China/HK Airlines Sector

DBS Group Research . Equity
31 Jan 2018

Entering a Golden Age

- **The number of air passengers in China is forecast to nearly triple to 1.5bn by 2036, driven by a rapidly expanding middle class and government support**
- **Domestically, an oligopolistic structure along with fare liberalisation will help the Big 3, i.e. Air China, China Southern Airlines, and China Eastern Airlines, grow earnings faster than market expectations**
- **There is further upside to share prices for the Big 3 despite a recent rally; improving earnings should act as a catalyst for the stocks to re-rate**
- **Our top pick is Air China (TP HK$14.40); we also have BUYs on China Eastern (TP HK$8.60) and China Southern (TP HK$11.90). But we have a HOLD on Cathay Pacific (TP HK$12.80)**

Growth in air travel demand in China is unstoppable. With 35% of China's population projected to be in the upper-middle-class bracket by 2030, from just 10% in 2010, air travel demand is poised to grow exponentially. IATA forecasts China's domestic market will overtake the US to become the world's largest aviation market by 2022. It also projects that China will add 921mn new passengers by 2036 from 2016, bringing total passengers to 1.5bn.

Fare liberalisation in an oligopolistic domestic market will be a boon for the Big 3. With the domestic market accounting for between 65% and 75% of the passenger revenue of the Big 3, the announcement of further liberalisation of domestic fares will boost yields in China in the long term. Coupled with robust demand growth, the Big 3 are poised to record firm growth in earnings and margins.

Despite a run-up, valuations are inexpensive and there is still over 20% upside to our one-year target prices. While the absolute share prices of the Big 3 look high, current price-to-book multiples (which are our preferred method to value airlines) of 1.3x to 1.4x FY18 P/B are not expensive. Given their positive earnings outlook, we believe there is further upside from current levels for the Big 3.

Key risks. With stronger balance sheets and significant pricing power domestically, the threats from higher fuel costs and forex losses have diminished. A key risk for the Big 3 would be the inability to grow their capacities as planned, either due to infrastructure or regulatory constraints.

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Recommendation & valuation

	Price HK$	Mkt Cap US$m	Target Price HK$	Performance (%) 3 mth	12 mth	Rating
Air China 'H'	11.26	27,567	14.4	61	105	BUY
China Southern 'H'	9.92	17,222	11.9	73	123	BUY
China Eastern 'H'	6.9	16,933	8.6	72	78	BUY
Cathay Pacific	12.26	6,167	12.8	(7)	18	HOLD

Price used as of 30 January 2018

Source: Thomson Reuters, DBS Vickers, Bloomberg Finance L.P.

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Note: Prices used as of 30 Jan 2018

Investment Summary

We are bullish on the medium- and long-term outlook for Chinese airlines, driven by robust growth in air travel demand, both in the domestic and international segments. This is further underpinned by an oligopolistic structure domestically, and with fare liberalisation happening on a larger scale from 2018, yields and profitability are poised to improve over the next few years.

China to become world's largest aviation market by 2022. With 35% of China's population projected to be in the upper-middle-class bracket or better by 2030, from just 10% in 2015, air travel demand growth in the country will be unstoppable. In October 2017, the International Air Transport Association (IATA) moved forward its expectations by two years that China's domestic aviation market will overtake the US' to become the world's largest by 2022. It expects China to add 921mn new passengers by 2036, bringing total passengers to 1.5bn.

We believe that over the next 3-5 years, China's Big 3 airlines will surpass its European peers to challenge the US airlines in terms of passenger carriage and could overtake the US carriers by 2030.

China's domestic aviation market has an oligopolistic structure. Today, China's aviation market is dominated by the Big 3, which enjoy a combined market share of nearly 71%. Whilst the top four players, including Hainan Airlines, have a combined market share of c.80%.

Fare liberalisation will unleash the Big 3's earnings potential. In early-2018, the Civil Aviation Administration of China (CAAC) announced that the largest routes in the country would be included in the current list of 1,030 routes to be deregulated. 29 of the busiest 30 routes in the country will now be liberalised. This means that from the summer of 2018, airlines can begin adjusting their prices upwards (subject to a maximum of 10% per annum).
Given the domestic market accounts for between 65% and 75% of the Big 3's total passenger revenue and with 50% or more of the Big 3's earnings exposure now liberalised, we believe that their profits are poised to grow at a robust pace over the new few years. This, despite higher fuel prices. We expect over 20% growth in 2019 as they fully benefit from the fare liberalisation.

Strong outbound travel potential. China's outbound air travel still has plenty of room for growth. This will be driven by a) still low revenue passenger kilometres (RPK) per capital compared to the US; b) visa relaxation by many countries chasing the Chinese tourist dollars; and c) the Belt & Road Initiative (BRI) opening up more destinations and improving connectivity between China and other regions.

Airport infrastructure can keep up with demand in the long term. Although China's top airports are operating at or above full capacity, we believe that strong government support and a willingness to continuously invest in airport infrastructure will ensure the country's strong air travel demand growth will ultimately be met.

Key Risks

With stronger balance sheets and significant pricing power domestically, the threats from higher fuel costs and forex losses have diminished. With the high-speed rail entering a period of slower, more mature growth, the impact on domestic air travel should also be more limited ahead.
A key risk for the Big 3 would be the inability to grow their capacities as planned, either due to infrastructure or regulatory constraints.

Valuations are not stretched despite recent run-up

While the share prices of Chinese airlines have done well over the last 12 months, this is by no means an exception as many other global airlines, such as American Airlines, United Airlines, and Lufthansa, have done equally well or better since mid-2016.

While the absolute share prices of Chinese airlines look high, current P/B multiples (which are our preferred method to value airlines) of 1.3x to 1.4x FY18 P/B are inexpensive given the strong ROE outlook for all of them. On a price-to-earnings (P/E) basis, they are also trading around the low-teens, which is not a stretch.

Southbound money flow was a key driver of share price performance for Chinese airlines in the past four months. The strong performance of the Big 3 was also helped by an increase in southbound holdings of all three stocks. Each saw a net increase of between 3% and 4% in southbound holdings in their capital between end-September 2017 and 22 January 2018. Continued interest in these names by mainland investors could help hold up share prices.

Stock Picks

Initiate coverage on Air China 'H' with a BUY and 12-month target price of HK$14.40. Air China is our top pick in the sector as a strong proxy for China's air travel demand growth, and we project Air China's EPS to enjoy 20% CAGR over 2016 to 2019F, driven by both revenue expansion and margin improvement from higher yields. The net gearing of Air China is expected to decline from 1.3x in FY16 to 0.5x by FY19F, and its strong cash flows and balance sheet could pave the way for a sustained or even higher dividend payout (currently at 20%).

Initiate coverage on China Eastern Airlines 'H' with a BUY and 12-month target price of HK$8.60. We see China Eastern Airlines as a big beneficiary of price liberalisation in its domestic market, and project firm quality earnings growth ahead for the company. EPS is projected to grow at a CAGR of 25.7% over FY16 – FY19F, the quickest among the Big 3.

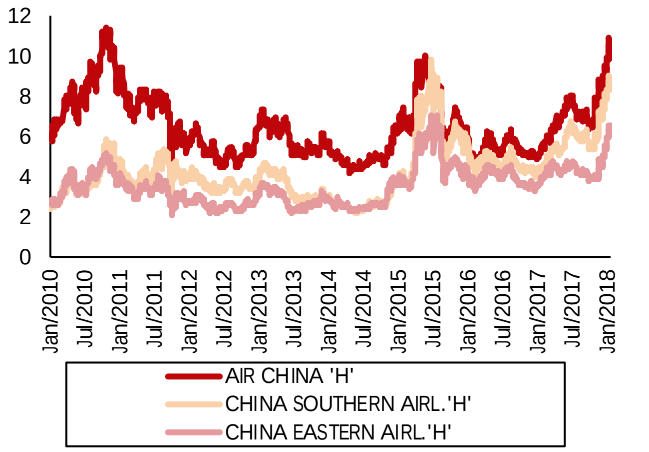
Initiate coverage on China Southern Airlines 'H' with a BUY and 12-month target price of HK$11.90. We like China Southern Airlines as it has the largest revenue exposure to the lucrative domestic market among the Big 3. Despite an expected equity fund raising in 2018, we forecast an EPS CAGR of 14.3% over FY16-19F, with a significant improvement in its net gearing – from 1.9x in FY16 to 0.9x by FY19F.

Initiate coverage on Cathay Pacific with a HOLD and 12-month target price of HK$12.70. We are neutral on Cathay Pacific as we believe that its transformation plan will take time to yield material benefits on its bottom line. Meanwhile, stiff competition and the increasing availability of more direct flights to more cities in Mainland China will be a drag on growth in the medium term.

Valuations and Equity Picks

Historically, the share prices of Air China, China Eastern, and China Southern have closely mirrored each other on the Hong Kong Exchange. We believe that this will continue to hold given the similar earnings outlook for all three.

Share price performance for Chinese airlines 'H'



Source: Thomson Reuters, DBS Bank's estimates

Share prices for the Big 3 can re-rate further from earnings growth and higher valuation multiples. We are positive on the share price outlook for all three Chinese major airlines as we see strong revenue growth driven by travel demand in tandem with better margins from higher yields driving improved profitability. Backed by higher ROEs and with lower net gearing implying lower cost of equity, we expect the big 3 to trade at higher Price-to-Book multiples ahead.

Meanwhile, without a lucrative domestic market to call its own, we believe that **Cathay Pacific (HOLD)** will continue to struggle in the mediuem term. Our target price for the company is based on 0.9x FY19 P/B against a projected ROE of 6% for FY19.

Initiate coverage on Air China 'H' with a BUY and 12-month target price of HK$14.40. Our 12-month target price of HK$14.40 for Air China is based on 1.67x FY19 price-to-book (P/B) against a projected ROE of 12.54% for FY19 based on an assumed cost of equity of 7.5% for Air China. Since 2010, Air China has traded at an average of 1.29x P/B, with a standard deviation (SD) of 0.47x. Our target multiple of 1.67x P/B is just below +1 SD for Air China.

12-month target price of RMB 15.86 for Air China 'A'. Our target price for Air China 'A' share is based on 30% premium to our Air China 'H' share target price, which is around -0.5 SD of its historical average premium.

Initiate coverage on China Eastern Airlines 'H' with a BUY and 12-month target price of HK$8.60. Our target price of HK$8.60 for China Eastern is based on 1.49x FY19 P/B against a projected ROE of 13.43% for FY19 based on an assumed cost of equity of 9% for China Eastern. Since 2010, China Eastern has traded at an average of 1.3x P/B, with a SD of 0.51x. Our target multiple of 1.49x P/B is at +0.4 SD for the stock.

12-month target price of RMB 10.20 for China Eastern 'A'. Our target price for China Eastern 'A' share is based on 40% premium to our China Eastern 'H' share target price, which is c. -1 SD of its historical average premium.

Initiate coverage on China Southern Airlines 'H' with a BUY and 12-month target price of HK$11.90. Our target price of HK$11.90 for China Southern is based on 1.51x FY19 P/B against a projected ROE of 12.06% for FY19 based on an assumed cost of equity of 8% for the company. Since January 2011, China Southern has traded at an average of 0.95x P/B, with a SD of 0.26x. Our target multiple of 1.51x P/B is c.+2 SD for China Southern.

12-month target price of RMB 14.12 for China Southern 'A'. Our target price for China Southern 'A' share is based on 40% premium to our China Southern 'H' share target price, which is lower than -0.5 SD of its historical average premium.

Target prices and current valuations at a glance for HK/China airlines

						PER (x)		P/B (x)		ROE	
Airline	Current Price		Target Price		Upside	FY18	FY19	FY18	FY19	FY18	FY19
Air China 'H'	HK$	11.26	HK$	14.40	28%	13.8	10.9	1.45	1.30	10.97%	12.54%
China Southern 'H'	HK$	9.92	HK$	11.90	20%	13.1	10.9	1.31	1.25	11.60%	12.06%
China Eastern 'H'	HK$	6.90	HK$	8.60	25%	12.2	9.5	1.36	1.20	11.70%	13.40%
Cathay Pacific	HK$	12.26	HK$	12.80	4%	133.3	15.8	0.92	0.87	1.00%	6.00%

Source: ThomsonReuters (Consensus estimates), DBS Bank

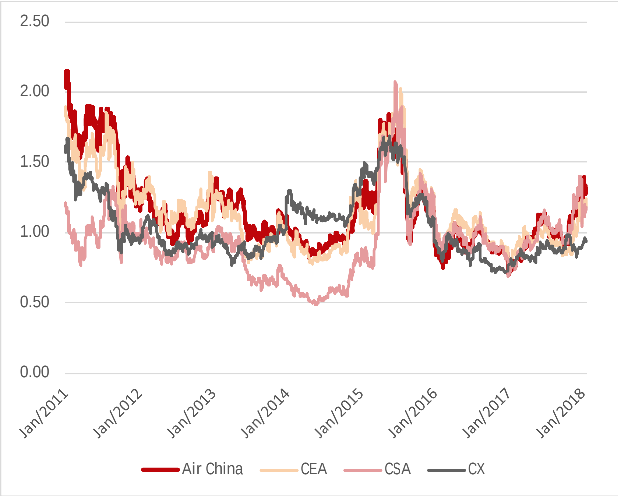
Valuations are not stretched despite recent run-up

While the share prices of Chinese airlines have done well over the last 12 months, this is by no means an exception as many other global airlines, such as American Airlines, United Airlines, and Lufthansa, have done equally well or better since mid-2016.

While the absolute share prices of Chinese airlines look high, current P/B multiples (which are our preferred method to value airlines) of 1.3x to 1.4x FY18 P/B are inexpensive given the strong ROE outlook for all of them. On a price-to-earnings (P/E) basis, they are also trading around the low-teens, which is not a stretch.

Southbound money flow was a key driver of share price performance for Chinese airlines in the past four months. The strong performance of the Big 3 was also helped by an increase in southbound holdings of all three stocks. Each saw a net increase of between 3% and 4% in southbound holdings in their capital between end-September 2017 and 22 January 2018. Continued interest in these names by mainland investors could help hold up share prices.

P/B multiples for HK/China airlines



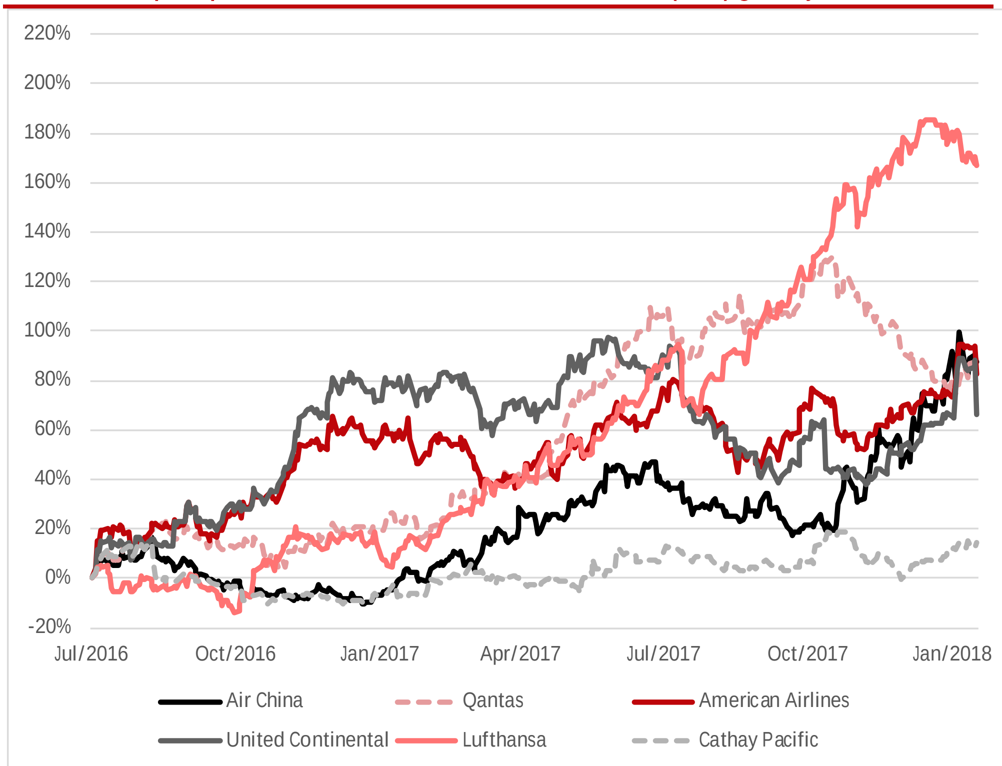
Source: ThomsonReuters, DBS Bank's estimates

Southbound holdings

% of Share Capital	30-Sep-17	30-Dec-17	22-Jan-18
Air China	5.84%	9.47%	10.03%
China Southern	16.97%	21.00%	20.04%
China Eastern	8.93%	11.60%	12.41%

Source: HKEx, DBS Bank's estimates

Relative share price performances of selected full-service carriers (FSCs) globally



Source: ThomsonReuters, DBS Bank's estimates

Valuation Methodology

P/B Valuations

Our preferred methodology to value airlines, given that the sector is capital intensive with volatile earnings, is to apply an appropriate P/B multiple to the book value of the respective airline. In turn, the appropriate book value multiple to be used would depend on the cost of equity of the respective airline. As seen in the "P/B vs ROE – Global FSCs" chart, the relationship between ROE and P/B (as the equity markets value airlines) is strong (R^2 of nearly 75%). Interestingly, if European carriers are excluded from our analysis, the R^2 is 89%.

