers from infected areas aggravated the situation.

As the SARS outbreak raged on in China, the economic environment in the region darkened as the prospects of the fastest-growing economy in Asia became cloudy. The uncertain outlook prompted the World Bank to predict that output growth in East Asia would fall by almost 1 percentage point in 2003, to 5 percent (World Bank 2003). Analysts and rating agencies also revised their forecasts downward (table 4). On average, private sector analysts estimated that Hong Kong's output growth in 2003 would be 1.2 percentage points lower than previously expected, which translated to a drop of around HK$15 billion in spending on final goods and services in the domestic economy. On 9 April 2003, the government announced that the original forecast of a 3 percent real growth rate in GDP would not be met. Doom and gloom hit the region and Hong Kong.

4. Economic impact of SARS in Hong Kong

4.1 Early predictions and concerns during the SARS shock

Table 5 shows the decomposition of Hong Kong's GDP between 2000 and 2002 by types of spending. Three areas of Hong Kong's economy would have been particularly vulnerable to a long-term SARS outbreak: consumption spending, tourism, and re-exports. Because Hong Kong's total private consumption expenditure in 2002 was 57.8 percent of GDP, a long-term drop in consumption spending resulting from a widespread fear of SARS would have had a very significant adverse impact on output if the disease had not been controlled fairly quickly.

Table 4. Private sector forecasts of Hong Kong's output growth and inflation (2003)

	Output growth			Consumer price inflation		
	Previous (percent)	Latest (percent)	Difference (percentage point)	Previous (percent)	Latest (percent)	Difference (percentage point)
Economist Intelligence Unit (EIU)	2.5	0.3	−2.2	—	—	—
Bloomberg News Survey	2.9	2.1	−0.8	—	—	—
Forecasts by major private companies				—	—	—
J.P. Morgan Chase	3.2	0.3	−2.9	—	—	—
HongKong and Shanghai Banking Corporation	1.6	0.5	−1.1	—	—	—
BNP Paribas Peregrine	1.5	0.9	−0.6	—	—	—
Citibank	2.8	1.0	−1.8	−1.2	−2.0	−0.8
DBS Bank	1.8	1.2	−0.6	—	—	—
Internationale Nederlanden Group (ING)	3.0	1.5	−1.5	—	—	—
Goldman Sachs	3.0	1.7	−1.3	—	—	—
Lehman Brothers	2.5	2.0	−0.5	—	−1.5	—
Morgan Stanley	2.7	2.1	−0.6	—	—	—
Merrill Lynch	4.6	3.1	−1.5	—	—	—
ABN Amro Bank	4.0	3.5	−0.5	—	—	—
Average	2.8	1.6	−1.2	—	—	—

Source: *Compiled by the Hong Kong Monetary Authority. Available at www.info.gov.hk/hkma*

Tourism-related activities constitute an important part of the export and import of services in Hong Kong. In 2002, exports of transportation and travel services amounted to 8.2 percent and 4.7 percent of Hong Kong's GDP, respectively, and imports of transportation and travel services were 4.1 percent and 7.7 percent, respectively. The net effect of a widespread, lengthy SARS outbreak in Hong Kong would have been a decrease in GDP, with the hotel, airline, and retail sectors suffering more than other services.

Hong Kong's exports of goods are dominated by re-exports and amount to roughly 10 times its domestic exports. Most of the re-exports are goods manufactured across the border in mainland China, in the Pearl River Delta area. In 2002, total imports and exports of goods and services in Hong Kong was 293 percent of GDP, as Hong Kong is the business center from which a vast regional cross-border manufacturing production base is managed. A recent study by the Hong Kong Centre for Economic Research (2003) estimates that 43 percent of the Hong Kong labor force in 2001 was either directly or indirectly engaged in managing and supporting this production base. Although net exports in 2002 were only 8.3 percent of GDP, Hong Kong's function as a trading hub, that is, its role in the management, financing, and transportation within this regional export-oriented cross-border manufacturing base, would have been seriously disrupted if the SARS outbreak in China had paralyzed parts of the global supply chains. The impact on GDP and employment would have been severe for Hong Kong. During the outbreak, analysts were concerned that if the disease were not quickly contained, then Hong Kong would suffer long-term conse-

Table 5. Structure of the Hong Kong economy (2000–2002)

