

China Airlines

Coronavirus impact: scenario and sensitivity analysis

Recently, an outbreak of Coronavirus appeared in China. The epidemic has adversely affected transportation during the Spring Festival. We hereby revise our industry outlook for China Airlines in 2020, change our top-pick to Air China (753 HK), and reiterate long-term bullish view.

- The epidemic began to take its toll on the Spring Festival transport.**
 According to the Ministry of Transport of the PRC, during the first 13 days of the Spring Festival transport (10 to 22 Jan), China aviation industry carried a total of 25.05mn passengers, an increase of 8.6% over the same period last year. Since the 14th day (23 Jan), due to the impact of the epidemic, the number of passengers carried on that day began to decline (-0.9% YoY). On the 24th day (2 Feb), the industry carried only 460,000 passengers, a decrease of 76.5% YoY.
- In the previous SARS epidemic, 2Q 03 RPK dropped by 47% YoY.** In order to quantify the impact of the epidemic on China aviation industry, we refer to the SARS epidemic in 2003. The SARS epidemic spread in the first quarter, became severe in the second quarter, and ended at the end of the second quarter. In 1Q/2Q/3Q/4Q 2003, quarterly RPK of China aviation industry changed by 17.5%/-47.0%/12.3%/20.9% YoY.
- Scenario analysis: we expect industry-wide 2020E RPK to decrease 7.1% YoY.** In the best-case scenario, the epidemic will end in February. In this context, we expect industry-wide RPK in 1Q/2Q/3Q/4Q 2020E to change by -40%/5%/10%/10% YoY, respectively. In the base-case, the epidemic will end in March, and we expect industry-wide quarterly RPK to change by -50%/5%/10%/10% YoY. In the worst-case, the epidemic will end in the second quarter, and we expect industry-wide quarterly RPK to change by -50%/-10%/5%/10% YoY. We expect the best/base/worst case scenarios to occur at a probability of 10%/60%/30%, respectively. On average, we expect industry-wide RPK in 2020E to decrease by 7.1% YoY.

Investment Summary

Company	Ticker	Rating	Mkt cap (LC mn)	Price (LC)	TP (LC)	Up/down side
H shares						
CHINA EAST AIR-H	670 HK	BUY	78,031	3.75	5.8	54.7%
AIR CHINA LTD-H	753 HK	BUY	118,989	6.9	9.28	34.5%
CHINA SOUTHERN-H	1055 HK	BUY	73,388	4.66	6.08	30.5%
A shares						
CHINA EAST AIR-A	600115 CH	BUY	70,090	4.7	6.86	46.0%
AIR CHINA LTD-A	601111 CH	BUY	106,880	7.89	10.4	31.8%
CHINA SOUTHERN-A	600029 CH	HOLD	65,919	5.88	7.63	29.8%
JUNEYAO AIR-A	603885 CH	BUY	24,105	12.26	17.63	43.8%

Source: Bloomberg, CMBIS estimates

MARKET PERFORM (Maintain)