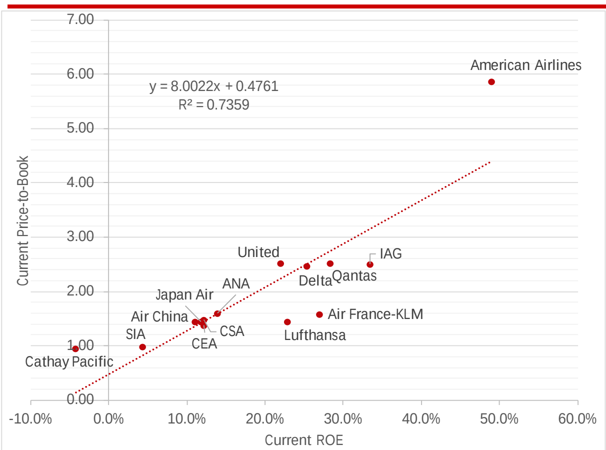
The three US-listed FSCs are trading at an average implied cost of equity of 10%, while Asia-Pacific carriers are trading at an average implied cost of equity of 9%.

We believe the Big 3 should trade at an implied cost of equity of between 7.5% and 9%, which is lower than their historically implied cost of equity, given a) China's strong air travel demand; b) oligopolistic structure in the domestic market, along with fare liberalisation driving robust earnings growth; and c) stronger balance sheets.

Strong relation to ROE

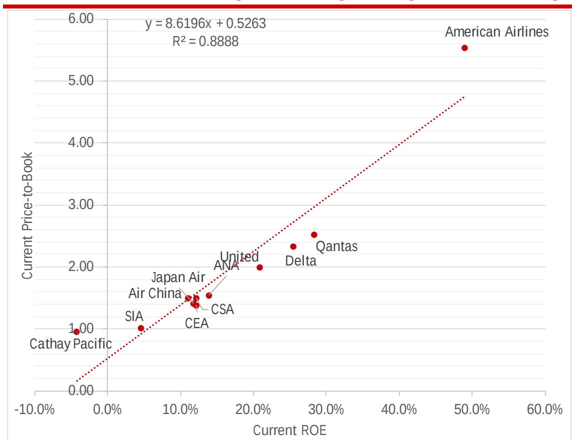
As expected, the price to book multiples of the HK/China airlines (see charts on the next page) has historically had a strong relationship with ROE, reflecting the fact that expected earnings, like for most stocks, is the key driver of share prices.

P/B vs ROE – Global FSCs



Source: ThomsonReuters, DBS Bank's estimates

P/B vs ROE for FSCs (excluding European carriers)



Source: ThomsonReuters, DBS Bank's estimates

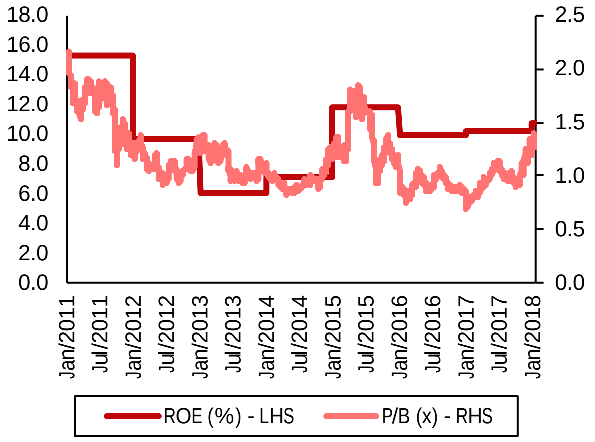
Consensus peer valuations – Global FSCs (Prices as at 30 January 2018)

		Last Px	Mkt Cap	--------- PER	----------		EV/EBITDA			Price-to-Book		ROE		Crnt
Company			US$m	Hist	Crnt	Forw	Hist	Crnt	Forw	Hist	Crnt	Hist	Crnt	Yield
Delta Air Lines	USD	56.12	40,012	11.5	9.0	7.8	5.84	5.76	5.22	2.69	2.35	23.4%	26.1%	2.3%
American Airlines	USD	52.59	25,164	10.9	9.4	7.7	6.43	6.82	5.55	5.32	3.78	48.9%	40.2%	0.9%
United Continental	USD	67.01	19,852	10.0	9.0	7.4	5.58	5.96	5.95	2.20	1.94	22.0%	21.5%	0.0%
Deutsche Lufthansa	EUR	28.71	16,751	9.4	6.1	6.4	3.87	4.25	4.19	2.34	1.38	25.0%	22.7%	2.5%
IAG Group	GBP	6.39	18,405	9.0	7.2	6.8	4.93	5.42	4.80	2.49	2.43	27.7%	33.7%	3.9%
Air France KLM SA	EUR	12.24	6,493	8.6	5.7	5.7	4.10	4.49	4.07	6.47	1.53	74.9%	27.0%	0.2%
Singapore Airlines Ltd	SGD	11.45	10,488	22.4	22.1	25.9	4.71	5.44	6.17	1.03	1.01	4.6%	4.6%	2.4%
Cathay Pacific Airways	HKD	12.26	6,169	100.2	-21.6	63.2	7.67	12.45	9.06	0.98	0.92	1.0%	-4.2%	0.2%
Air China Ltd	HKD	11.26	27,510	16.3	13.9	13.1	5.23	6.53	5.87	1.93	1.53	11.8%	11.0%	1.5%
China Eastern Airlines	HKD	6.90	17,231	13.7	12.0	13.4	6.44	8.38	8.04	1.77	1.45	13.0%	12.1%	1.9%
China Southern Airlines	HKD	9.92	16,942	14.1	12.9	12.7	5.48	8.32	7.50	1.96	1.61	13.9%	12.5%	1.6%
Japan Airlines	JPY	4,162	13,512	9.1	11.8	11.2	3.94	4.97	4.68	1.53	1.39	16.8%	11.8%	2.5%
ANA Holdings Inc	JPY	4,484	14,514	18.6	10.9	12.6	5.65	6.26	5.81	1.79	1.52	9.6%	13.9%	1.4%
Qantas Airways	AUD	5.25	7,442	10.0	8.9	8.4	4.54	4.04	3.82	2.60	2.52	25.9%	28.3%	3.2%
Average				18.8	8.4	14.5	5.32	6.36	5.77	2.51	1.81	22.8%	0.19	1.8%
Median				11.2	9.2	9.8	5.36	5.86	5.68	2.08	1.53	19.4%	17.7%	1.7%

Source: ThomsonReuters (Consensus estimates), DBS Bank's estimates

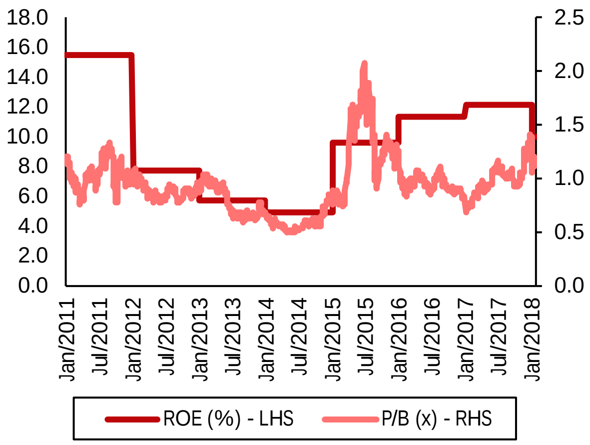
P/B vs ROE and Historical trading ranges

P/B band vs ROE for Air China



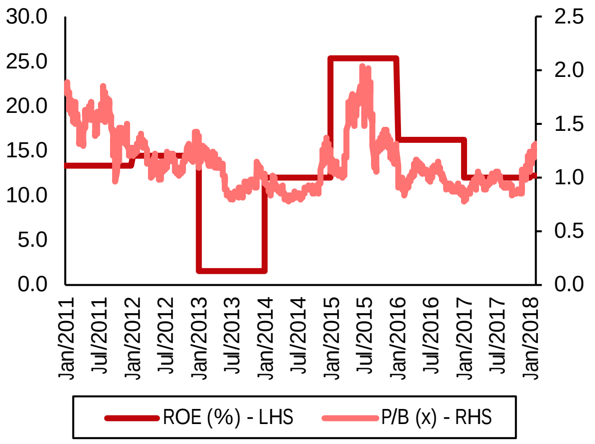
Source: ThomsonReuters, DBS Bank's estimates

P/B band vs ROE for China Southern



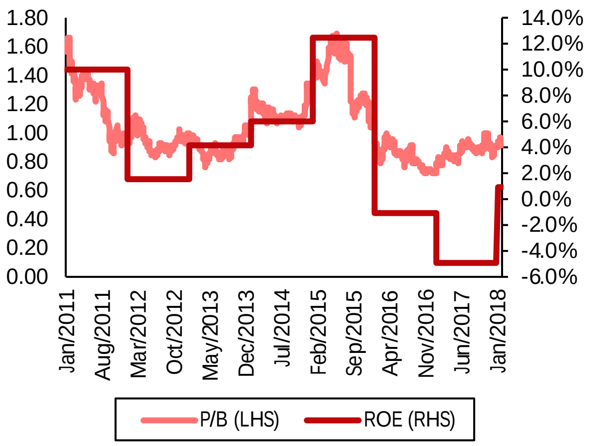
Source: Thomson Reuters, DBS Bank's estimates

P/B band vs ROE for China Eastern



Source: ThomsonReuters, DBS Bank's estimates

P/B band vs ROE for Cathay Pacific

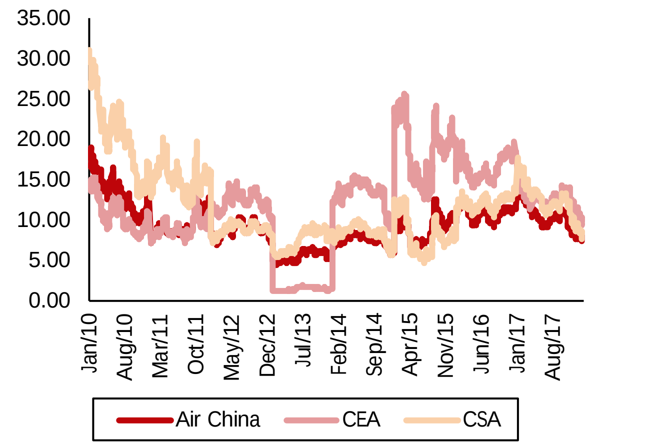


Source: ThomsonReuters, DBS Bank's estimates

Historically (since 2010), Air China has traded at an average of 1.29x P/B, China Eastern Airlines at 1.3x P/B and China Southern Airlines at 0.95x P/B. In comparison, the simple average ROE since 2010 have been 12.5%, 15% and 11% respectively, which helps to partially explain the difference in P/B multiples for each company.

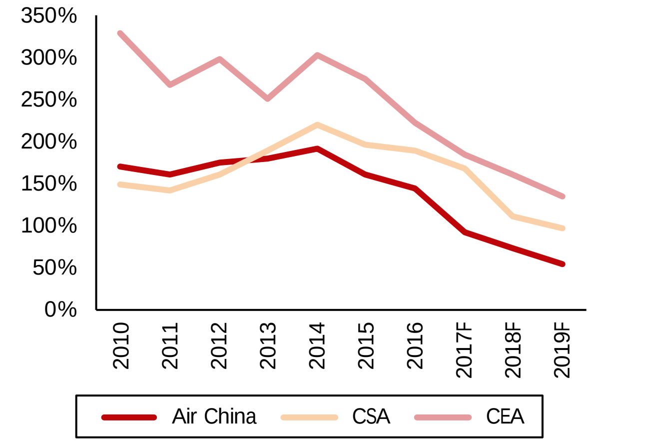
We believe the disparity can also be explained by the different implied cost of equity for each stock. Since 2010, Air China, China Eastern Airlines and China Southern Airlines have traded at an implied cost of equity of 9.4%, 11.9% and 11.6%. In turn we believe that the relative difference in net gearing of each company helps explain the disparity in their implied cost of equity, in addition to other factors like earnings outlook, track record etc.. All else being equal, a lower net gearing would equate to a lower implied cost of equity, and hence a higher price to book multiple.

Implied cost of equity for the Big 3



Source: Company, DBS Bank's estimates

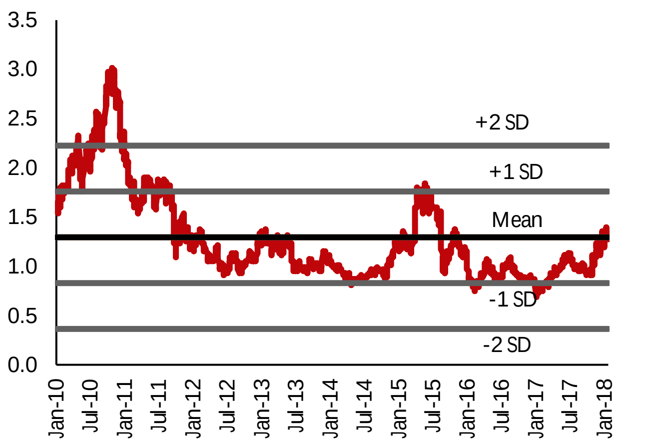
Net gearing of Big 3



Source: Company, DBS Bank's estimates

Since January 2010, Air China has traded at an average of 1.29x P/B, with a SD of 0.47x.

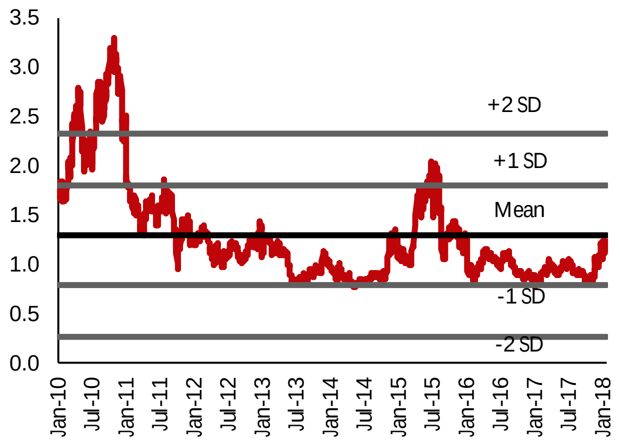
P/B band chart for Air China



Source: Thomson Reuters, DBS Bank's estimates

Since January 2010, China Eastern has traded at an average of 1.3x P/B, with a SD of 0.51x.

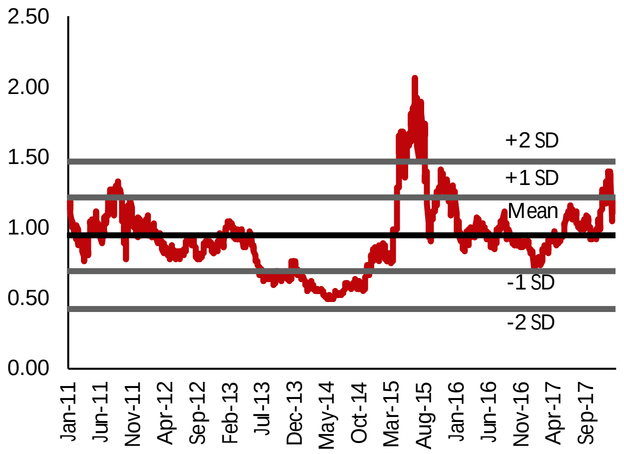
P/B band chart for China Eastern



Source: ThomsonReuters, DBS Bank's estimates

Since January 2010, China Southern has traded at an average of 0.95x P/B, with a SD of 0.26x.

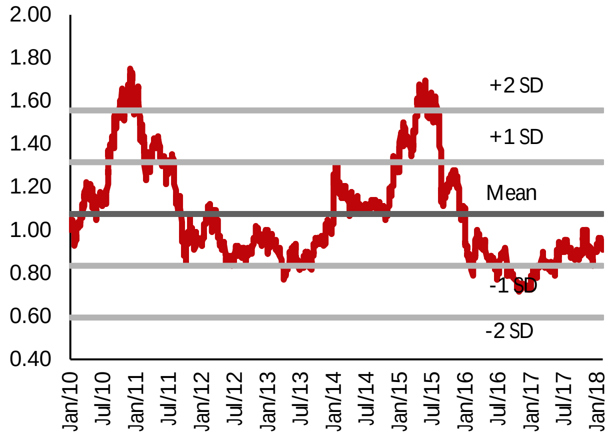
P/B band chart for China Southern



Source: Thomson Reuters, DBS Bank's estimates

Since January 2010, Cathay Pacific has traded at an average of 1.08x P/B, with a SD of 0.24x.