	Value in 2002 (HK$ billion)	Share of GDP (%)		
		2002	2001	2000
Private consumption expenditure	728.4	57.8	60.2	57.8
Government consumption expenditure	131.2	10.4	10.1	9.3
Gross domestic fixed-capital formation	292.6	23.2	26.2	27.0
Changes in inventories	2.4	0.2	−0.3	1.1
Exports of goods and services	1,900.1	150.8	140.8	146.7
Goods	1,562.1	124.0	116.6	122.1
Domestic exports	131.1	10.4	12.1	14.0
Re-exports	1,431.0	113.6	104.5	108.0
Services	337.9	26.8	24.2	24.7
Transportation	103.0	8.2	7.4	7.7
Travel	58.8	4.7	3.7	4.8
Trade-related services	117.2	9.3	8.4	7.6
Others	58.9	4.7	4.8	4.6
Imports of goods and services	1,794.9	142.5	137.1	141.9
Goods	1,601.5	127.1	122.0	127.0
Services	193.4	15.4	15.2	14.9
Transportation	51.7	4.1	4.0	3.8
Travel	96.8	7.7	7.6	7.6
Trade-related services	12.1	1.0	0.9	0.9
Others	32.8	2.6	2.7	2.7
Gross domestic product	1,259.8	100.0	100.0	100.0

Source: *Census and Statistics Department, Hong Kong (2003b).*

quences from the diversion of foreign investments from the region. Many analysts were also concerned that the disease might recur in 2004.

The SARS outbreak was an unexpected negative shock to Hong Kong's economy. The most significant negative effects were on the demand side. Local consumption and the export of services related to tourism and air travel were severely affected in the short run. Early anecdotal evidence reported in the press indicated that restaurants and retail outlets were hit hard, with sales dropping by 10 to 50 percent (table 6). Land transport declined by 10–20 percent because people stayed home. There was also a 50 percent drop in the use of the Airport Express Line,[1] which indicated a reduction in air travel. Fortunately, the supply side of Hong Kong's economy was unaffected. Even though SARS raged through the province of Guangdong, the cross-border manufacturing base was not disrupted. The production and cross-border movement of goods continued to function smoothly, and the global supply chains remained intact.

The stock market reaction to the SARS outbreak was relatively moderate. The Hong Kong Hang Seng Index dropped only by 1.78 percent between 12 March (when WHO raised the global alert) and 30 April. Other major market indexes rose over the same period, except for the Taiwan Weighted Index and Japan's Nikkei 225

1 The Airport Express Line offers a fast passenger railway link between Chek Lap Kok (where Hong Kong International Airport is located) and central Hong Kong.

Table 6. Anecdotal evidence of losses from SARS according to selected businesses (all dates 2003)

Sector	Source	Date	Reported loss
Food and catering	Hong Kong Federation of Restaurants and Related Trades	Mid-April	50 restaurants closed temporarily
	Café de Coral	Early April	Sales dropped by 20%
Retail	Hong Kong Retail Management Association	Early April	Retail sales fell by 50%
	Sa Sa International	Early April	Sales dropped by 10%
	Giordano International	Mid-April	Sales dropped by 30%
	Mirabell International	Mid-April	Sales fell by 50% from a year prior
Tourism	Hong Kong Tourism Board	Early April	10.4% drop in visitor arrivals in the last 16 days of March over a year prior
Airline	Cathay Pacific Airways	Mid-April	Estimated loss per day was US$3 million; cancellation of flights rose from 10% in late March to over 40% in mid-April
	Dragon Airlines	Mid-April	Flight schedule was cut by 48%
Transport	Citybus	Early April	Passenger level fell by 10%
	New World First Bus	Mid-April	Passenger level fell by 20%
	MTR Corporation	Mid-April	Airport Express Line frequency was cut as passenger levels fell by 50%
Others	The Hong Kong Convention and Exhibition Centre	Early April	12% of bookings were cancelled or postponed
	Cinema Association	Mid-April	Revenue in March dropped by 47%

Sources: *Various press reports from* Ming Pao *(www.mingpaonews.com) and* South China Morning Post *(www.scmp.com).*

(table 7). The Hong Kong market surged ahead by 3.7 percent on 29 April, after WHO announced that the worst of the SARS outbreak appeared to be over in Singapore, Hong Kong, Canada, and Vietnam. Stock shares of airlines, hotels, property developers, and retailers performed worse than the whole market, whereas shares of export-oriented companies did relatively well (table 8).

4.2 Impact on local consumption

The decline in local consumer spending in Hong Kong stemmed from fears that the disease had spread to the community at large. Consequently, people refrained from many consumption activities outside their homes. The drop in demand rippled through the whole economy: it affected other sectors, put further downward pressure on the price level, and worsened the unemployment problem. The SARS shock started to bite only in late March 2003, based on the March retail sales figure, which was HK$14.17 billion, a 6.1 percent drop from the previous year (table 9). Retail sales in April declined 15.2 percent from the previous year. As the number of new SARS cases started to decline in late April, local residents began venturing out more often. On 1 May, the Labor Day holiday, queues were seen outside some restaurants and cinemas. The consumption pattern also adjusted, with supermarkets and video rental shops doing more business. Retail sales began to recover steadily after

Table 7. Stock market indexes during the SARS outbreak (percentage change, 2003)