China Transportation Sector

XU Hanbo
 (852) 3761 8725
 xuhanbo@cmbi.com.hk

DING Wenjie, PhD
 (852) 3900 0856
 dingwenjie@cmbi.com.hk

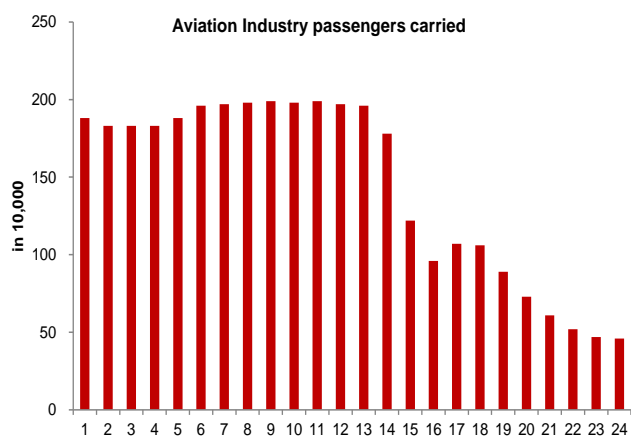
- **Sensitivity analysis: Air China's (753 HK) 2020E EBITDAR is least sensitive.** We examined the sensitivity of listed airlines' 2020E EBITDAR to changes in passenger RPK. The hot spots of the Spring Festival air travel are concentrated in cities such as Beijing, Shanghai, Guangzhou, Shenzhen, southwest, northeast, and Hainan. International travel is mainly concentrated in neighboring countries such as Japan, South Korea, Thailand, Vietnam, Malaysia, and the Philippines. Under the circumstances that both domestic and international RPK in 2020E fell by 5% YoY, we expect 2020E EBITDAR of Air China/China Eastern Airlines/China Southern Airlines/Juneyao Airlines to decrease by 16%/29%/32%/48% YoY, respectively.
- **Reiterate long-term bullish view: air travel demands are postponed rather than cancelled.** The shock of the epidemic does not change the fundamentals of China aviation industry. Air travel demands, particularly those going back to work, are postponed rather than cancelled. We reiterate our long-term bullish view. In addition, due to the epidemic, the oil market is oversupplied, and weak oil prices support the profitability of listed airlines. Top-pick is Air China (753 HK).

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Focus Charts

Figure 1: Since the 14th day, the number of passengers carried on that day began to decline



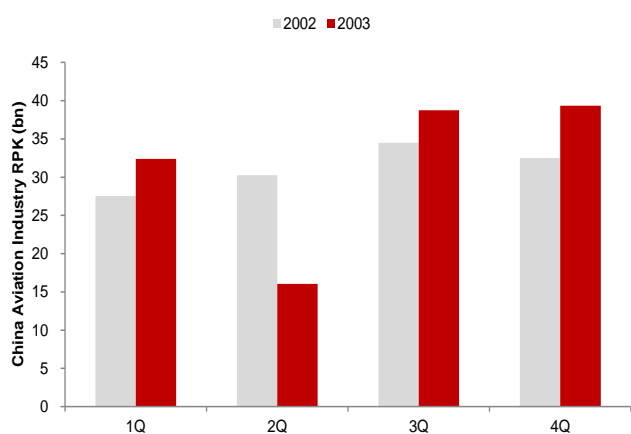
Source: Ministry of Transport, CMBIS

Figure 2: On the 24th day, the industry carried only 460,000 passengers, a decrease of 76.5% YoY



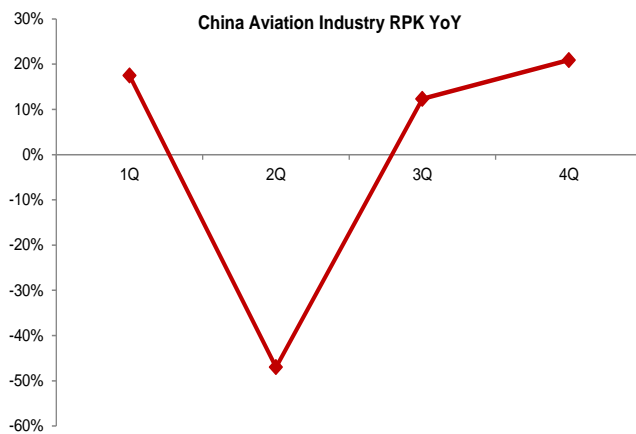
Source: Ministry of Transport, CMBIS

Figure 3: The SARS epidemic became severe and ended in the second quarter



Source: Wind, CMBIS

Figure 4: In 2Q 2003, quarterly RPK of China aviation industry changed by -47.0% YoY