P/B band chart for Cathay Pacific



Source: Thomson Reuters, DBS Bank's estimates

DuPont Analysis

ROEs for the Big 3 to stay strong despite significantly lower leverage. Net margins are generally projected to improve on higher yields and more than offset higher fuel costs from 2017 to 2019F. Meanwhile, rapid revenue growth, driven by both passenger carriage growth and yield improvement, will help asset turnover to increase significantly. In the meantime, as a result of recent equity fundraising as well as stronger retained earnings, the leverage ratios of all three are projected to decline substantially.

Air China's ROE is projected to improve to 12.5% in 2019F from 10.6% in 2016 and China Eastern's ROE is expected to increase to 13.4% in 2019F from 10.4% in 2016. Meanwhile, China Southern's ROE is expected to hold steady at 12.1% in 2019F even after a significant equity fundraising proposed (up to 25% of 2017F shareholders' equity) to be completed in 2018.

Comparison with global peers. Compared to global peers, the Big 3 in 2016 reported ROEs that were substantially below that of its peers in the US, mainly due to a) their lower asset turnover ratios, which were mainly due to the fact that the Big 3 have a much younger fleet and lower average yields, and b) lower net margins as US carriers enjoy an oligopolistic structure without fare restrictions.

Looking at 2018F forecasts, it is projected that margins for the Big 3 will improve while those of its US counterparts decline. Their leverage ratios are also expected to decrease more substantially than most of its US, and even global, peers.

P/B multiples for HK/China airlines

Air China	2016	2017F	2018F	2019F
Net Income	6,809	8,951	10,043	12,664
Revenue	115,145	125,903	141,337	157,012
Average Total Assets	218,841	227,846	235,468	244,085
Avg. S/H Equity	64,274	78,090	91,530	100,995
Net profit margin	5.9%	7.1%	7.1%	8.1%
Assets turnover	52.6%	55.3%	60.0%	64.3%
Leverage	340.5%	291.8%	257.3%	241.7%
ROE	**10.6%**	**11.5%**	**11.0%**	**12.5%**

China Eastern	2016	2017F	2018F	2019F
Net Income	4,498	7,421	6,915	8,926
Revenue	104,373	112,436	125,922	142,957
Average Total Assets	205,158	216,007	222,427	228,795
Avg. S/H Equity	43,431	52,799	59,243	66,440
Net profit margin	4.3%	6.6%	5.5%	6.2%
Assets turnover	50.9%	52.1%	56.6%	62.5%
Leverage	472.4%	409.1%	375.4%	344.4%
ROE	**10.4%**	**14.1%**	**11.7%**	**13.4%**

China Southern	2016	2017F	2018F	2019F
Net Income	5,044	5,923	6,706	8,518
Revenue	114,981	130,445	150,387	170,797
Average Total Assets	193,216	204,642	212,605	220,316
Avg. S/H Equity	41,251	46,025	57,773	70,657
Net profit margin	4.4%	4.5%	4.5%	5.0%
Assets turnover	59.5%	63.7%	70.7%	77.5%
Leverage	468.4%	444.6%	368.0%	311.8%
ROE	**12.2%**	**12.9%**	**11.6%**	**12.1%**

Source: Thomson Reuters, DBS Bank's estimates

Global Peer ROE Breakdown

	2016A				2018F			
Company	Net Margin	Asset Turn	Leverage	ROE	Net Margin	Asset Turn	Leverage	ROE
Air China	5.9%	52.6%	340.5%	10.6%	7.1%	60.0%	257.3%	11.0%
China Southern Airlines	4.3%	50.9%	472.4%	10.4%	4.5%	70.7%	368.0%	11.6%
China Eastern Airlines	4.4%	59.5%	468.4%	12.2%	5.5%	56.6%	375.4%	11.7%
American Airlines	7.9%	80.2%	1063.0%	67.4%	5.6%	78.3%	1014.2%	44.5%
Delta	10.1%	75.9%	451.7%	34.8%	9.7%	79.3%	364.2%	28.0%
United Continental	7.8%	90.4%	459.0%	32.4%	4.9%	91.3%	454.3%	20.4%
Lufthansa	5.6%	94.3%	523.5%	27.7%	5.3%	101.1%	352.6%	18.8%
IAG	8.7%	77.6%	549.6%	37.2%	9.6%	85.2%	396.4%	32.5%
Air France - KLM	1.6%	107.4%	3066.1%	54.2%	3.6%	107.0%	726.8%	27.8%
Japan Airlines*	12.7%	77.9%	182.3%	18.1%	9.1%	75.8%	169.6%	11.7%
ANA Holdings*	5.6%	77.7%	265.8%	11.6%	5.9%	78.3%	244.7%	11.4%
Qantas**	6.6%	94.6%	510.8%	32.0%	6.2%	96.4%	473.8%	28.4%
Singapore Airlines*	2.4%	61.2%	188.0%	2.8%	3.9%	58.9%	201.5%	4.6%
Cathay Pacific	-0.6%	53.0%	339.1%	-1.1%	0.4%	54.4%	347.7%	0.7%

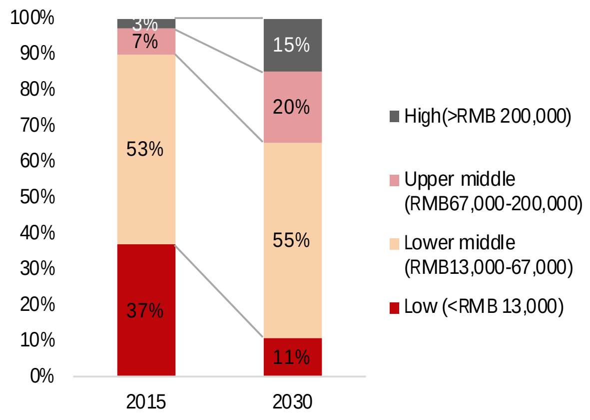
**FYE Mar'17 for SIA, Japan Airlines, and ANA; **FYE Jun'16 for Qantas*
Source: Thomson Reuters (Consensus estimates), DBS Bank's estimates

China's Insatiable Appetite for Air Travel to Persist for Decades

Set to be the largest aviation market by 2022

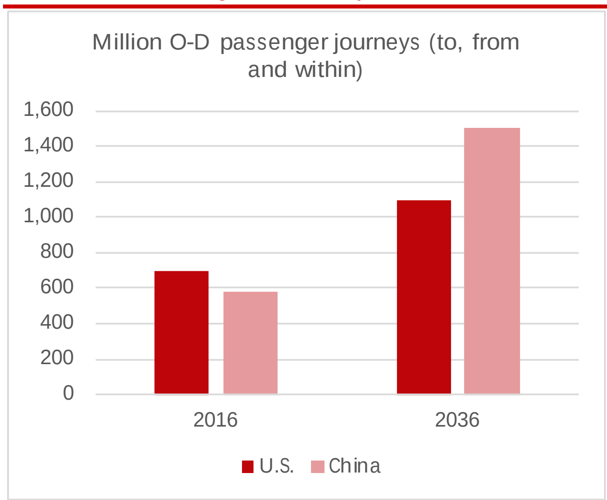
With 35% of China's population projected to be in the upper-middle-class bracket or better by 2030, from just 10% in 2015, China's leading airlines, especially the Big 3, are poised to ride the travel demand growth to become world leaders in the medium to long term.

China's growing middle class



Source: The Economist Intelligence Unit

China to become largest market by 2022: IATA



Source: IATA

We believe China's Big-3 airlines will, over the next three to five years, surpass its European peers to challenge the US airlines in terms of passenger carriage, and could overtake US carriers by 2030.

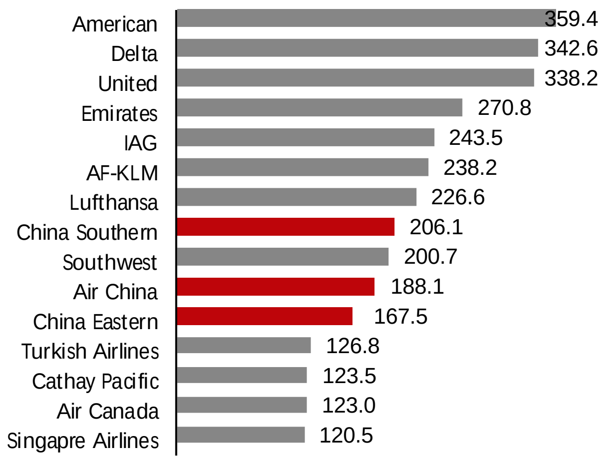
While China's aviation market, as measured by revenue passenger kilometres (RPKs) , is around 55% the size of the US', its RPK per capita is only 13% that of the US'. Coupled with rapid economic growth and rising incomes, there is plenty of upside potential for China's air travel market to continue to grow quickly.

US' vs China's aviation market (2016)

	US	China
Population (bn)	0.32	1.38
Passenger carried (mn)	829	498
RPK (bn)	1,512	836
RPK per capita	4,678	608
GDP per capita (US$)	57,467	8,123

Source: World Bank, CEIC

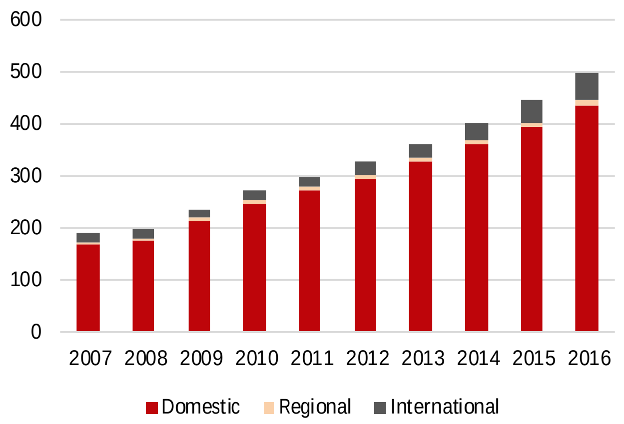
Top 15 airlines' RPK in billion (2016)



Source: CAPA, ICAO, Company

In October 2017, the International Air Transport Association (IATA) moved forward its expectations by two years that China's domestic aviation market will overtake the US' to become the world's largest by 2022. It also expects China to add 921mn new passengers by 2036, bringing total passengers to 1.5bn.

Air passengers in China (2007-2016)

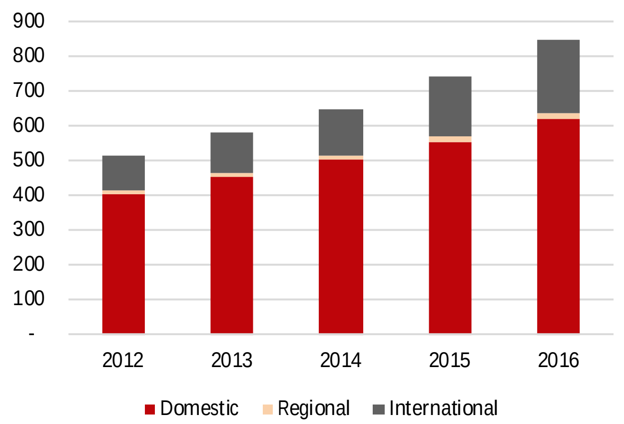


Source: CEIC

China's air travel, both domestically and internationally, has grown rapidly over the last decade. The number of people travelling by air in China has grown c.163% over the last decade, to a total of 498mn by 2016 from 186mn in 2007, representing a CAGR of 11.3%. Domestic travellers grew at a CAGR of 11.1% over the same period to 436mn while international travellers grew at a CAGR of 13.2% to 52mn. As of November 2017, total passengers reached 505mn with a YTD growth rate of 3.4%.

International air travel growth has accelerated in the last five years. Meanwhile, the pace of growth of international air travel has been picking up. Between 2012 and 2016, the number of international air travellers grew at a CAGR of 21.9%, compared to a CAGR of 10.2% for domestic air travellers, and a CAGR of 11.2% for overall air travellers in China.

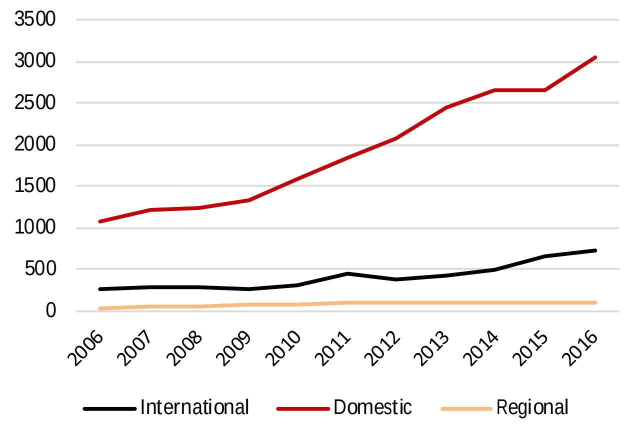
RPK by destination in China (2012-2016)



Source: CEIC

From 2012, passenger carriage (as measured by RPK) grew at a CAGR of 13.7%, reaching 836bn in 2016. Domestic RPK climbed 11.4% per annum in average to 621bn while international RPK accelerated at a CAGR of 21.6% over the same period. Regional RPK grew at a slower pace of 4% per year.

Total routes by destination (2006-2016)

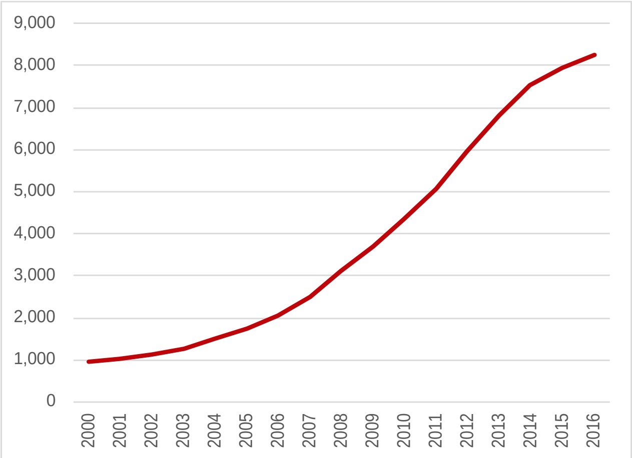


Source: Wind

The number of domestic routes jumped over the past decade; international routes catching up. By end-2016, there were a total of 1,379 routes in China – 78.3% were domestic routes, 18.9% international, and the remainder regional. From 2006 to 2016, the number of domestic routes grew at a CAGR of 11.1%, whilst the CAGR of international routes was 10.7%. Notably, the growth of international routes has quickened since 2012 with a CAGR of 18.0%.

China's fast-growing middle class. Since China joined the World Trade Organization in December 2001 and opened its economy, the country has enjoyed tremendous economic prosperity. This has led to high income growth for its population, lifting millions into the middle class. In terms of gross national income (GNI) per capita, as measured by the World Bank, China has seen its income per capita rise from just US$940 in 1990 to US$8,250 by 2016. This ranks China as an upper-middle-income economy, based on the World Bank's definition of upper-middle-income range of between US$4,036 and US$12,475 for such economies.

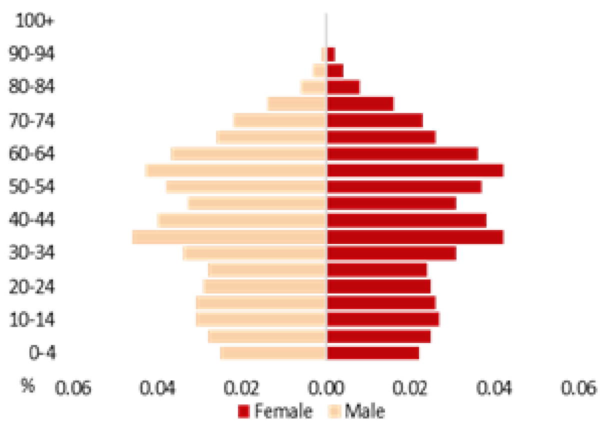
China's GNI per capita, Atlas method (current US$)



Source: World Bank

In the next decade, the middle-aged population - comprising Chinese baby-boomers born in 1980-87 - with stronger economic capability will form the majority of China's population.

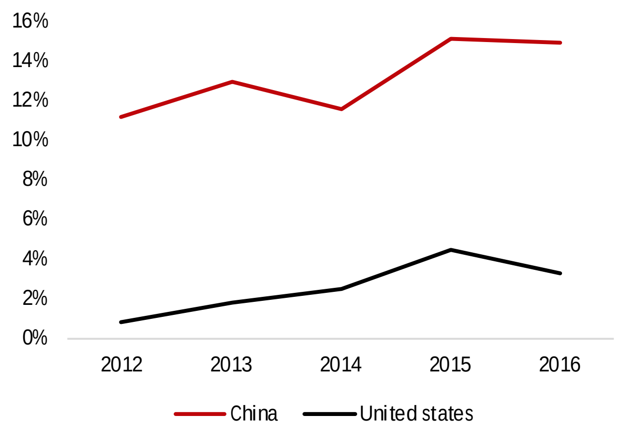
China's projected population structure (2027)



Source: www.populationpyramid.net

Catching up with the US. While China's total RPK was less than 40% that of the US' in 2011, the gap has been narrowing quickly as its RPK grew at a CAGR of 13.1% from 2011 to 2016 whilst the US only recorded average annual growth of less than 3% over the same period.