Index	12 March to 31 March	31 March to 15 April	15 April to 30 April	30 April to 30 May	30 May to 30 June	30 June to 31 July	12 March to 30 April	12 March to 30 May	12 March to 30 June	12 March to 31 July
Hong Kong Hang Seng	−2.71	−0.03	0.99	8.83	0.95	5.82	−1.78	6.90	7.91	14.20
Hong Kong Hang Seng Finance	−2.63	1.80	1.84	8.49	−0.55	3.66	0.95	9.51	8.91	12.90
Hong Kong Hang Seng Utilities	0.15	1.34	−2.71	3.47	0.35	0.41	−1.27	2.15	2.51	2.93
Hong Kong Hang Seng Properties	−4.68	−4.62	2.87	9.59	−0.001	12.08	−6.47	2.50	2.50	14.88
Hong Kong Hang Seng Commerce and Industry	−2.77	−0.87	0.32	10.11	3.04	7.53	−3.31	6.46	9.69	17.95
Shanghai Stock Exchange, A-Share	2.45	8.03	−6.71	3.65	−5.72	−0.63	3.25	7.02	0.90	0.26
Taiwan Stock Exchange Weighted	−0.16	3.85	−7.57	9.83	6.94	9.16	−4.16	5.26	12.57	22.88
Japan Nikkei 225	0.37	−1.68	−0.09	7.57	7.82	5.29	−1.41	6.06	14.35	20.40
Kuala Lumpur Stock Exchange Composite	1.02	−0.38	0.10	6.71	3.90	5.10	0.73	7.49	11.68	17.38
Singapore Straits Times	2.53	2.16	−0.68	6.47	6.57	7.26	4.03	10.76	18.03	26.60
Stock Exchange of Thailand	3.44	6.03*	−3.08*	7.79	14.36	4.83	6.30	14.58	31.04	37.36
Philippines Stock Exchange Composite	3.92	7.39	−4.33	0.52	13.89	1.44	6.77	7.32	22.23	23.99
Australian Stock Exchange All Ordinaries	6.01	2.94	1.31	0.30	0.67	3.57	10.56	10.89	11.63	15.62
Korea Composite Stock Price	0.73	12.93	−0.93	5.68	5.76	6.51	12.70	19.11	25.97	34.17
Standard & Poor's 500	5.47	5.03	2.93	5.09	1.13	1.62	14.02	19.82	21.18	23.14
Jakarta Composite	2.78	8.97	3.95	9.74*	2.17	0.49	16.43	27.77*	30.53	31.18
London FTSE 100	9.93	8.40	0.23	3.11	−0.42	3.12	19.44	23.15	22.64	26.47

Source: *CEIC Data. Published by CEIC Data Company Ltd. Available at www.ceicdata.com*

Note: *The figures for the Thailand SET index marked with an asterisk represent the periods of 31 March–16 April (rather than 31 March–15 April) or 16 April–30 April (rather than 15 April–30 April). The figures for the Jakarta Composite Index marked with an asterisk represent the periods of 30 April–30 May (rather than 30 April–31 May) and 12 March–29 May (rather than 12 March–30 May).*

Table 8. Share price movements of selected Hong Kong companies (percentage change, 2003)

Stock	12 March to 31 March	31 March to 15 April	15 April to 30 April	30 April to 30 May	30 May to 30 June	30 June to 31 July	12 March to 30 April	12 March to 30 May	12 March to 30 June	12 March to 31 July
Cathay Pacific Airways	−13.64	−8.95	8.67	4.78	6.60	4.29	−14.55	−10.45	−4.55	−0.45
Shangri-La Asia	−7.27	−7.84	4.79	−3.55	4.21	25.25	−10.45	−13.64	−10.00	12.73
Sun Hung Kai Properties	−8.56	−5.61	3.68	6.28	1.29	17.51	−10.51	−4.89	−3.67	13.20
Giordano International	1.04	−10.31	−3.45	13.10	2.11	13.40	−12.50	−1.04	1.04	14.58
Café de Coral	−10.42	6.98	5.43	9.28	12.26	−1.68	1.04	10.42	23.96	21.88
HongKong and Shanghai Banking Corporation	−2.43	3.74	2.40	9.09	−0.54	3.51	3.65	13.07	12.46	16.41
Li & Fung	8.61	2.44	4.17	10.29	4.15	9.95	15.89	27.81	33.11	46.36
Esprit	−1.99	−2.71	6.62	7.84	15.45	4.99	1.66	9.63	26.58	32.89
Johnson Electric	−2.29	−2.92	1.20	9.52	4.89	9.84	−4.00	5.14	10.29	21.14

Source: Datastream. *Published by Thomson Financial. Available at www.thomson.com/financial*

Table 9. Retail sales data for Hong Kong (2003)