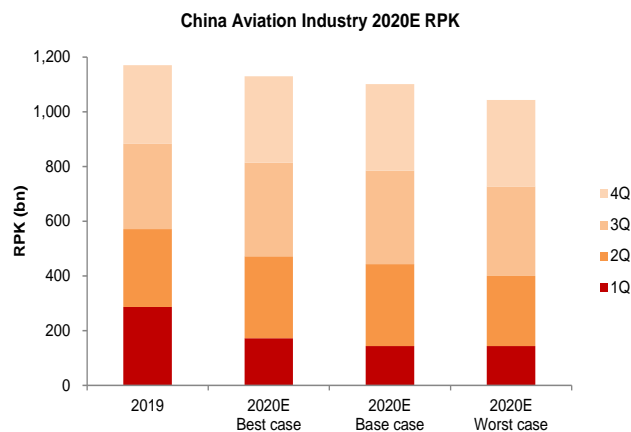
Source: Wind, CMBIS

Figure 5: Scenario analysis

	Best case	Base case	Worst case	Expectation
Prob.	10%	60%	30%	-
RPK YoY				
1Q 2020E	-40%	-50%	-50%	-49.0%
2Q 2020E	5%	5%	-10%	0.5%
3Q 2020E	10%	10%	5%	8.5%
4Q 2020E	10%	10%	10%	10.0%

Source: Wind, CMBIS estimates

Figure 6: On average, we expect industry-wide 2020E RPK to decrease 7.1% YoY



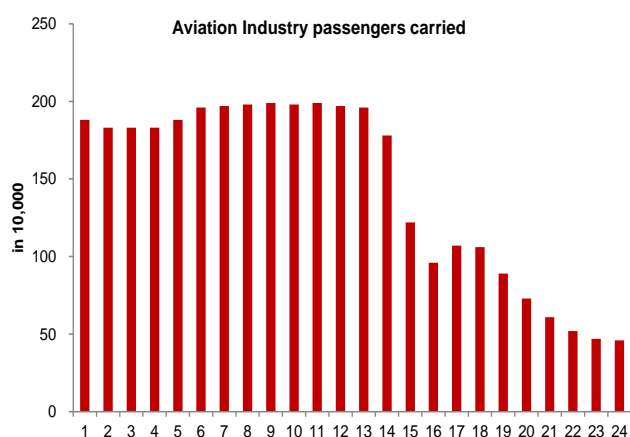
Source: Wind, CMBIS estimates

Investment Summary

The epidemic began to take its toll on the Spring Festival transport

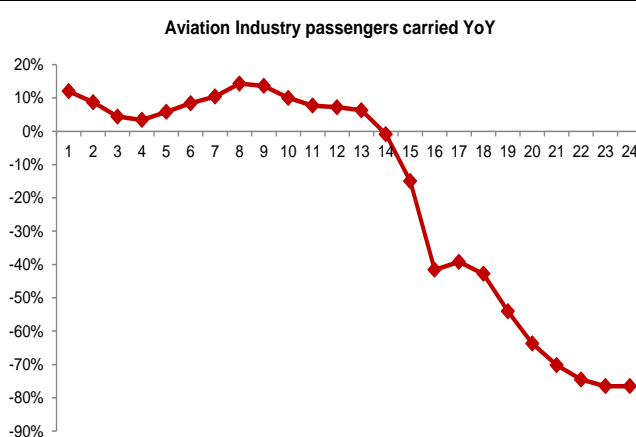
According to the Ministry of Transport of the PRC, during the first 13 days of the Spring Festival transport (10 to 22 Jan), China aviation industry carried a total of 25.05mn passengers, an increase of 8.6% over the same period last year. Since the 14th day (23 Jan), due to the impact of the epidemic, the number of passengers carried on that day began to decline (-0.9% YoY). On the 24th day (2 Feb), the industry carried only 460,000 passengers, a decrease of 76.5% YoY.