US vs China RPK growth (2012-2016)

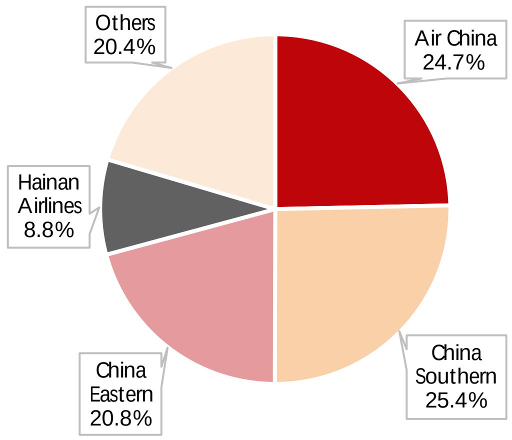


Source: CEIC, Bureau of Transportation Statistics

Oligopolistic structure and fare liberalisation a boon

Today, China's aviation market is dominated by the Big 3, which enjoy a combined market share of nearly 71%, whilst the top four players, including Hainan Air, have a combined market share of c.80%. Similarly, the top four airlines in the US are estimated to hold a combined two-thirds of their market.

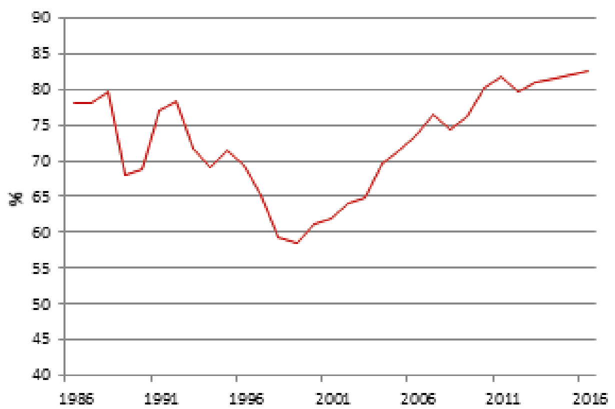
China's aviation market share (by revenue tonne-km)



Source: Wind

In 2002, the Chinese government merged the then existing nine major airlines into the current Big 3 to ease over-competition. Since then, the industry's passenger load factor has recovered from less than 65% to over 80% currently. This then paved the way for the Big 3 to be publicly listed, which greatly improved their profitability.

Passengers load factor (1986-2016)



Source: CEIC

In 2016, the Chinese government began to liberalise air fares on domestic routes. And most significantly, it announced in early-2018 that the largest routes in the country will be added to the current list of 1,030 liberalised routes. **29 of the busiest 30 routes in China will now be liberalised.** This means that from the summer of 2018, airlines can begin adjusting their prices (subject to a maximum of 10% per annum).

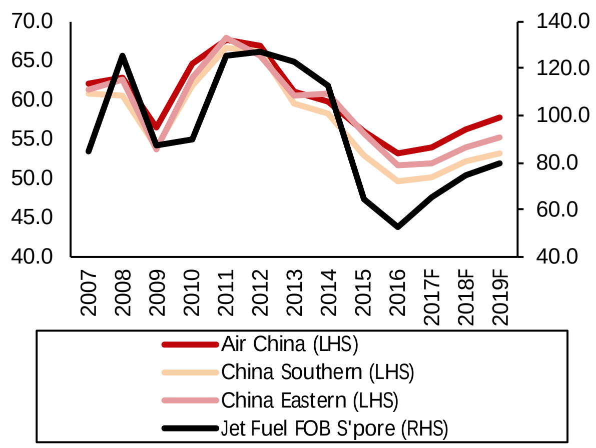
Top 10 domestic routes now liberalised

Rank	Route	Estimated market share of seats (%)		
		Air China	China Eastern	China Southern
1	Beijing-Shanghai	32.5	47.1	4.7
2	Shanghai-Shenzhen	12.3	33.1	32.3
3	Guangzhou-Shanghai	6.5	43.7	35.9
4	Shenzhen-Beijing	47.6	0.0	29.4
5	Guangzhou-Beijing	30.3	3.9	48.2
6	Beijing-Hangzhou	51.3	20.2	9.5
7	Beijing-Chengdu	50.6	0.0	17.3
8	Shanghai-Chengdu	20.8	46.2	0.0
9	Shanghai-Qingdao	0.0	60.2	0.0
10	Xiamen-Shanghai	0.0	29.0	40.9

Source: Ctrip, CAAC, CAPA, DBS Bank

Thanks to stronger pricing power due to robust demand and fare liberalisation, we expect yield improvement for the Big 3 to more than offset higher fuel costs in the years ahead.

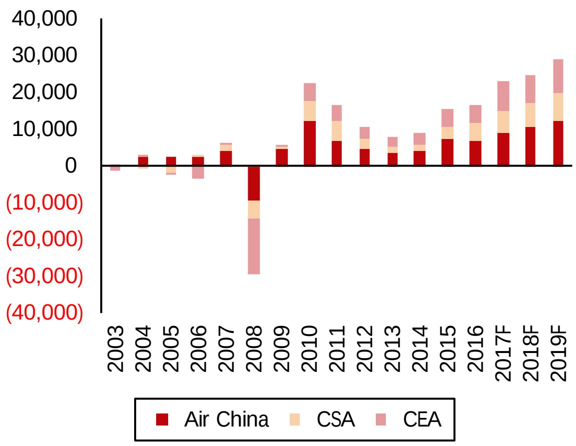
Yield per RPK (RMB cts) vs jet fuel (US$ per barrel)



Source: Company, DBS Bank's estimates

Given the domestic market accounts for between 65% and 75% of the Big 3's total passenger revenue and with 50% or more of the Big 3's earnings exposure now deregulated, we believe their net earnings are poised to grow at a healthy pace over the new few years despite higher fuel prices.

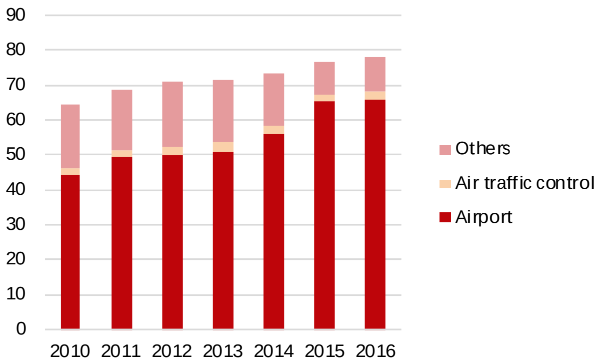
Combined net profits of Big 3 (2003-2019F) (RMB mn)



Source: Company, DBS Bank's estimates

China will continue to back the development of the aviation sector as it is one of its key strategic industries. The Chinese government has long supported the growth of the aviation sector. Investment in aviation infrastructure has grown at a CAGR of 3.2% since 2010, reaching RMB 78.2bn in 2016. Funds allocated to airport development comprise the bulk of such investments and has grown at a CAGR of 6.9%.

Aviation industry infrastructure investment (RMB bn)



Source: Wind

In addition, the CAAC said the government will continue to provide subsidies to less profitable or unprofitable airports. It will also provide subsidies for the development of routes that may not be profitable for airlines but are deemed important for the development of the sector or local economies, such as those in the less economically-developed parts of the country.

Subsidies provide to airports and routes (RMB mn)

	2014	2015	2016	2017	2018E
Subsidy to airport	1,079	1,211	1,314	1,429	1,488
Subsidy to route	912	1,088	1,020	988	2,451
Total	1,991	2,299	2,335	2,417	3,939

Source: CAAC

Under the 13th Five-Year Plan (FYP) from 2016 to 2020, the number of passengers carried is targeted to rise at a CAGR of 10.4% to reach 720mn. Total revenue tonne-kilometre (RTK) is expected to record a CAGR of 10.8% to 142bn tonne-kilometres during the five years.

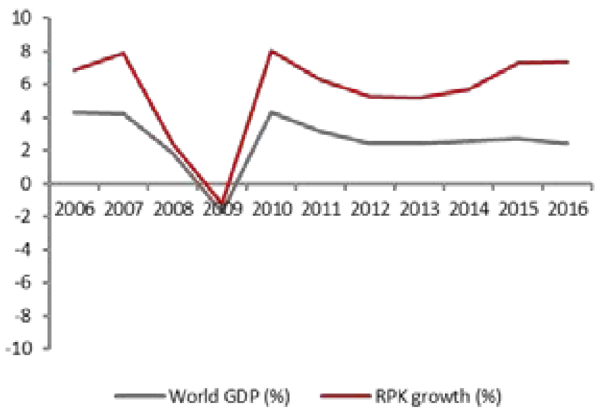
Airfare price liberalisation: Though the CAAC pledged to strengthen the influence of market forces in the pricing of air fares at the 11th FYP (2006-2010), real progress was only made in 2015 when the CAAC announced that pricing for domestic routes will be gradually liberalised, starting from 2016. The government aims to establish a market-oriented pricing mechanism for most domestic routes, with a transparent supervision system by 2020.

By 2016, a total of 724 routes were liberalised, accounting for c.24% of total routes. At end-2017, 306 more routes were added to the list, set to be implemented in mid-2018. Unlike before, majority of the 306 newly-liberalised routes comprise the main routes in China, many of which connect provinces' capital cities .

Currently, there are a total of 1,030 domestic routes opened. This is about 35% of total domestic routes, which is estimated to account for c.70% of the total capacity or available seat kilometres (ASKs) of the domestic market.

Huge potential for China's outbound air travel market

World RPK and GDP Growth (2006-2016)

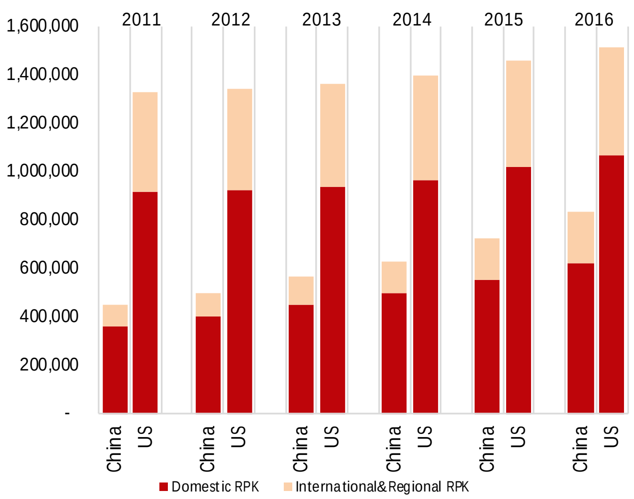


Source: World Bank

Global economic recovery favours aviation sector. The correlation coefficient of global RPK growth and GDP growth from 2006 to 2016 is over 91%, validating the long-standing relationship between economic expansion and air travel growth. With the global economy in the midst of a synchronised recovery, travel demand growth is expected to remain strong in the short term and in the long term as well.

International and regional RPK accounted for c.30% of total RPK in the US, but just 20-25% for China. This indicates further upside potential for Chinese airlines to expand in international routes.

US vs China RPK (2011-2016)

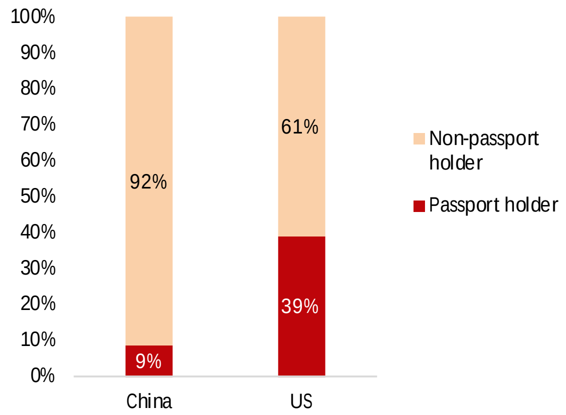


Source: CEIC, Bureau of Transportation Statistics

Visa relaxation in countries chasing Chinese tourist dollars has also boosted outbound travel. It has become increasingly easier for Chinese passport holders to travel overseas. Over the last five years, many countries have significantly eased visa requirements, even offering visa exemptions or visa-on-arrivals, to Chinese travellers. In fact, more countries are starting to offer long-tenured, multiple-entry visas to Chinese citizens, following the examples of the US, Canada, Singapore, Korea, Japan, and Australia.

Outbound travel growth to continue to outpace domestic travel in the years ahead. In 2016, Chinese outbound tourists only accounted for 2.7% of total tourist trips (less than 10% of the population hold passports). Compared with the domestic market, we believe outbound travel has more room to grow, thanks to both the tourism and business demand of an expanding middle class, and the transformation of China's economic structure.

US vs China passport penetration rate (2016)



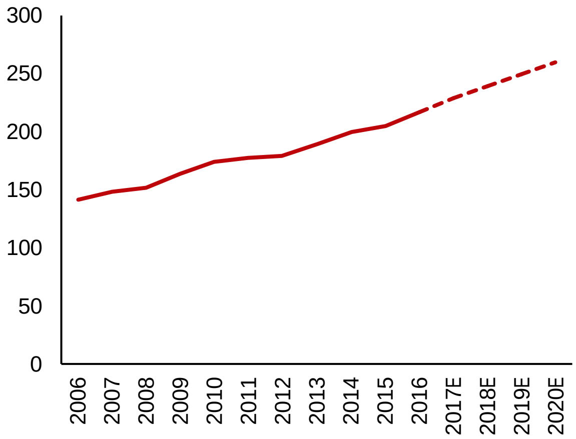
Source: State Council of PRC, US Department of State

Network expansion amid the Belt and Road Initiative. Since the Belt and Road Initiative (BRI) was proposed by the Chinese government in 2013, 33 new airports related to the BRI have been built. By mid-2017, China has signed bilateral air transport agreements with 62 countries, opening direct air routes to 43 of these countries, which includes most of Southeast Asia. China's National Tourism Administration projects that China would contribute 150mn visitors to BRI partner countries during the 13th FYP period – implying huge growth potential for outbound and inbound air travel to and from these markets.

Can Infrastructure Support Air Travel Demand Growth?

By end-2016, there were a total of 218 civil airports in China – 24% of them were in the East and about half in the West. However, average passenger traffic per airport in the East was 10.4mn, nearly 4x that of airports in the West. The number of civil airports is projected to reach 260 by 2020, supported by the 13th FYP.

No. of civil airports in China (2006-2020)



Source: Wind, 13th FYP, DBS Bank's estimates

Many new airports have been built in China since 2006, with the majority in less developed and far-flung regions of the country, such as Inner Mongolia, Guizhou, Xinjiang, Sichuan, and Heilongjiang, all of which have seen five or more airports being built in the province over the last decade.

No. of new airports by province (2006-2016)

No. of new airports	Province
9	Inner Mongolia
7	Guizhou, Xinjiang
5	Sichuan, Heilongjiang
4	Yunnan, Hebei, Gansu, Qinghai
3	Tibet, Guangxi, Shanxi, Jiangxi
2	Anhui, Liaoning, Guangdong, Jiangsu, Hebei, Hainan
1	Shaanxi, Hunan, Ningxia, Chongqing, Jilin, Henan, Shandong, Fujian

Source: CAAC

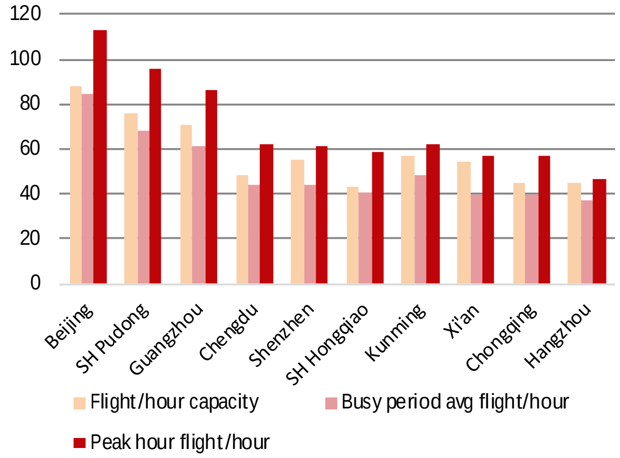
Airport slots and traffic distribution by region (2016)

	East	Northeast	West	Central	Total
Airport	53	23	110	32	218
Pax traffic (mn p-tm)	551	62	301	102	1,016
Avg pax traffic/ airport (mn)	10.4	2.7	2.7	3.2	4.7

Source: Wind

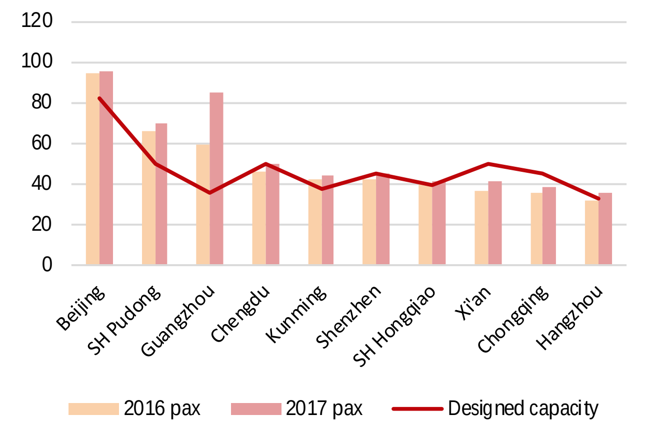
The top 10 airports handled c.49% of all passenger traffic in China in 2016. Six out of them lie in eastern China and another three in the West. The flights per hour of these airports during their busy periods are approaching capacity, while the peak hour frequency has already surpassed the limit. China's busiest airports are operating at near or over their designed capacity as 81% of the market share is packed into the top 30 airports, 15 of which are in the East.