2003	Total retail sales		Unit price index (year-on-year percentage change)	Volume index (year-on-year percentage change)
	Value (HK$ billion)	Year-on-year percentage change		
January	17.48	9.87	−1.71	11.76
February	12.68	−12.56	−1.46	−11.23
March	14.17	−6.06	−2.43	−3.73
April	12.72	−15.15	−3.28	−12.24
May	13.78	−11.13	−3.95	−7.45
June	13.60	−6.46	−3.31	−3.31
July	14.63	−2.49	−2.19	−0.30
August	14.72	1.16	−1.68	2.91

Source: *Census and Statistics Department, Hong Kong SAR Government. Available at www.info.gov.hk/censtatd/eng/hkstat/fas /commerce/retail/retail_index.html*

May 2003 as the SARS outbreak receded, and reached their pre-outbreak levels by the end of July.

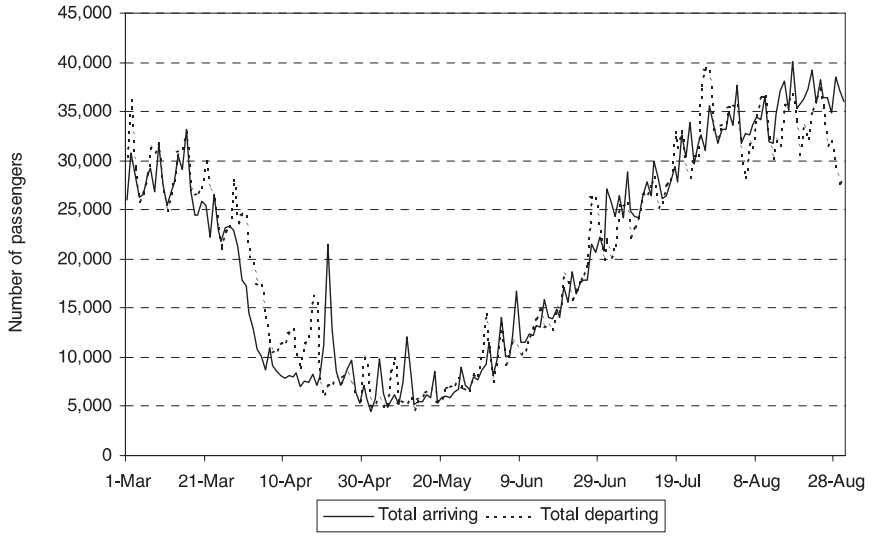
4.3 Impact on tourism and travel

During the second half of March 2003, visitor arrivals dropped by 10.4 percent, compared with arrivals in the previous year, and airlines had to cancel flights. As shown in figure 3, air passenger travel to and from Hong Kong began to drop in mid-March and fell sharply at the end of the month, several days before the WHO travel warning. The spike during the Easter holidays was a result of local residents' taking tours outside Hong Kong. The amount of aircraft movement began to drop after the end of March and reached bottom in early May (figure 4). By the end of July, the number of flights had nearly recovered to the level seen in March.

Table 10 shows the number of passenger arrivals and departures by mode of travel for visitors and residents in Hong Kong. In April 2003 visitor arrivals dropped in all three modes of travel, compared with the March 2003 figures: the number of airline passengers fell by 77 percent, the number of people traveling by land declined by 52 percent, and the number that came by sea dropped by 72 percent. On average, between March and April 2003 the total number of visitors arriving in Hong Kong fell by 63 percent (around 850,000). The decline in travel by residents was considerably less drastic, with a decrease in the total number of around 26 percent in April month-on-month. In June, visitor arrivals started to recover and by August they had returned to their original levels. Residents' travel recovered about a month sooner. (See table 10 and figures 5 and 6.)

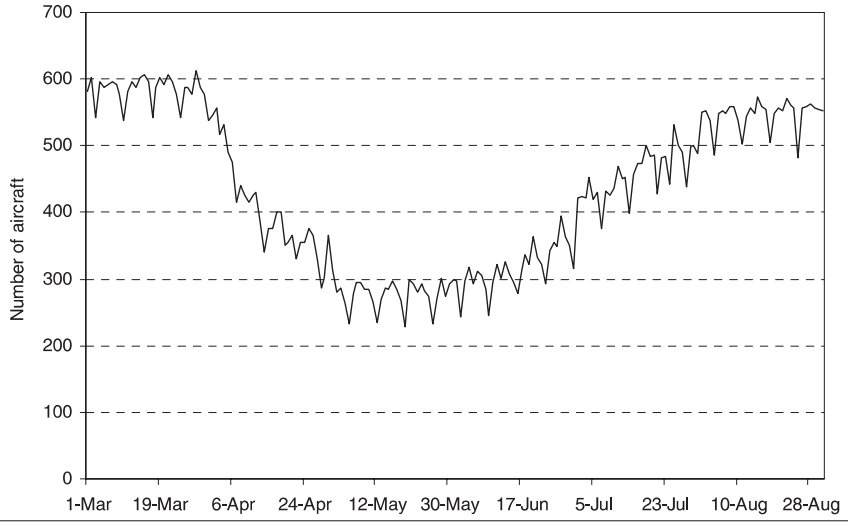
As the SARS outbreak came under control, the number of visitors to Hong Kong picked up. On average, between 1997 and 2002 only around half of the visitors to Hong Kong were tourists: 30 percent were business travelers and 10 percent were