Figure 7: Since the 14th day, the number of passengers carried on that day began to decline



Source: Ministry of Transport, CMBIS

Figure 8: On the 24th day, the industry carried only 460,000 passengers, a decrease of 76.5% YoY

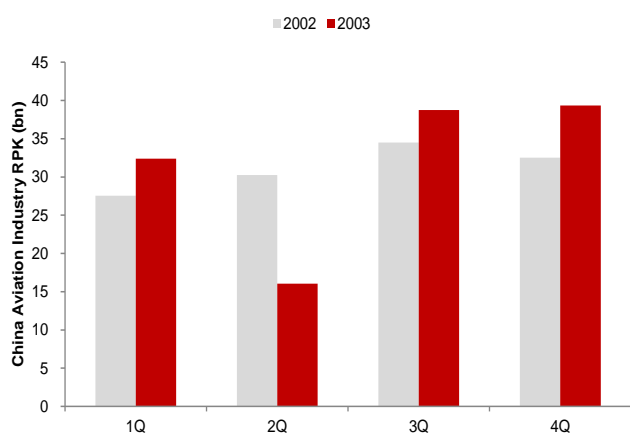


Source: Ministry of Transport, CMBIS

In the previous SARS epidemic, 2Q 2003 RPK dropped by 47% YoY

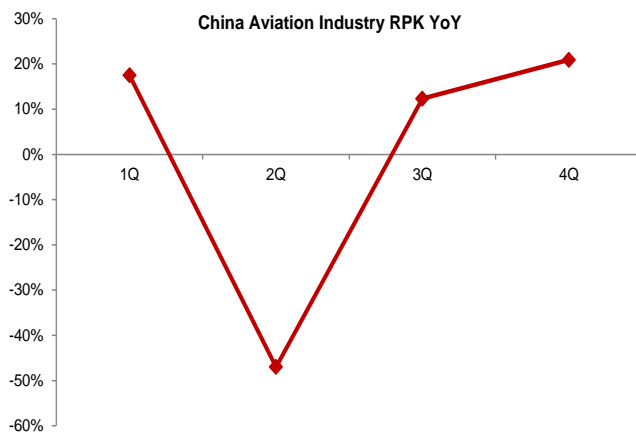
In order to quantify the impact of the epidemic on China aviation industry, we refer to the SARS epidemic in 2003. The SARS epidemic spread in the first quarter, became severe in the second quarter, and ended at the end of the second quarter. In 1Q/2Q/3Q/4Q 2003, quarterly RPK of China aviation industry changed by 17.5%/-47.0%/12.3%/20.9% YoY.

Figure 9: The SARS epidemic became severe and ended in the second quarter



Source: Wind, CMBIS

Figure 10: In 2Q 2003, quarterly RPK of China aviation industry changed by -47.0% YoY



Source: Wind, CMBIS

Scenario analysis: expect industry-wide 2020E RPK to decrease 7.1% YoY

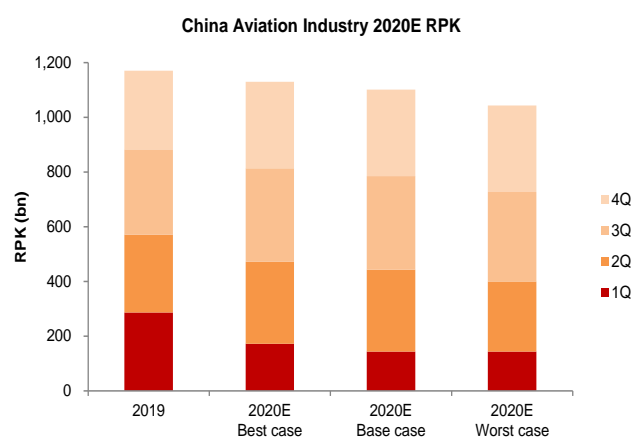
In the best-case scenario, the epidemic will end in February. In this context, we expect industry-wide RPK in 1Q/2Q/3Q/4Q 2020E to change by -40%/5%/10%/10% YoY, respectively. In the base-case, the epidemic will end in March, and we expect industry-wide quarterly RPK to change by -50%/5%/10%/10% YoY. In the worst-case, the epidemic will end in the second quarter, and we expect industry-wide quarterly RPK to change by -50%/-10%/5%/10% YoY. We expect the best/base/worst case scenarios to occur at a probability of 10%/60%/30%, respectively. On average, we expect industry-wide RPK in 2020E to decrease by 7.1% YoY.