Top 10 airports' no. of flights/hour (2016)



**Busy period: 0700-2200h*
Source: CAAC

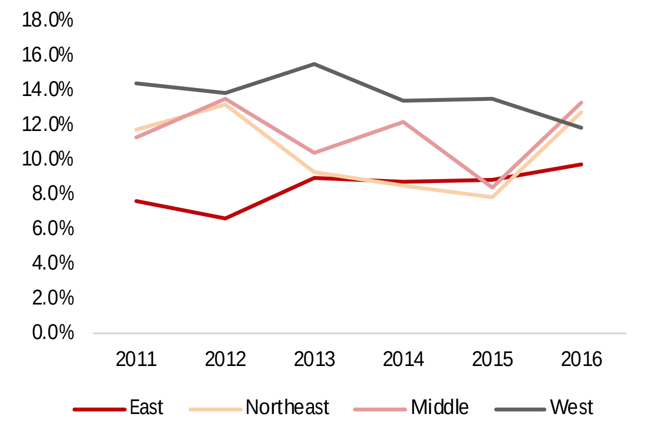
Top 10 airports - no. of passenger (mn)



Source: CADAS, News reports

In the past five years, the demand for air travel in the western and central regions of China has recorded double-digit growth, which is higher than that for the eastern region. This is largely due to a low base effect, the longer distances involved, and the lack of a high-speed-rail alternative. Point-to-point air travel is also more suitable for regions with lower population density .

Growth rate of passenger numbers by region (2011-2016)



Source: Wind

The Chinese government plans to have 260 airports by 2020, which means that on average from 2017 to 2020, there would be 11 new airports being completed per year. In the 13th FYP, most of the new airports planned lie in the central and western regions. Beijing and Chengdu will have their second airport completed in 2019, which are expected to handle 45mn and 25-30mn passengers per year, respectively, when the first phases are completed.

Many of the already-busy projects in the eastern region are undergoing expansion through the planned building of more terminals and runways. Seven of the top 10 airports in China have expansion plans except Beijing Capital, Chengdu Shuangliu, and Shanghai Hongqiao. In the case of Beijing and Chengdu, completely new airports are being built.

Airport expansion plan and expected capacity (mn pax)

	2018	2020	2025	2030	2040	Plan
Pudong		80				2019: Phase 3
Baiyun	81		105			2018: T2 2025: T3, 4th&5th runway
Changshui		80		120		3 runways; Satellite hall and T2 under construction
Bao'an			52		63	2018: 3rd runway 2020: Satellite hall 2025: T4
Xianyang				79		Phase 3 planed
Jiangbei						4th runway planed
Xiaoshan		50				2022: T4
Daxing		45	72		100	2019: T1
Tianfu		25-30			40	2019: Completed

Source: CADAS, News reports

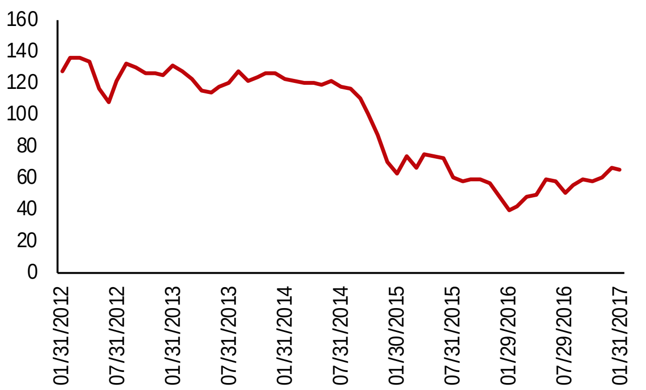
Despite the current tightness in supply, we believe that the strong government support and willingness to invest in airport infrastructure will ensure that the strong demand for air travel will ultimately be met.

Key Risk Factors

Jet fuel and forex exposure well-mitigated

Jet fuel has historically made up c. 25%-40% of total operating costs, and a sharp and sustained spike in prices would impact airlines' margins. However, the Big 3 should be able to mitigate this through a) raising ticket prices and/or b) imposing fuel surcharges when international jet fuel prices rise above US$85 a barrel. The Big 3 currently do not hedge their jet fuel requirements.

Jet fuel price (US$/bbl)



Source: Thomson Reuters, DBS Bank's estimates

The table below illustrates the impact on the projected FY18F earnings for each of the Big 3 airlines, assuming a 1% increase in fuel price and overall passenger yield.

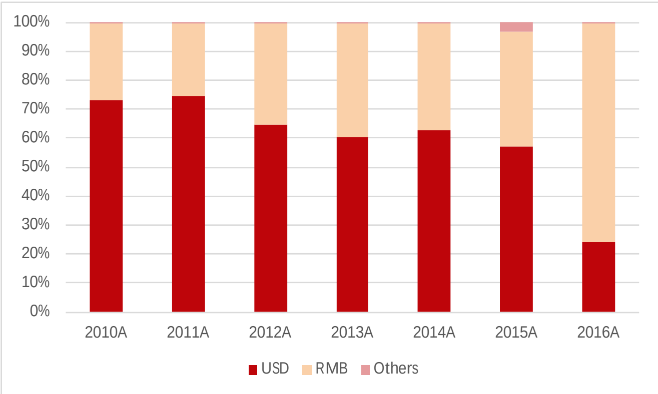
FY18F profit sensitivity to changes in fuel price and pax yield

FYE Dec	2018F		
(RMB mn)	Profit	RPK (+1%)	Fuel (+1%)
Air China	10,321	+8.8%	-2.5%
China Eastern	7,165	+11.3%	-3.1%
China Southern	6,706	+15.5%	-4.8%

Source: DBS Bank's estimates

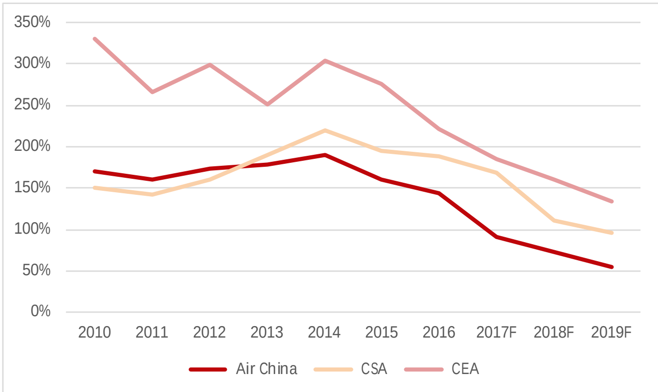
Chinese carriers, which used to hold a large percentage of their debt in the US dollar, reported large forex losses in 2015 and 2016 due to the appreciation of the dollar. However, they have since reduced their dollar debt exposure and, furthermore, have seen their net gearing improve significantly, which also lowers their vulnerability to higher interest rates.

Debt denomination by currency



Source: Company, DBS Bank's estimates

Net gearing of Big 3

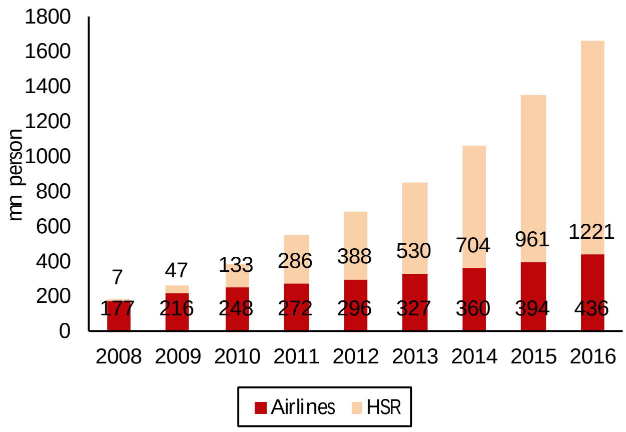


Source: Company, DBS Bank's estimates

Diminishing impact of high-speed rail

While the rapid growth of China's high-speed railway network since 2009 may have slowed down the growth of the Chinese airlines, this is expected to be more benign in the years ahead. Under China's 13th FYP (2016-2020), passengers carried by high-speed rail is estimated to grow 9.5% per year, while that of airlines is projected to be 10.4% by 2020. The government is also promoting inter-model connectivity, such as the Hongqiao transportation hub in Shanghai, which should increasingly encourage complementary growth between high-speed rail and airlines. New airports under construction such as Beijing Daxing and Chengdu Tianfu are also slated to be connected to corresponding rail stations.

Domestic passengers of airlines vs high-speed rail (2008-2016)



Source: Wind

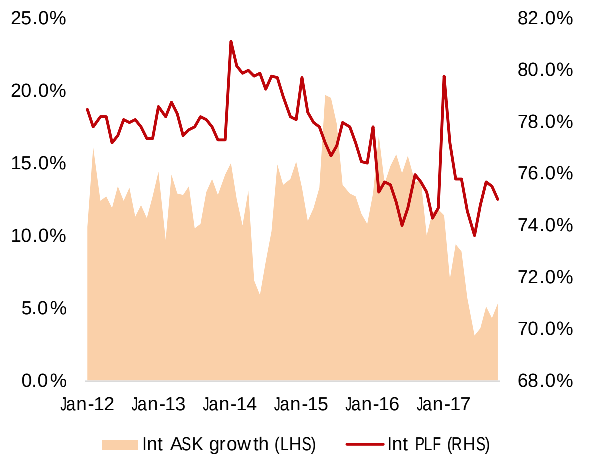
Since China's high-speed rail began operations in 2008, the number of passengers has grown at an explosive pace, at nearly 90% CAGR and surpassing the number of domestic passengers carried by airlines in 2011. Given the rapid development and growth of the rail system, there is no doubt that high-speed rail has taken away some market share from the airlines in the last decade. This is especially true for the shorter routes, i.e. those less than 800km.

However, the growth rate of passengers on the high-speed rail slowed down rapidly from 2012 onwards, dropping from 114.3% in 2011 to 35.9% in 2012 and further down to 27% in 2016. Meanwhile, the growth in domestic passengers carried by airlines accelerated again from 8.8% in 2012 to 10.7% in 2016.

Other key risk factors

Competition on international routes. With Chinese carriers enjoying an oligopolistic structure domestically, the Big 3 face the most competition in international routes. However, Middle Eastern carriers, which have been the most aggressive in expanding in recent years, have been curbing their growth since mid-2017. This should help boost load factors and yields for the Big 3 on their international routes.

Middle Eastern Airlines – Monthly ASK growth and PLF



Source: IATA

Airlines and airports with poor on-time performance are forbidden to add more flights. Starting from the second travel season of 2017, airports have been required to reduce capacity if the on-time ratio is less than 70% for nine months within the recent year. In return, more flights can be added as the reward for higher-than-required on-time ratio. Hence, the growth of Chinese airlines could be restricted if poor on-time performance cannot be improved.

Infrastructure constraints. Most of China's busiest airports are already operating beyond their design capacity during peak or busy hours, and while there are on-going expansion plans for existing and new airports, there could be some constraint in the short term before these are completed (for example, in Beijing). In the longer term, continuous investment is needed to build the necessary infrastructure to support the growth in air travel demand in the country.

Airspace constraints. Most of China's airspace is controlled by the military, creating a bottleneck for passenger planes in the country. The growth of China's civil aviation sector could be limited if more airspace is not freed up.

Appendix:

Compare and contrast the major carriers in China

China's four largest airline groups enjoy nearly 80% of the market. Here, we examine them in detail.

Air China. Having its origins in CAAC's Beijing Administration Bureau in 1988, Air China is the country's only flag carrier. It was listed in Hong Kong and Shanghai's A-share market in 2004 and 2006, respectively. Based in Beijing, Air China has the dominant market share in Beijing Capital International Airport, the busiest air hub in China. Chengdu Shuangliu International Airport also acts as another hub, focusing on southwestern China for the group.

China Southern Airlines. China Southern was established in 1989 and debuted on both the New York and Hong Kong exchanges in 1997. In 2003, the company also listed on the Shanghai Stock Exchange. China Southern is based in Guangzhou, Guangdong Province and uses Baiyun International Airport as its main hub.

China Eastern Airlines. Incorporated in China in 1995, China Eastern was publicly listed in the New York, Hong Kong, and Shanghai stock markets in 1997. The major hubs for China Eastern are Shanghai Hongqiao International Airport and Shanghai Pudong International Airport. China Eastern also has hubs in Kunming and Xi'an.

Hainan Airlines was set up in 1993 as the first joint stock airline company in China, with Hainan Airlines Group as its largest shareholder. Hainan Air issued B shares in the Shanghai Stock Exchange in 1997 and A shares in 1999. Its main base is Haikou Meilan International Airport and it also operates a hub in Beijing Capital International Airport.

(a) Market share

By the end of 2016, there were a total of 59 transport airlines in China. By type of ownership, there were 44 state-owned airlines and 15 private and privately-held airlines. Among all the transport airlines, there were eight all-cargo airlines, 11 joint venture airlines, and 7 publicly-listed airlines.

Compared to 10 years ago, market concentration has reduced slightly, but China's four largest airline groups still account for 78.2% of the total market revenue.

The domestic competition among the four is not that intense, given that each focuses on different regions. Air China, China Eastern, and China Southern operate in the most developed areas in China like Beijing, the Shanghai-centred Yangtze River Delta, and the Guangzhou-centred Pearl River Delta, respectively. Their presence in other cities or regions are further fulfilled or bolstered through other airline subsidiaries and/or associates.

From 2007 to 2016, the Big 3 grew their revenue steadily at a similar CAGR of about 9%. Hainan Air grew at a faster CAGR of 12.9%, but with an 8.1% market share as at 2016, Hainan Air still has a long way to go in catching up with the Big 3.

Low-cost carriers (LCCs) have less than 10% market share in China, and are not expected to take up significant market share in the years ahead.

Market share by revenue

	2016 Revenue (RMB mn)	% of industry (2016)	% of industry (2007)	CAGR (2007-2016)	Dominant area
Air China	115,145	24.5%	26.9%	9.5%	Beijing, Southwestern China
China Southern Airlines	114,981	24.5%	28.5%	8.7%	Pearl River Delta
China Eastern Airlines	98,904	21.0%	21.5%	9.8%	Yangtze River Delta
Hainan Airlines	*38,037*	8.1%	7.1%	12.9%	Hainan, Shanxi
Total	*367,067*	78.2%	84.0%		

Source: DBS Bank, Wind

(b) Fleet
While China Southern owned the largest fleet in 2016, as it did in 2008, the difference between it and the rest has narrowed. As at end-2016, China Southern, Air China, and China Eastern had a fleet of 702, 623, and 581 aircraft, respectively. Meanwhile, Hainan Air had 238 aircraft.

Given the large number of new aircraft acquired in recent years, it is no surprise that the average fleet age is relatively low, ranging from between 4.6 years and 6.6 years, compared with an average fleet age of 14 years in the Asia-Pacific, and 18.7 years in North America.

In 2016, the number of aircraft under operating leases ranged from 24% to 35% among the Big 3, while for Hainan Air, the figure is about 50%.

Fleet comparison (2016 vs 2008)

	Air China		China Southern A		China Eastern A		Hainan A
	2016	2008	2016	2008	2016	2008	2016
No. of aircraft	623	243	702	348	581	240	238
Avg age (years)	6.4	7.4	6.6	6.0	5.4	7.0	4.6
By ownership							
Owned and under finance lease	430	183	458	NA	439	NA	120
Under operating lease	193	60	244	NA	142	NA	118
By type							
Passenger jet	601	231	688	337	572	229	NA
Jet freighter	15	12	14	11	9	11	NA

Source: DBS Bank, Company

(c) Capacity
In terms of capacity, China Southern is the largest player in both overall ASK and ATK. Hainan Air has the most capacity for cargo and mail.

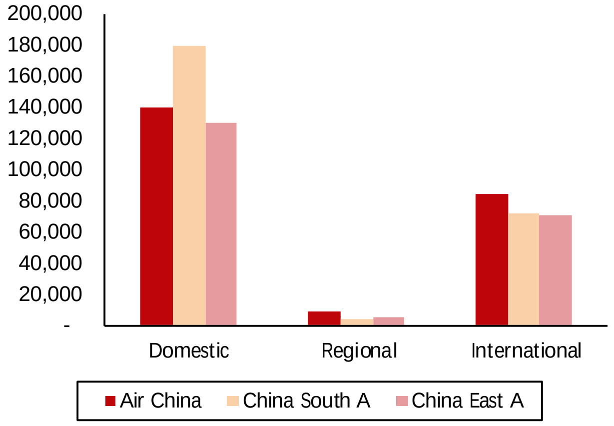
Among the Big 3 in 2016, China Southern had the most capacity on domestic routes whilst Air China was the leader in the international market. Nevertheless, the Big 3 are pretty close to each other in terms of overall capacity, and in terms of capacity deployed on domestic and international routes.