Figure 3. Number of arriving and departing air passengers in Hong Kong (1 March 2003 to 31 August 2003)



Source: *Unpublished daily data provided by Immigration Department, Hong Kong SAR Government. Available at www.immd.gov.hk*

Figure 4. Aircraft movement at the Hong Kong International Airport (1 March 2003 to 31 August 2003)



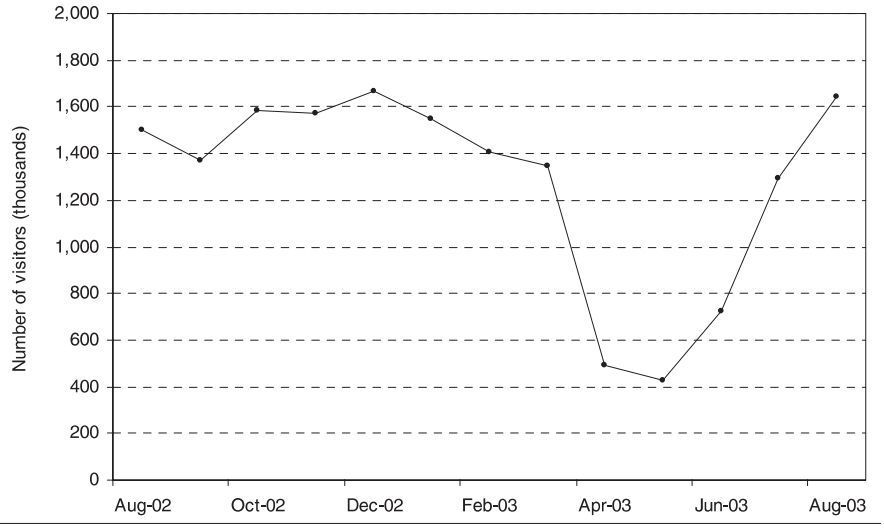
Source: *Unpublished daily data provided by Airport Authority Hong Kong. Available at www.hongkongairport.com*

Table 10. Number of arriving and departing passengers by air, land, and sea in Hong Kong (January–August 2003)

	January 2003	February 2003	March 2003	April 2003	May 2003	June 2003	July 2003	August 2003
Passenger arrivals	**6,604,300**	**6,758,628**	**6,316,860**	**4,143,283**	**4,336,505**	**5,430,374**	**6,701,276**	**7,926,087**
Air	889,369	1,019,169	801,764	278,757	211,328	445,708	895,839	1,104,674
Land	4,969,356	4,830,002	4,808,490	3,416,892	3,664,852	4,335,240	5,001,669	5,780,185
Sea	745,575	909,457	706,606	447,634	460,325	649,426	803,768	1,041,228
Passenger departures	**7,093,129**	**6,191,524**	**6,385,857**	**4,237,584**	**4,343,374**	**5,420,115**	**6,692,902**	**7,771,069**
Air	1,032,311	843,425	853,172	332,125	214,326	447,495	889,839	1,023,221
Land	5,210,192	4,415,771	4,731,252	3,414,591	3,656,902	4,304,626	4,954,354	5,602,102
Sea	850,626	932,328	801,433	490,868	472,146	667,994	848,709	1,145,746
Visitor arrivals	**1,545,978**	**1,408,139**	**1,347,386**	**493,666**	**427,254**	**725,236**	**1,291,828**	**1,644,878**
Air	538,904	546,490	464,414	106,555	56,792	152,548	404,182	491,602
Land	778,294	640,948	693,909	334,465	317,711	464,391	707,158	882,799
Sea	228,780	220,701	189,063	52,646	52,751	108,297	180,488	270,477
Resident departures	**5,487,978**	**4,803,886**	**4,993,315**	**3,702,524**	**3,924,507**	**4,718,681**	**5,479,894**	**6,087,610**