Figure 11: Scenario analysis

	Best case	Base case	Worst case	Expectation
Prob.	10%	60%	30%	-
RPK YoY				
1Q 2020E	-40%	-50%	-50%	-49.0%
2Q 2020E	5%	5%	-10%	0.5%
3Q 2020E	10%	10%	5%	8.5%
4Q 2020E	10%	10%	10%	10.0%

Source: Wind, CMBIS estimates

Figure 12: On average, we expect industry-wide 2020E RPK to decrease 7.1% YoY



Source: Wind, CMBIS estimates

Sensitivity of listed airlines' 2020E EBITDAR to changes in passenger RPK

The hot spots of the Spring Festival air travel are concentrated in cities such as Beijing, Shanghai, Guangzhou, Shenzhen, southwest, northeast, and Hainan. International travel is mainly concentrated in neighboring countries such as Japan, South Korea, Thailand, Vietnam, Malaysia, and the Philippines. Under the circumstances that both domestic and international RPK in 2020E fell by 5% YoY, we expect 2020E EBITDAR of Air China/China Eastern Airlines/China Southern Airlines/Juneyao Airlines to decrease by 16%/29%/32%/48% YoY, respectively.

Figure 13: Under the circumstances that both domestic and international RPK in 2020E fell by 5% YoY, we expect 2020E EBITDAR of Air China to decrease by 16% YoY

		2020E Domestic RPK YoY				
		-10%	-5%	0%	5%	10%
2020E Int'l RPK YoY	-10%	34,966	38,309	41,651	44,993	48,336
	-5%	36,413	39,755	43,097	46,440	49,782
	0%	37,859	41,202	44,544	47,886	51,229
	5%	39,306	42,648	45,990	49,333	52,675
	10%	40,752	44,095	47,437	50,779	54,121

Source: Company data, CMBIS estimates

* Note: the new EBITDAR is compared with our original estimate, which corresponded to 2% 2020E Domestic RPK growth and 5% 2020E Int'l RPK growth.

Figure 14: Under the circumstances that both domestic and international RPK in 2020E fell by 5% YoY, we expect 2020E EBITDAR of China Eastern Airlines to decrease by 29% YoY

		2020E Domestic RPK YoY				
		-10%	-5%	0%	5%	10%
2020E Int'l RPK YoY	-10%	22,216	24,968	27,719	30,471	33,223
	-5%	23,635	26,387	29,139	31,890	34,642
	0%	25,055	27,806	30,558	33,310	36,061
	5%	26,474	29,226	31,977	34,729	37,481
	10%	27,893	30,645	33,397	36,148	38,900

Source: Company data, CMBIS estimates

* Note: the new EBITDAR is compared with our original estimate, which corresponded to 8% 2020E Domestic RPK growth and 7% 2020E Int'l RPK growth.

Figure 15: Under the circumstances that both domestic and international RPK in 2020E fell by 5% YoY, we expect 2020E EBITDAR of China Southern Airlines to decrease by 32% YoY

		2020E Domestic RPK YoY				
		-10%	-5%	0%	5%	10%
2020E Int'l RPK YoY	-10%	22,067	26,026	29,984	33,942	37,901
	-5%	23,228	27,187	31,145	35,104	39,062
	0%	24,390	28,348	32,307	36,265	40,224
	5%	25,551	29,510	33,468	37,427	41,385
	10%	26,713	30,671	34,629	38,588	42,546

Source: Company data, CMBIS estimates

* Note: the new EBITDAR is compared with our original estimate, which corresponded to 7% 2020E Domestic RPK growth and 10% 2020E Int'l RPK growth.