Capacity comparison (2016)

	Air China	China Southern	China Eastern	Hainan Air
ASK (mn)	233,218	255,992	206,249	94,442
AFTK (mn)	12,737	11,941	9,440	1,345
ATK (mn)	33,777	34,980	28,002	9,697

Source: DBS Bank, Company

Breakdown of ASK (2016)



Source: DBS Bank, Company

(d) Traffic

In terms of carriage, China Southern is the largest, measured by both RPK and RTK, while Air China ranks second. Air China carries the most air freight, measured by RFTK. Hainan Airlines, in comparison, is much smaller than the Big 3 in these areas.

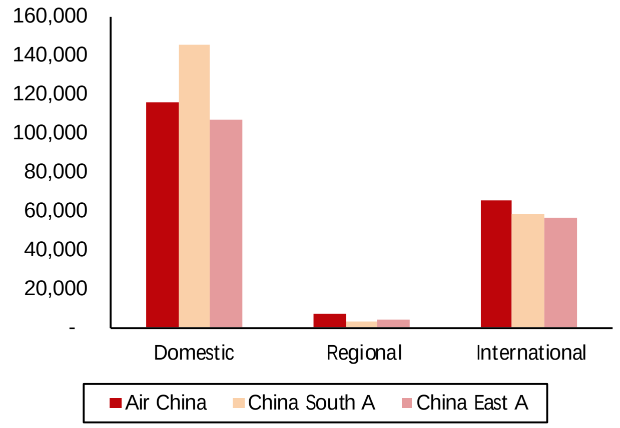
Traffic comparison (2016)

	Air China	China Southern	China Eastern	Hainan Air
RPK (mn)	188,158	206,106	167,529	82,951
RFTK (mn)	6,995	6,222	4,875	1,132
RTK (mn)	23,698	24,387	19,953	8,445

Source: Company, DBS Bank

In 2016, China Southern had the highest carriage domestically in terms of RPK while Air China was the leader on international routes.

Breakdown of RPK (2016)



Source: DBS Bank, Company

(e) Load factors

Hainan Airlines performed significantly better than the Big 3 in terms of load factors in 2016, recording better passenger and freight load factors of 87.8% and 84.1%, respectively, for an overall load factor of 87.1%.

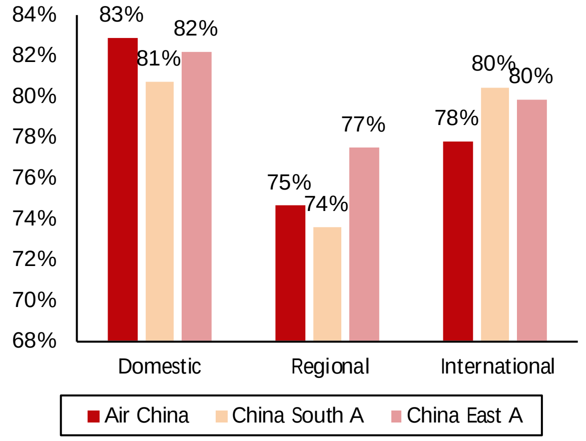
In 2016, Air China recorded the best load factor among the Big 3 on domestic routes while China Eastern led the way on international routes.

Comparison of load factors (2016)

	Air China	China Southern	China Eastern	Hainan Air
Pax LF	80.7%	80.5%	81.2%	87.8%
Freight LF	54.9%	52.1%	51.6%	84.1%
Overall LF	70.2%	69.7%	71.3%	87.1%

Source: Company, DBS Bank

Passenger load factor (2016)



Source: DBS Bank, Company

(f) Airport share

Among the major six hub airports representing the northern, eastern, southern, and western markets in China, capacity allocation from the top four airlines is mostly concentrated in Shenzhen Bao'an Airport. Each airline prevails in its main hubs.

Estimated share in capacity in the main hubs by ASK

	PEK	PVG	SHA	CAN	SZX	CTU
Air China	39.3%	6.2%	8.5%	10.5%	37.2%	31.2%
China Southern	11.2%	3.8%	10.6%	53.0%	26.4%	9.9%
China Eastern	6.0%	33.6%	42.4%	4.5%	6.0%	9.4%
Hainan Air	11.1%	2.3%	1.7%	4.6%	11.9%	4.1%
Total	**67.7%**	**45.8%**	**63.2%**	**72.6%**	**81.5%**	**54.6%**

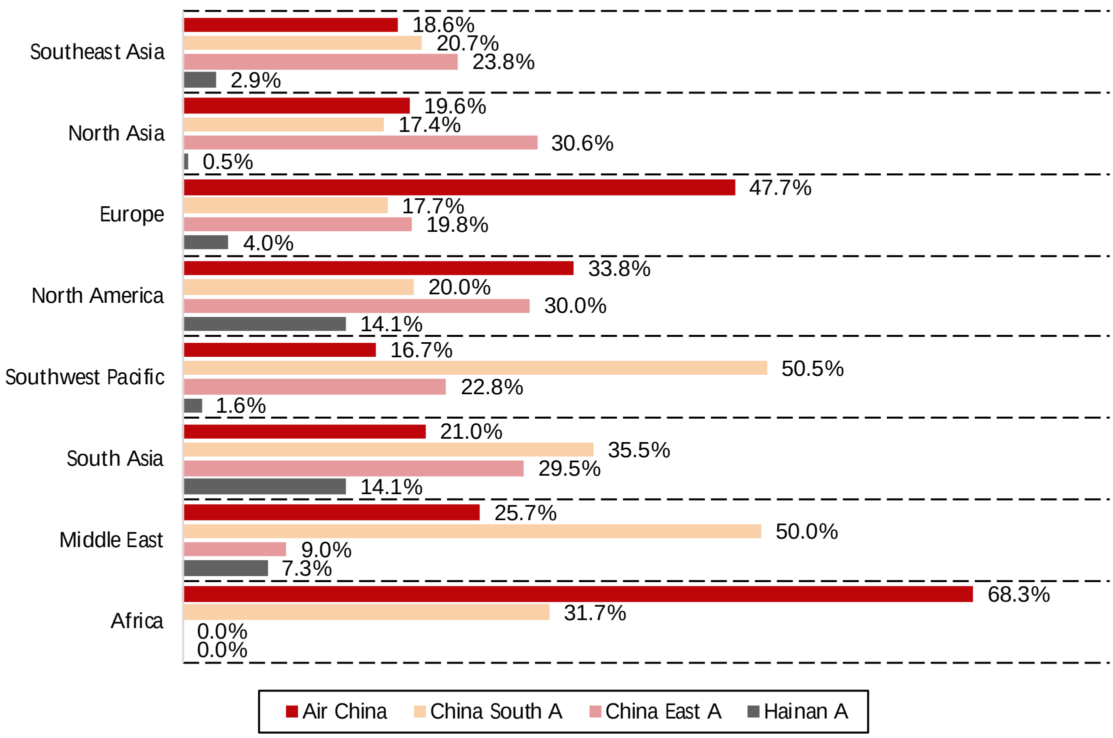
*PEK: Beijing Capital International Airport; PVG: Pudong Airport; SHA: Shanghai Hongqiao Airport; CAN: Guangzhou Baiyun Airport; CTU: Chengdu Shuangliu Airport

Source: CAPA, DBS Bank

(g) International routes share

Air China has the biggest share of the capacity in Europe, North America, and Africa. Meanwhile, China Southern is the leader in Southwest Pacific, South Asia, and the Middle East, and the largest share in Southeast Asia and North Asia belongs to China Eastern. Hainan Airlines has a much smaller presence in the international market, though it does have over-10% market share in South Asia and North America.

Distribution of capacity in International routes (2016)



Source: CARNOC, TravelSky

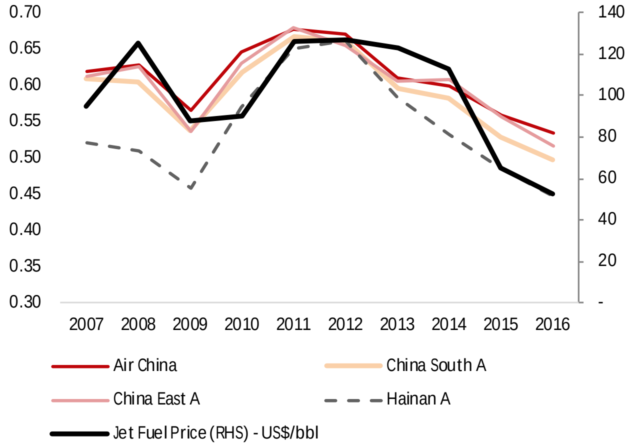
Operating and Financial Performance

Operations

The cost of jet fuel has generally been a driver of yield per RPK for the Chinese carriers.

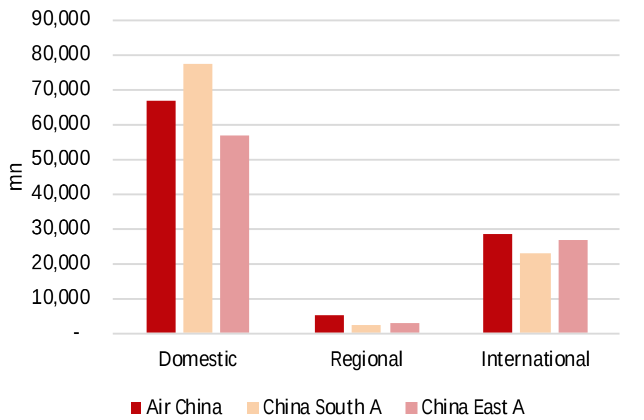
We observe that yields started to fall more than fuel prices did from 2012 to 2014, likely due to the impact of competition from high-speed rail, but held up better in 2015 and 2016 compared to a steep decline in fuel price over the same period, as the competition from High Speed Rail was mitigated by a) slower growth of High Speed Rail and b) adjustments made by airlines such as the elimination of short-haul routes.

Yield per RPK since 2007 vs Jet fuel



Source: Company, DBS Bank

Revenue by destination (2016)

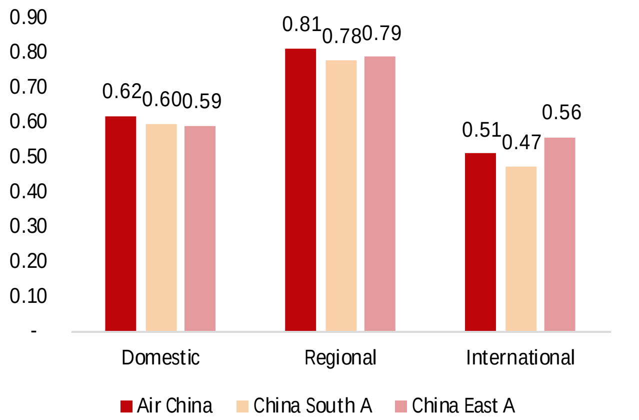


Source: DBS Bank, Company

On average over the past five years, the Big 3 have enjoyed very strong yields on their regional routes. Air China recorded the highest yields on regional and domestic routes while China Eastern earned the best yield on international ones.

Yields for the Big 3 on domestic and regional routes are very similar while there is greater differentiation in international routes, due to the different regions each is dominant in.

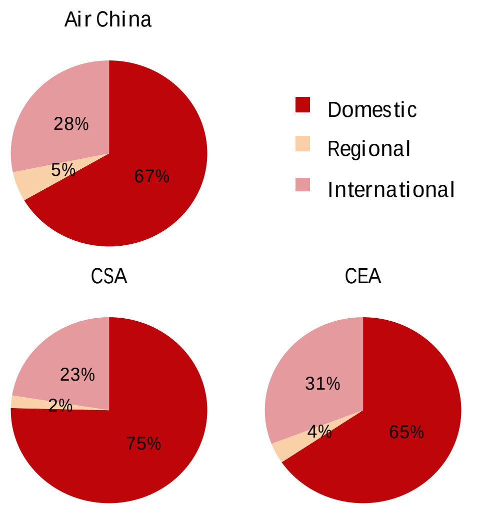
Five-year average yield per RPK



Source: Company, DBS Bank

In 2016, due to its high exposure to the domestic market, China Southern had the highest revenue of c.RMB 77bn in domestic routes among the Big 3. Air China outperforms in both the regional routes and the international routes. with revenue of c. RMB 5bn and c.28bn, respectively.

Breakdown of passenger revenue (2016)

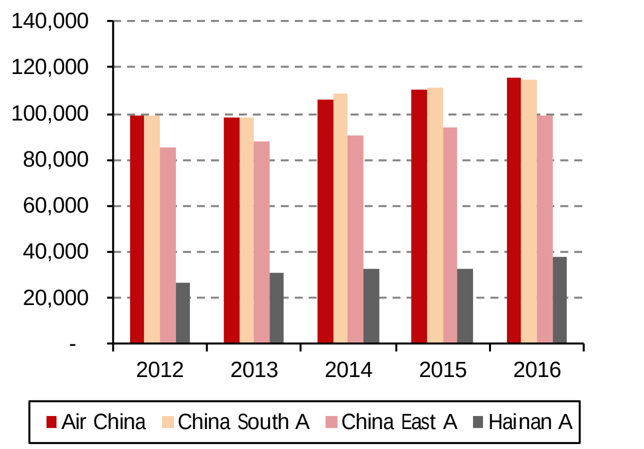


Source: Company, DBS Bank

Revenue growth

All four airlines have seen steady topline growth over the last five years.

Revenue in RMB mn (2012 to 2016)

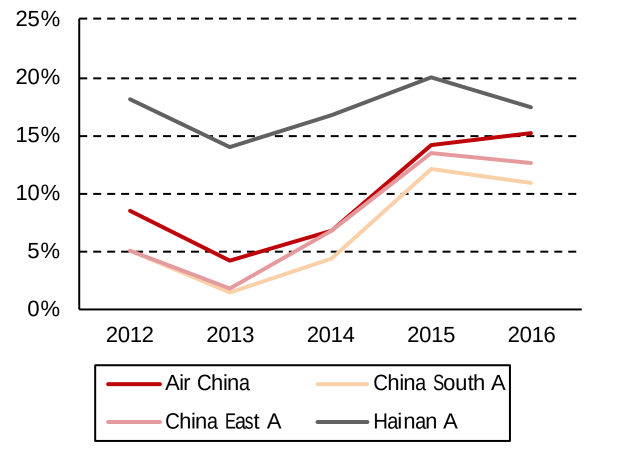


Source: Company, DBS Bank

EBIT margin picked up as jet fuel prices hit a new low.

From 2012 to 2016, jet fuel prices declined from US$127 per barrel to US$54 , lifting the EBIT margin of the whole sector. In the first six months of 2017, however, higher fuel prices led to lower earnings year-on-year as yields were slow to improve to compensate for higher costs.

EBIT margin of Chinese airlines (2012 to 2016)



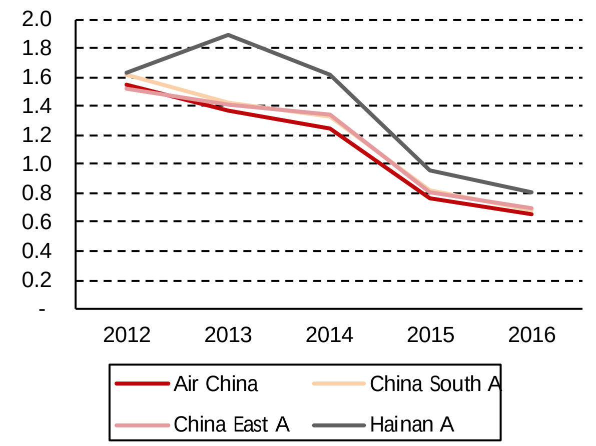
Source: Company, DBS Bank

Cost

Compared with Hainan Airlines, the Big 3 have a lower jet fuel unit cost due to higher international exposure. The gap narrowed as Hainan Airlines grew its international business.

With bonded jet fuel being cheaper than domestic fuel, and longer routes consuming less fuel (per ATK), Air China enjoys the lowest unit fuel cost as it has the highest international exposure.

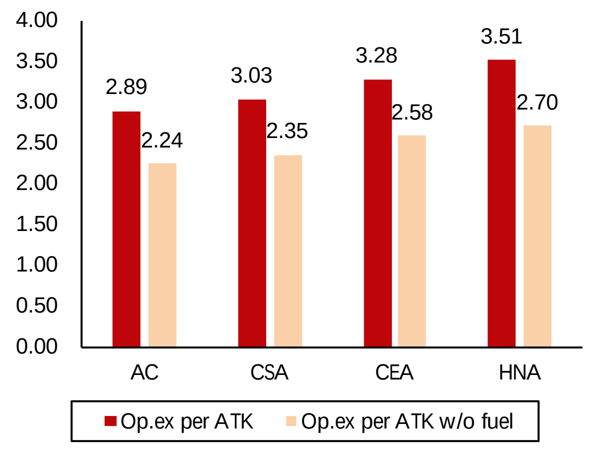
Jet fuel cost per ATK (RMB)



Source: Company, DBS Bank

Air China recorded the lowest operating cost per ATK, with and without fuel, among its peers in 2016.

Operating cost per ATK in RMB (2016)



Source: Company, DBS Bank

P&L performance

The four largest Chinese airlines have generally done well since 2012 in terms of net profit, with all reporting at least a CAGR of 9% in that respect, and the best performer recording a CAGR of nearly 18%.