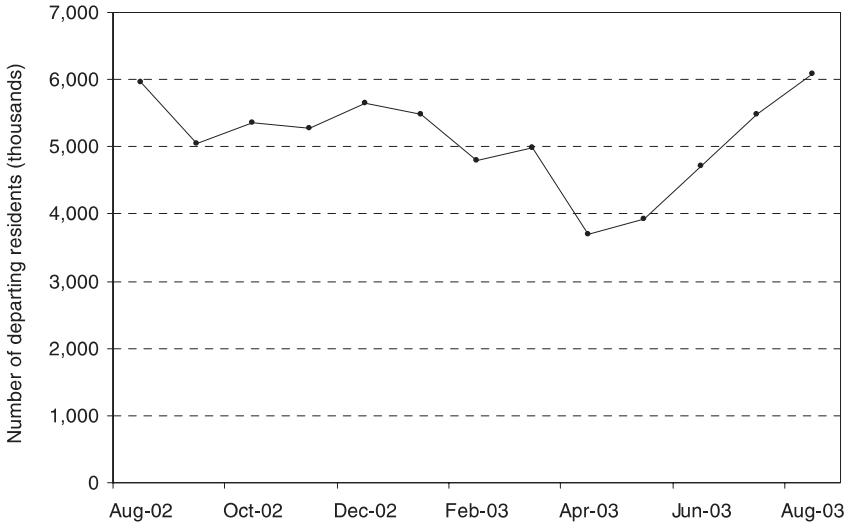
Source: CEIC Data. *Published by CEIC Data Company Ltd. Available at www.ceicdata.com*

Figure 5. Number of visitors arriving in Hong Kong (August 2002 to August 2003)



Source: *Census and Statistics Department, Hong Kong (2003d).*

Figure 6. Number of departing Hong Kong residents (August 2002 to August 2003)



Source: *Census and Statistics Department, Hong Kong (2003d).*

Table 11. Purpose of visit and average length of stay of visitors to Hong Kong (1997–2002)

Purpose of visit	1997	1998	1999	2000	2001	2002
Vacation	61%	49%	49%	55%	50%	47%
Business/meetings	26%	32%	30%	30%	30%	32%
Visiting friends and relatives	7%	9%	12%	8%	10%	14%
En route	5%	8%	7%	6%	9%	7%
Other purposes	2%	1%	2%	1%	2%	0%
Average length of stay (nights)	3.6	3.4	3.4	3.0	3.1	3.6

Sources: *Census and Statistics Department, Hong Kong (2003a) and Hong Kong Tourism Board (2003).*

those visiting friends or relatives (table 11). The number of visitors in the latter two groups recovered more quickly than the number of tourist visitors. The occupancy rate in Hong Kong's hotels dropped dramatically from around 79 percent in early March to 18 percent in early May, but by early July the rate had recovered to 71 percent (figure 7).

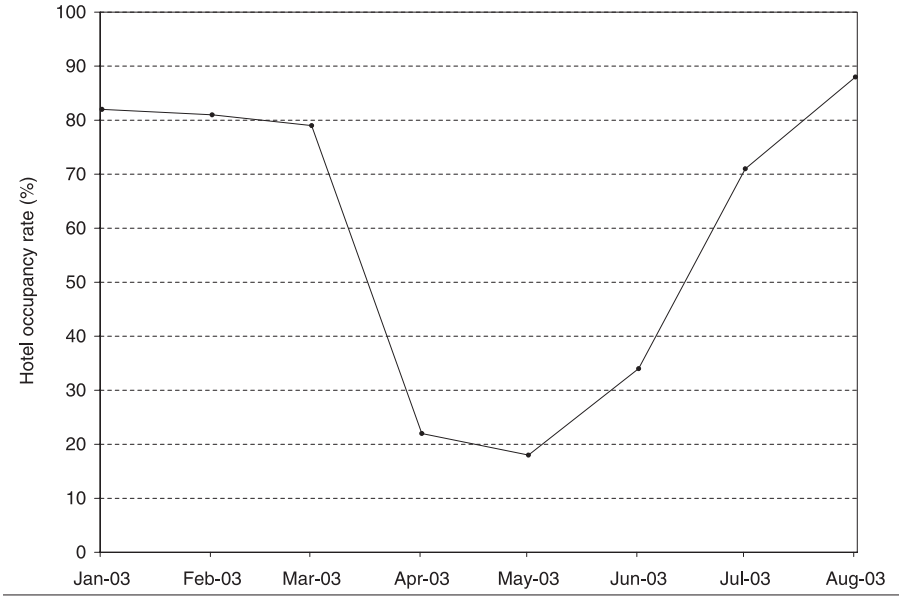
The depressed state of Hong Kong's domestic demand since 1999 was partially offset by increased demand by tourists. Total spending by tourists had dropped off dramatically between 1997 and 1998, at the onset of the Asian financial crisis (table 12), but since then it has grown at an average annual rate of 8 percent, largely because of the increasing number of visitors from mainland China resulting from the more relaxed restrictions on travel to Hong Kong.[2] The most up-to-date figure for total tourism expenditure associated with inbound tourism in Hong Kong is HK$77.4 billion in 2002, which amounts to 6 percent of GDP. The impact of tourist spending on the value of retail sales is, however, quite substantial. The average spending by each overnight tourist in 2001 was HK$4,588, and this spending increased to HK$4,904 in 2002. A drop of 850,000 visitors in April 2003 translates to a reduction of HK$4.2 billion of spending in the domestic consumption market, implying that retail sales probably fell by around HK$2.0 billion in April, or 14 percent of the value of retail sales in March.