Figure 16: Under the circumstances that both domestic and international RPK in 2020E fell by 5% YoY, we expect 2020E EBITDAR of Juneyao Airlines to decrease by 48% YoY

		2020E Domestic RPK YoY				
		-10%	-5%	0%	5%	10%
2020E Int'l RPK YoY	-10%	1,936	2,443	2,950	3,456	3,963
	-5%	2,031	2,538	3,045	3,552	4,059
	0%	2,127	2,634	3,140	3,647	4,154
	5%	2,222	2,729	3,236	3,743	4,250
	10%	2,318	2,824	3,331	3,838	4,345

Source: Company data, CMBIS estimates

* Note: the new EBITDAR is compared with our original estimate, which corresponded to 9% 2020E Domestic RPK growth and 45% 2020E Int'l RPK growth.

Sector valuations

Reiterate long-term bullish view: air travel demands are postponed than cancelled

The shock of the epidemic does not change the fundamentals of China aviation industry. Air travel demands, particularly those going back to work, are postponed rather than cancelled. We reiterate our long-term bullish view. In addition, due to the epidemic, the oil market is oversupplied, and weak oil prices support the profitability of listed airlines. Currently the stocks are trading at 0.66x – 1.85x 2020E P/B, lower than historical average.

Figure 17: Peer valuation

Company	Ticker	Rating	Mkt cap (LC mn)	Price (LC)	TP (LC)	Up/down side
H shares						
CHINA EAST AIR-H	670 HK	BUY	78,031	3.75	5.8	54.7%
AIR CHINA LTD-H	753 HK	BUY	118,989	6.9	9.28	34.5%
CHINA SOUTHERN-H	1055 HK	BUY	73,388	4.66	6.08	30.5%
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JUNEYAO AIR-A	603885 CH	BUY	24,105	12.26	17.63	43.8%

Company	P/B (x)		ROE (%)		Div.yield	
	FY20E	FY21E	FY20E	FY21E	FY20E	FY21E
H shares						
CHINA EAST AIR-H	0.68	0.62	8.71	9.02	1.21	1.53
AIR CHINA LTD-H	0.79	0.74	9.72	9.93	2.45	2.91
CHINA SOUTHERN-H	0.66	0.62	8.46	9.54	2.38	2.84
A shares						
CHINA EAST AIR-A	1.01	0.92	9.34	10.09	1.07	1.45
AIR CHINA LTD-A	1.02	0.95	9.33	10.08	1.87	2.35
CHINA SOUTHERN-A	0.97	0.90	8.79	9.89	1.78	2.26
JUNEYAO AIR-A	1.85	1.64	13.78	14.75	1.62	1.71

Source: Bloomberg, CMBIS

Stock picks

Top-pick Air China (753 HK)

Under the epidemic situation, our top-pick is Air China (753 HK), whose 2020E EBITDAR is least sensitive to changes in passenger turnover.

Figure 18: Under the circumstances that both domestic and international RPK in 2020E fell by 5% YoY, we expect 2020E EBITDAR of Air China to decrease by 16% YoY

		2020E Domestic RPK YoY				
		-10%	-5%	0%	5%	10%
2020E Int'l RPK YoY	-10%	34,966	38,309	41,651	44,993	48,336
	-5%	36,413	39,755	43,097	46,440	49,782
	0%	37,859	41,202	44,544	47,886	51,229
	5%	39,306	42,648	45,990	49,333	52,675
	10%	40,752	44,095	47,437	50,779	54,121

Source: Company data, CMBIS estimates

* Note: the new EBITDAR is compared with our original estimate, which corresponded to 2% 2020E Domestic RPK growth and 5% 2020E Int'l RPK growth.

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CMB International Securities Limited

Address: 45/F, Champion Tower, 3 Garden Road, Hong Kong, Tel: (852) 3900 0888 Fax: (852) 3900 0800

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