While the Big 3 all reported more than 20% EBIT (CAGR) over the same period, they also reported substantial foreign-exchange losses, due to the appreciation of the dollar against the RMB, as all three had substantial portions of their debt denominated in the dollar.

Profit and Loss performance of major Chinese airlines (2012-2016)

FYE Dec (RMB mn)	2012	2013	2014	2015	2016	CAGR
Air China						
Revenue	99,473	98,181	105,965	110,057	115,145	3.7%
EBIT	8,409	4,118	7,257	15,552	17,533	20.2%
Interest cost	2,262	2,688	2,854	2,813	3,235	9.4%
Forex gain/loss	119	1,938	(360)	(5,156)	(4,234)	N/A
Pretax profit	6,909	4,518	5,135	9,355	10,213	10.3%
Net profit	4,816	3,264	3,852	7,063	6,809	9.0%
China Southern Airlines						
Revenue	99,514	98,547	108,584	111,652	114,981	3.7%
EBIT	5,099	1,510	4,748	13,438	12,612	25.4%
Interest cost	1,376	1,651	2,193	2,188	2,465	15.7%
Forex gain/loss	267	2,903	(292)	(5,953)	(3,276)	N/A
Pretax profit	4,738	3,484	3,066	6,118	7,661	12.8%
Net profit	2,619	1,986	1,777	3,736	5,044	17.8%
China Eastern Airlines						
Revenue	85,253	88,245	90,185	93,969	98,904	3.8%
EBIT	4,352	1,576	6,058	12,625	12,486	30.1%
Interest cost	1,697	1,549	1,957	2,189	2,699	12.3%
Forex gain/loss	148	1,976	(203)	(4,987)	(3,573)	N/A
Pretax profit	3,137	2,217	4,113	5,667	6,497	20.0%
Net profit	3,072	2,373	3,410	4,537	4,498	10.0%
Hainan Airlines						
Revenue	26,870	30,973	32,415	33,077	38,037	9.1%
EBIT	4,865	4,355	5,407	6,641	6,609	8.0%
Interest cost	2,604	2,045	3,401	4,645	4,522	14.8%
Forex gain/loss	0	0	0	0	0	N/A
Pretax profit	2,654	2,761	3,213	3,914	4,062	11.2%
Net profit	1,928	2,159	2,591	3,003	3,138	13.0%

Source: Company

History of China's airline sector

Foundation period (1949 to 1970s). When the People's Republic of China was founded in 1949, the country only had 12 short-haul routes and 12 small aircraft. By the end of 1970s, China had set up 162 routes and 78 airports, forming its initial aviation network. The annual passengers carried and total traffic volume in 1980 was 3.43mn persons and 429mn tonne-kilometres, ranking No.35 in the world. At that point, the development of China's aviation industry was far behind that of the leading nations in the world.

Market-oriented Reform period (1980-2002)

Phase One (1980 – 1987). As the Chinese government adopted the "Reform and Opening up" policy in the late 1970s, the civil aviation industry also launched market-oriented reforms. In 1980, the CAAC, a then-subsidiary body of the air force, became an institution directly under the State Council, as the initial step toward market reform. However, during this period, the CAAC still undertook a dual role of operator and regulator. The commercialisation of the aviation industry was still quite limited.

Phase Two (1987-2002). The Chinese government transformed the then-six regional administrative bureaus of the CAAC located in Beijing, Chengdu, Xi'an, Shenyang, Guangzhou, and Shanghai into separate for-profit airline companies. These companies included Air China International Corporation, China Southern Airlines, China Eastern Airlines, China Southwest Airlines, China Northwest Airlines, and China Northern Airlines. Transferring aviation operations to these companies, the CAAC was able to focus more on industry regulation and the formulation of an industry development plan. At the same time, many smaller airlines were established by provincial or municipal governments. The increased number of players substantially promoted both market expansion and competition.

The reform inspired speedy growth. By the end of 2002, total traffic volumes had reached 16.5bn tonne-kilometres, nearly 38.4 times that in 1980. In addition, the number of aircraft increased to 1,112 and civil aviation routes surged to 1,176 by the end of 2002.

Phase Three (2002-2005). The competition caused industry-wide revenue per tonne-kilometre to decline from RMB 6.57 to RMB 5.08 during 1997 to 2002. Passenger load factor also fell from 78.4% in 1992 to 54% in 2002. Thus, the Chinese government merged the then-existing nine major airlines into three giant airline groups, namely China National Aviation Holding Company, China Eastern Aviation Holding Company, and China Southern Aviation Holding Company. The current oligopolistic market structure was formed with the Big 3 taking almost 80% market share.

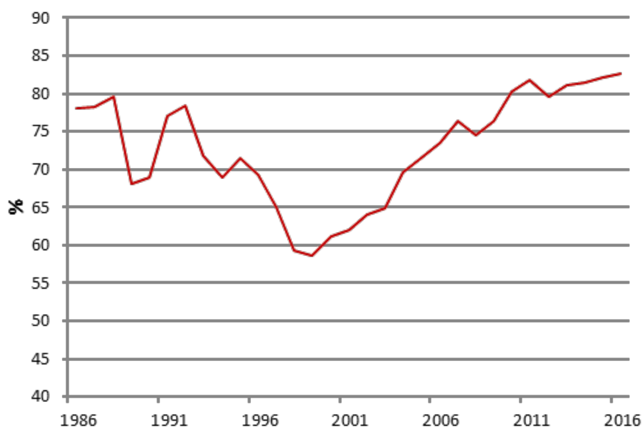
Consolidation in 2002

Pre-consolidation	Post-consolidation
Air China International	
China Southwest Airlines	China National Aviation Holding
China National Aviation	Company
China Eastern Group	
China Northwest Airlines	China Eastern Aviation Holding
Yunnan Airlines	Company
China Southern Group	
China Northern Airlines	China Southern Aviation Holding
Xinjiang Airlines	Company

Source: CAAC, DBS Bank

The restructuring was helpful in curbing competition, with revenue per tonne-kilometre and passenger load factor rebounding to RMB 5.32 and 76.4% in 2007, respectively. Over the same period, thanks to the booming economy over 2002-2008, overall traffic maintained a high growth rate. Industry transportation revenue grew to RMB 191bn in 2007, representing a CAGR of 27.2% during 1980-2007. In 2008, passengers carried by airlines in China hit a record high of 191.9mn, nearly 56 times that in 1980, when China began reforming its aviation industry.

Passenger load factor (1986-2016)

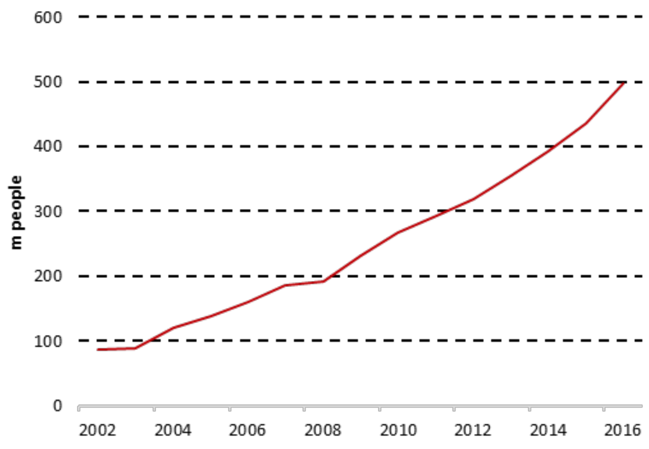


Source: CEIC

A blossoming market (2005-current)

To further boost the industry, market forces were strengthened under the 11th FYP. The Chinese government adjusted the pricing of jet fuel and ticket fares, with a fluctuation range referenced to market indicators. Private capital was also encouraged to enter. Deregulation was set as the direction for future growth. During this stage, the industry continued to expand rapidly. RTK and passenger traffic grew at a CAGR of 15.2% and 13.8% from 2006 to 2010. By the end of 2010, passenger load factor jumped to 80.2% for the year and the industry transportation revenue hit a historical high of RMB 288bn, representing a CAGR of 16.6%.

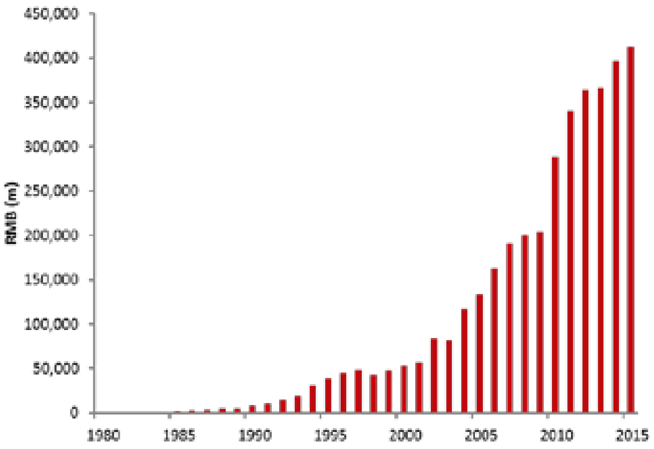
Passengers carried by Chinese airlines (2002-2016)



Source: Wind

Listed as one of the "Seven Major Strategic Industries", Chinese aviation continued to be attached importance in the 12th FYP (2011-2015). The Chinese government allocated RMB 1.5tn to investment and subsidies for the sector. The establishment of 20 new airlines was approved whilst domestic lower-cost carriers joined the landscape, and the sector continued to thrive. From 2011 to 2015, RTK grew at a CAGR of 10.2%, with passenger traffic increasing 10.4%, though slightly missing the goal set by government. The industry's transportation revenue grew at a CAGR of 4.9% to RMB 413bn. By the end of 2015, passenger load factor reached 82.1%. There were 207 civil airports and 3,326 routes, including 660 international routes. The number of routes was nearly 20 times that in 1979, when China launched its reform.

Transportation revenue for Chinese airlines (1980–2015)



Source: CEIC

Industry overview

Regulations

Although the aviation industry in China is still highly regulated, the central government has been gradually loosening control over the latest 10 years.

Policy comparison

	2007	2017
Establishment of carriers	Must be approved by the government	No change
Aircraft acquisition	Must be approved by the CAAC and through China Aviation Supplies Import and Export Group Corporation	Must be approved by the CAAC and not necessarily through China Aviation Supplies Import and Export Group Corporation
Airfare pricing	International route: Sanctioned by the CAAC	International route: International segments are market-oriented while domestic segments are priced by the government
	Domestic route: Fluctuate within a range determined by regulators	Domestic route: Partially marketised on a regular basis
Jet fuel price	Adjusted with Singapore jet fuel, adding a premium decided by the CAAC	Fixed-premium mechanism cancelled. Priced on the fuel cost and relevant taxes
Foreign ownership	Foreign ownership restricted	Further opening foreseeable, with mixed-ownership reform
On-time requirement	N/A	Flights cut as punishment for missing the benchmark

The establishment of new airlines in China requires government approval. The number of players in the sector is limited as the establishment of new carriers requires the CAAC's approval. Route rights are also awarded to airlines considering the geographic distribution of bases so that the competition along individual routes is monitored and controlled.

More say assigned to the airlines for aircraft acquisition. Big players like Air China, China Eastern, and China Southern can determine the number of aircraft that they need and negotiate the price with manufacturers themselves. While the China Aviation Supplies Holding Company (CASC) still acts as the intermediary to purchase aircraft for airlines, the China Aviation Equipment Co., Ltd. (**中國航空器材有限責任公司**), as the associate of CASC, was founded in Beijing in 2016. China Southern Airlines Holding, China National Aviation Holding, China Eastern Airlines Holding, CASC, and China Guoxin Holding Co., Ltd jointly operate and own 24%, 23%, 22%, 21%, and 10% share of it. It aims to improve the management of aircraft acquisition. The ownership allocation of China Aviation Equipment Co. ensures that the Big 3 will have more say in aircraft acquisitions.

Central government open to holding less than absolute majority of stakes in the Big 3. In 2017, the CAAC published an opinion soliciting manuscript for investment in civil aviation, allowing the possibility that the central government's share in the Big 3 can be lowered to below 50%, as long as it remains the largest. This leaves the door open for the Big 3 to seek more private capital and foreign ownership.

Airlines and airports with poor on-time performance are forbidden to add more flights. Starting from the second travel season of 2017, airports have been required to reduce capacity if their on-time ratio is less than 70% for nine months within the recent year. In return, more flights can be added as the reward for higher-than-required on-time ratio.

A host of air service agreements have been signed. By the end of 2016, China had already signed 120 bilateral air service agreements with other countries or regions, up by 2 (Samoa and Papua New Guinea) from 2015; the deals include 44 in Asia (including ASEAN), 24 in Africa, 36 in Europe, nine in the Americas, and seven in Oceania.

Routes, Fleet, and Infrastructure

Routes. China's aviation sector has witnessed a rapid expansion in the number of routes, at a CAGR of 11% in the past 10 years. The total number almost tripled from 1,379 to 3,903 from 2006 to 2016. The number of domestic routes grew faster than regional and international ones, at a CAGR of 11.1%, and increased its share of total routes to 78.3%, partly due to government subsidies for inland air routes.

Chinese airlines' routes

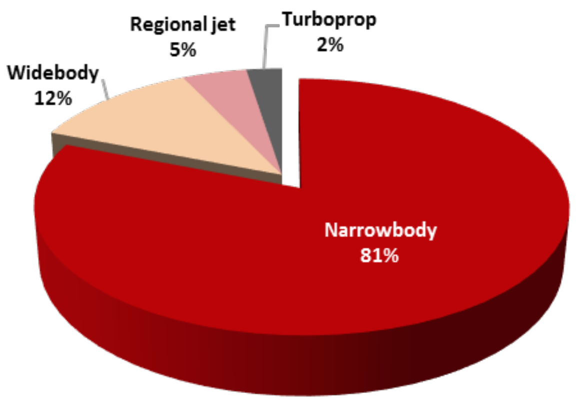
	2016		2006		
	No.	%	No.	%	CAGR
Domestic	3,055	78.3%	1,068	77.4%	11.1%
Regional*	109	2.8%	43	3.1%	9.7%
International	739	18.9%	268	19.4%	10.7%
Total	3,903	100.0%	1,379	100.0%	11.0%

**Regional means Hong Kong, Macau, and Taiwan*

Source: Wind, DBS Bank

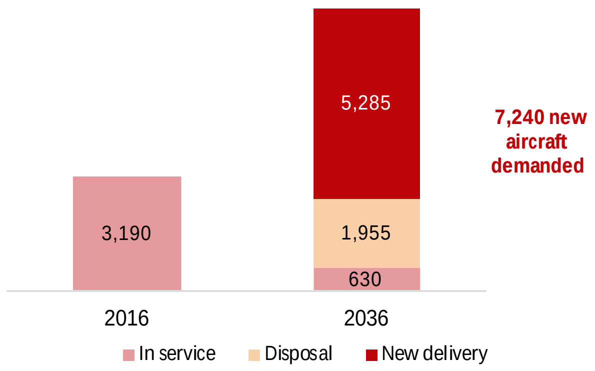
Fleet. At the end of 2016, Chinese airlines operated a total of 5,046 aircraft, 3,190 of which are civil aircraft. The rest are general-purpose aeroplanes for agricultural, industrial, and other uses. Narrowbody aircraft accounted for 81% of civil aircraft, with 12% being widebodies and 5% being regional jets. Boeing has estimated that for the next 20 years, 7,240 more aircraft would be required in China. China's fleet size is projected to account for 25% of the world's total by 2036.

Aircraft size(2016)



Source: CAPA, DBS Bank

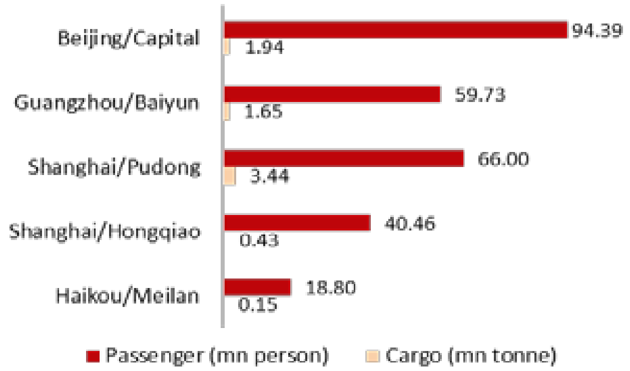
Delivery of civil aircraft (2016-2036)



Source: COMAC, Boeing

Airport. By the end of 2016, there were 218 civil airports in China. The Beijing Capital International Airport is the busiest, with annual passenger traffic of 94.4mn . However, if we combined the passenger throughput of Hongqiao and Pudong airports in Shanghai, the total of 106.5mn would surpass that of Beijing.

Major airports' annual traffic (2016)



Source: Wind

US vs China – Civil aviation

2016	US	China
Civil airports (unit)	5,136	218
Civil aircraft (unit)	7,039	3,190
ASK (bn)	1,789	1,012
GDP (USD bn)	18,569	11,199

Source: CAAC, DBS Bank

Market landscape

The Big 3 still dominant. The Chinese airlines ca n broadly be divided into three tiers by ownership. The ones controlled by the central government command over 70% of the market, with the local government-run and privately-run airlines taking up the rest of the market.