4.4 Impact on exports and re-exports of goods

The fear that the SARS outbreak would cause a fall in Hong Kong's goods exports and re-exports was not borne out: cross-border truck traffic figures showed no obvious decrease between March and September 2003 (figure 8). Evidently the production and movement of goods continued unperturbed during the outbreak. The trade figures for exports of goods continued to grow robustly between January and

2 Under the *Individual Visit Scheme* commenced on 28 July 2003, residents of four Guangdong cities could travel to Hong Kong as individual visitors. Previously, they had to join a tour group to visit Hong Kong. The scheme was introduced by the Chinese government as a measure to revive Hong Kong's economy and was subsequently extended to Beijing, Shanghai, and the whole of Guangdong province. Beijing's policy is to extend the scheme further by including more cities.

Figure 7. Hotel occupancy rates in Hong Kong (January–August 2003)



Source: *Census and Statistics Department, Hong Kong (2003d).*

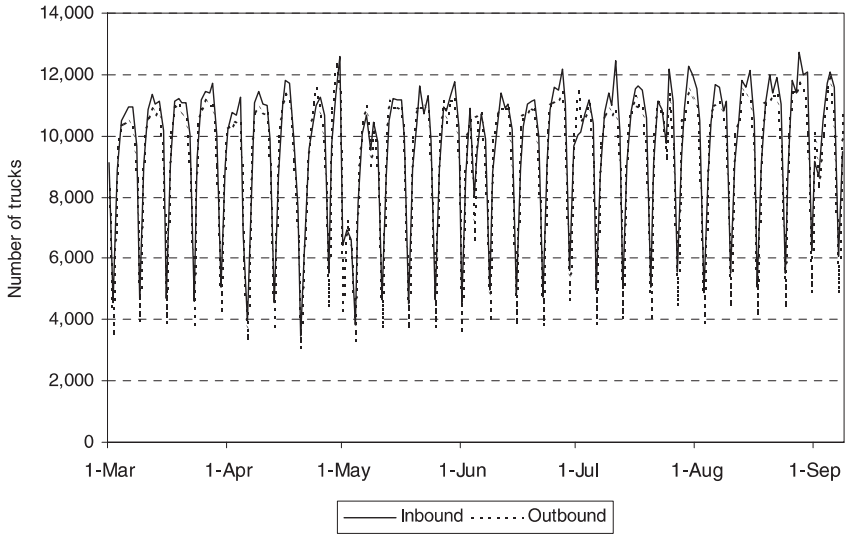
Table 12. Visitor spending in Hong Kong (1992–2002)

Year	Total visitor spending (HK$ billion)	Per capita visitor spending (HK$)
1992	46.70	6,684
1993	58.30	6,684
1994	62.51	6,699
1995	72.94	7,151
1996	91.49	7,052
1997	75.70	6,715
1998	56.83	5,490
1999	56.99	4,897
2000	63.91	4,612
2001	61.80	4,588
2002	77.41	4,904

Sources: *Census and Statistics Department, Hong Kong (2003a) and Hong Kong Tourism Board (2003).*
Note: *Figures for 1998–2002 are new data on "total tourism expenditure associated with inbound tourism" and "overnight visitor per capita spending" released by the Hong Kong Tourism Board in November 2003.*

June 2003. For the first and second quarters of 2003, the value of the total exports of goods from Hong Kong rose by 17.6 percent and 12.2 percent, respectively, compared with the values in the same period of 2002. The value of re-exports surged by 20.3 percent in 2003:Q1 and by 14.4 percent in 2003:Q2, and the value of domestic exports decreased by 10.4 percent in 2003:Q1 and 11.3 percent in 2003:Q2. The value

Figure 8. Cross-border truck traffic—Lok Ma Chau (1 March 2003 to 8 September 2003)



Source: *Unpublished daily data provided by Customs and Excise Department, Hong Kong SAR Government. Available at www.info.gov.hk/customs*

of imports of goods increased in 2003:Q1 and 2003:Q2 by 18.0 percent and 10.0 percent, respectively, resulting in a trade deficit of HK$16.0 billion and HK$9.8 billion for these periods. Thus, the external trade sector performed quite well during the worst period of the SARS outbreak.

No major production disruptions were reported in factories in the Pearl River Delta, which are mostly owned by Hong Kong–based manufacturing and trading companies. Most factory hands employed in the manufacturing operations in this area are migrant workers who live in employer-provided hostels. This arrangement probably helped to insulate these workers from SARS in the nearby community. The effects of the curtailment of travel to the region by employees of overseas companies was mitigated by the return of business travelers after the SARS outbreak was over and by the increased level of travel by local businessmen to meet with their overseas clients.

4.5 Impacts on unemployment and deflation

The combined effects of the drop in domestic consumption and the decrease in tourist spending worsened what was already a weak labor market in Hong Kong. Unemployment and underemployment rates rose throughout the SARS outbreak (table 13). Many severely affected sectors either laid off workers or undertook work-

Table 13. Unemployment and underemployment in Hong Kong (2003)

Average for 3-month period ending in:	Unemployment		Underemployment	
	Persons (thousands)	Rate (%, seasonally adjusted)	Persons (thousands)	Rate (%)
January	246	7.2	108	3.1
February	256	7.4	101	2.9
March	260	7.5	101	2.9
April	274	7.8	113	3.2
May	287	8.3	135	3.8
June	300	8.6	151	4.3
July	309	8.7	149	4.2
August	309	8.6	142	4.0

Source: *Census and Statistics Department, Hong Kong SAR Government. Available at www.info.gov.hk/censtatd/eng/hkstat/fas/labour/ghs/labour1_index.html*

sharing schemes in the face of lower demand. The underemployment rate started to decrease in July, and the unemployment rate showed signs of falling in August.

The consumer price index continued to show a negative growth rate throughout the SARS outbreak (table 14). The declines were more severe after the SARS outbreak had started to abate, reflecting attempts by retailers, restaurants, and others to entice consumers to spend.

5. Concluding remarks

The initial alarmist reports and estimates about the impacts of SARS have not been borne out by the actual statistics. The economic impacts of SARS on consumption, tourism, and travel-related services turned out to be relatively short-lived. Fear and panic subsided quickly once the outbreak abated. The stock market's overall response mirrored these developments well: most of the short-term negative effects were concentrated in sectors that were severely hit by the negative demand shock. There was no major disruption to external trade, especially for the re-exporting of goods from mainland China. The manufacturing base in the Pearl River Delta was unaffected, and goods continued to flow through Hong Kong normally. The Hong Kong economy did not experience a supply-side shock. We find no anecdotal evidence to indicate that SARS had negative effects on either domestic or foreign investment.

The possibility that the virus will return in 2004 cannot be ruled out. Mainland China and Hong Kong will be much better prepared, however, especially with the knowledge that the virus is not airborne and can therefore be contained if quarantine measures are quickly and meticulously implemented. The spread of the disease

Table 14. Composite consumer price index in Hong Kong (2003)

Month	Composite consumer price index	Year-on-year percentage change
January	93.7	−1.6
February	93.5	−2.0
March	93.7	−2.1
April	93.7	−1.8
May	92.7	−2.5
June	92.0	−3.1
July	91.1	−4.0
August	91.0	−3.8

Source: *Census and Statistics Department, Hong Kong SAR Government. Available at www.info.gov.hk/censtatd/eng/hkstat/fas/cpi/cpi_std_index.html*

in hospitals is likely to be better handled, with enhanced infection isolation facilities, infection control procedures, and heightened vigilance.

The fact that the disease raged on for several months without attracting worldwide attention reveals the damaging effects of information control in relatively closed societies that do not have a free press. The spread of SARS to Hong Kong, with the first case in a hotel, was very unfortunate, but it may also have been critical in focusing public attention on the potential global threat posed by the virus. The media in Hong Kong were the first to raise public alarm by candidly reporting the facts. The spread of the disease to several countries (notably Vietnam, Singapore, and Canada) brought world attention to the issues that SARS was a deadly new disease and was spreading quickly, and that authorities in mainland China had failed to report in a timely manner a serious epidemic. The free flow of information and the reactions that followed played an important role in stopping the spread of the disease. The Chinese government responded quickly to contain the spread of SARS in the wake of international public pressure. Research that led to the early identification of the virus at The University of Hong Kong and of some of the properties of the disease calmed the public's fears and may have helped avert an uncontrolled panic by investors and the serious economic impacts that would have followed.

If a recurrence of the disease is controlled effectively, then Hong Kong's close economic relationship with the mainland will not be affected by such a recurrence. Another SARS outbreak could even help to speed up the opening of the mainland, for the first experience demonstrated to the Chinese leadership that GDP numbers depend on the confidence of domestic and international economic agents. Any such further opening will enhance Hong Kong's role in China's development. Indeed, the lifting of restrictions on travel to Hong Kong for residents of Guangdong, Shanghai, and Beijing permitted by the *Individual Visit Scheme* is likely to increase the flow of information between Hong Kong and mainland China. The recent signing of the Closer Economic Partnership Arrangement confers greater freedom for many

Hong Kong service providers to access the market in mainland China, and it is likely to contribute to China's further opening up and integration with the rest of the world.

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