General market structure with subsidiaries

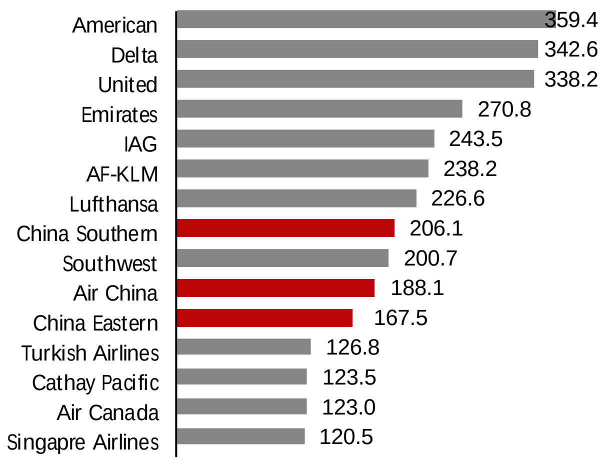
Controlled by	Airline	2016 Market share (by total RTK)	Subsidiaries
Central Government	Air China	24.66%	AC Cargo Shenzhen Air Beijing Air Dalian Air Air Macau Kunming Air AC Inner Mongolia
	China Southern Airlines	25.38%	Xiamen Air Shantou Air Zhuhai Air Guizhou Air Chongqing Air Henan Air
	China Eastern Airlines	20.76%	CEA Jiangsu CEA Wuhan Shanghai Air CEA Yunnan China United Air
Local Government	Hainan Airlines	8.79%	Air Changan Lucky Air Tianjin Air Hong Kong Air Capital Air China Xinhua Air Fuzhou Air Guangxi Beibu Gulf Air West Air Shanxi Air HK Express Urumqi Air HK Air Cargo
	Sichuan Airlines	3.64%	/
Private	Spring Airlines	2.33%	/
	Juneyao Airlines	2.16%	9 Air

Source: Wind, DBS Bank

After years of aggressive expansion and mergers & acquisitions backed by the central government since 2002, most of the municipal carriers became units of the three largest state-controlled airline groups (Air China, China Southern, and China Eastern) and the fast-growing Hainan Airlines. The highly-concentrated market structure is expected to remain.

International players. In 2016, the world's total RPK was 7,017bn. China Southern, Air China, and China Eastern rank at eighth , 10th and 11th, respectively in the world in terms of the RPK, accounting for 2.9%, 2.7%, and 2.4% of the world's total. The three largest carriers by RPK are based in the US, while European airlines took up the fifth to seventh spots, with Emirates at fourth. The global aviation industry is quite fragmented, with the top 15 airlines taking up 46.7% of total RPK.

Top 15 airlines' RPK in billion (2016)



Source: CAPA, ICAO, Company

China / Hong Kong Company Guide

Air China

Version 1 | Bloomberg: 753 HK EQUITY | 601111 CH Equity | Reuters: 0753.HK | 601111.SS

Refer to important disclosures at the end of this report

DBS Group Research . Equity   31 Jan 2018

H: BUY (Initiate coverage)

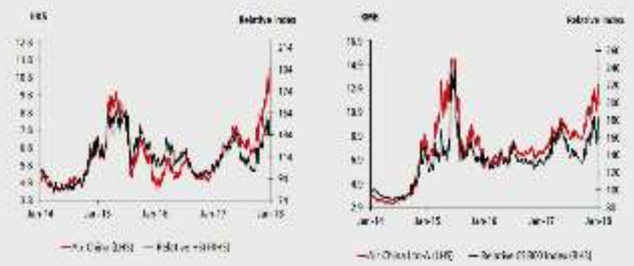
Last Traded Price (H) (30 Jan 2018):HK$11.26 (HSI : 32,607)
Price Target 12-mth (H): HK$14.40 (28% upside)

A: BUY (Initiate coverage)

Last Traded Price (A) (30 Jan 2018):RMB13.31 (CSI300 Index : 4,256)
Price Target 12-mth (A): RMB15.86 (19% upside)

Analyst
Paul YONG, CFA +65 6682 3712
paulyong@dbs.com

Price Relative



Forecasts and Valuation (H Shares)

FY Dec (RMB m)	2016A	2017F	2018F	2019F
Turnover	115,145	125,903	141,337	157,012
EBITDA	26,795	29,901	32,461	37,111
Pre-tax Profit	10,213	12,460	13,997	17,537
Net Profit	6,809	8,951	10,043	12,664
Net Pft (Pre Ex) (core profit)	6,809	8,951	10,043	12,664
EPS (RMB)	0.52	0.62	0.69	0.87
EPS (HK$)	0.64	0.76	0.86	1.08
EPS Gth (%)	(3.6)	18.4	12.2	26.1
Diluted EPS (HK$)	0.64	0.76	0.86	1.08
DPS (HK$)	0.15	0.15	0.17	0.20
BV Per Share (HK$)	6.50	7.44	8.15	9.05
PE (X)	17.5	14.8	13.2	10.5
P/Free CF (X)	17.1	13.6	11.6	9.0
EV/EBITDA (X)	8.4	7.4	6.5	5.4
Net Div Yield (%)	1.3	1.3	1.5	1.8
P/Book Value (X)	1.7	1.5	1.4	1.2
Net Debt/Equity (X)	1.3	0.8	0.7	0.5
ROAE (%)	10.6	12.6	11.0	12.5
Earnings Rev (%):		Nil	Nil	Nil
Consensus EPS (RMB)		0.64	0.69	0.54
Other Broker Recs:		B:14	S: 3	H: 6

ICB Industry: Consumer Services
ICB Sector: Travel & Leisure
Principal Business: Air China is the flag carrier of China and one of its largest airlines

Source of all data on this page: Company, DBSV, Thomson Reuters, HKEX

Leading China's aviation charge

- **Air China is an attractive direct proxy for China's air travel demand – forecasted to double by 2025**
- **Double-digit growth internationally, along with stable growth domestically to drive expansion**
- **We forecast EPS CAGR of 20% over FY16-19F**
- **Initiate coverage with a BUY, TP of HK$14.40 for 'H' and TP of RMB15.86 for 'A'**

Air China is our top pick among HK/China airlines as a beneficiary of firm long-term aviation travel growth. We project Air China to see robust EPS CAGR of 20% over FY16-FY19F, driven by firm growth in demand for air travel and higher yields in China. Backed by strong cash flows and with net gearing set to improve to 0.5x by end-2019F, there could be room to raise its dividend payout in the long term.

Where we differ: We have higher-than-consensus forecasts as we are more positive on yield improvement helping to offset higher fuel costs, given strong demand and the government's recent move to liberalise domestic air fares.

Potential catalysts: We believe Air China's share price can further re-rate as numbers continue to show firm growth in air travel, and an improvement in its yields.

Valuation:
Our target price of HK$14.40 for Air China 'H' share is based on 1.67x FY19F P/BV, based on an assumed cost of equity of 7.5% while the target price of RMB15.86 for Air China 'A' share is based on a 30% premium to the target price of the 'H' share.

Key Risks to Our View:
Like all other airlines, Air China is vulnerable to a spike in oil prices (as it does not hedge) and increased competition. The company's earnings could also be affected by a substantial depreciation of the RMB vs. USD.

At A Glance

Issued Capital - H shares (m shs)	4,563
- Non H shares (m	8,522
H shs as a % of Total	35
Total Mkt. Cap (HK$m/US$m)	215,524 / 27,567
Major Shareholders	
CNAHC (%)	50.15
Major H Shareholders	
John Swire & Sons Limited (%)	57.72
H Shares-Free Float (%)	42.28
3m Avg. Daily Val. (US$m)	27.5

SWOT Analysis

Strengths	Weaknesses
• The leader of Chinese airlines is the only national flag carrier backed by robust profitability. • Solid pricing power to pass on jet fuel cost to passengers. • Dominant position in promising international routes. • Sound financial standing with strong cash position and favourable gearing level.	• International routes generally provide lower yield than domestic routes, which affects Air China's revenue. • Higher sensitivity to the exchange rate due to relatively large exposure to foreign currency. • Cathay Pacific's weak financial performance.

Opportunities	Threats
• China air travel demand remains strong with tremendous potential in international market. • Yield and load factor to be improved with the air fare marketisation process and supply-side reform going forward.	• Competition from foreign competitors in international market. • Establishment of Beijing Daxing International Airport enables other domestic competitors to enlarge their networks in Beijing, which is the dominant hub of Air China. • Rising jet fuel price.

Source: DBS Bank

Company Background

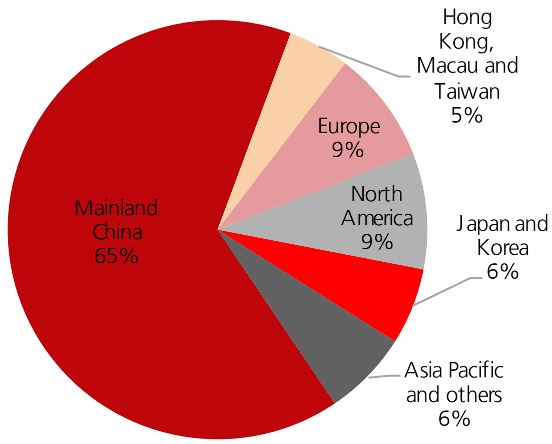
China's flag carrier. Founded in 1988 and headquartered in Beijing, Air China is the sole flag carrier of China and it completed its listing on the Hong Kong and London Stock Exchanges in 2004. Air China joined the Star Alliance in 2007, with its main hub in Beijing and secondary hubs in Shanghai and Chengdu.

Air China also has interests in a number of airlines including controlling stakes in Air China Cargo, Air Macau, Dalian Airlines, Shenzhen Airlines and Air China Inner Mongolia, as well as associate stakes in Beijing Airlines, Shandong Airlines, Tibet Airlines, and Cathay Pacific. It also has controlling stakes in AMECO (Aircraft Maintenance and Engineering Corporation) and CNAF (China National Aviation Finance Co., Ltd.)

In 2016, Air China and its subsidiaries carried 96.6m passengers on over 650,000 flights and carried c. 1.77m tonnes in cargo and mail. As at the end of the year, the group operated a fleet of 601 passenger aircraft with an average age of 6.3 years and 15 cargo aircraft with an average age of 9.5 years, as well as seven business jets.

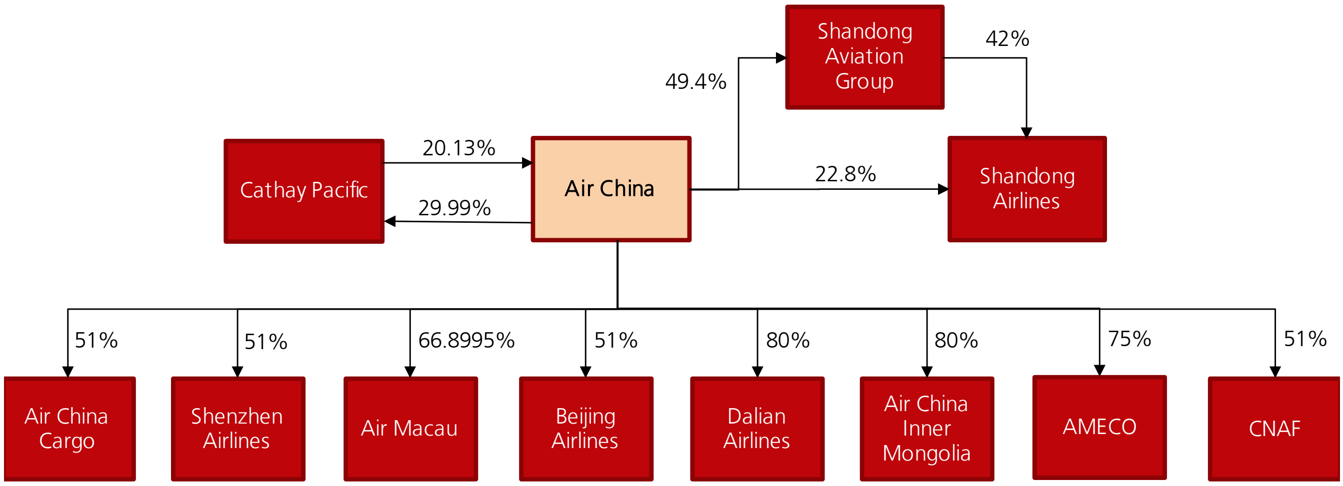
Air China recorded total revenues of RMB115bn in 2016, of which 87.1% was from passenger revenue, 7.2% from cargo revenue, and the remainder from Engineering and Ground Services, as well as Others. About 65% of Air China's total revenues was from Mainland China, with almost 9% each from Europe and North America.

Revenue contribution by geography in 2016: RMB115bn



Source: Company, DBS Bank estimates

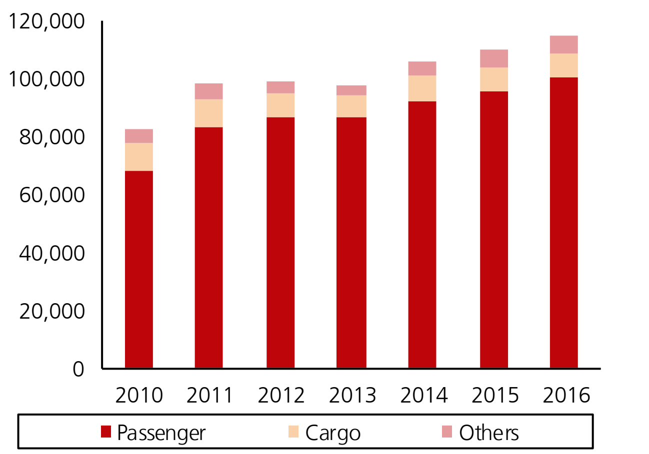
Shareholding structure of Air China and its key subsidiaries, associates and joint ventures



Source: Air China Annual Report 2016

Steady growth in passenger business has been driving Air China's expansion. Air China's total revenue grew at a 5.7% CAGR over 2010-2016 to RMB115bn, led by a 6.7% CAGR in passenger revenue over the same period to RMB100bn.

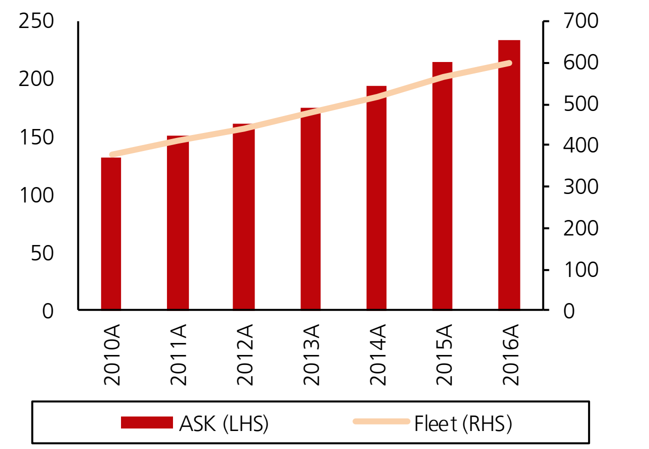
Segmental revenue between 2010 and 2016



Source: Company, DBS Bank estimates

Capacity growth has also been in tandem with fleet expansion. Meanwhile, Air China's total passenger fleet (excluding business jets) grew at a CAGR of 8.1% from 2010-2016 to 601 aircraft, supporting a 9.9% CAGR in ASK over the same period to 233bn passenger-kilometres.

ASK (bn p-km) vs Fleet (no. of passenger aircraft)



Source: Company, DBS Bank estimates

Competitive Strengths

China's sole flag carrier, with strong brand presence and premium positioning. Air China is the country's only flag carrier, with substantial market share in Beijing, the capital city. Backed by a strong product and brand recognition among its customers, Air China is able to achieve higher yields than its peers, which helps its profitability.

Solid earnings track record. Air China has historically been the most profitable of the Big Three carriers in China. The company has been profitable in nine of the last ten financial years, with an average ROE of c. 10%.

Sound balance sheet standing. The company has significantly improved its balance sheet over the last few years, aided by strong profitability and a recent equity fund raising. Air China's net gearing is projected to fall from nearly 2x as at end-2014 to c. 0.7x by end-2018F – the lowest since its IPO in 2004.

Growth Strategies

Enhance position as China's premium carrier. We believe Air China will further look to reinforce its position as the premium carrier in China, and focus more on its premium class segment by improving its product and service offerings.

Expanding with One Belt, One Road. In coordination with the country's One Belt, One Road initiative, Air China also plans to introduce new routes, such as the Beijing to Astana and Zurich routes it launched in 1H17, to support this development.

Growing its network through multiple hubs. We believe Air China will continue to develop its network through the various hubs it has in Beijing, Shanghai, Shenzhen and Chengdu. As at June 2017, Air China operated 408 routes in total, including 287 domestic, 106 international and 15 regional routes. This covered 184 cities in 39 countries and regions in six continents.

Key Risks

Competition. Increased competition, either domestically or on international routes, would impact Air China's load factors or yields, and therefore lower its profitability.

Fuel price. We believe Air China has currently no intentions to hedge its jet fuel exposure, and should jet fuel prices rise more significantly than expected, this would impact its profitability if it cannot fully pass on the higher costs.

Forex. As at end June 2017, c. 44% (or RMB42.5bn) of Air China's total debt was denominated in US dollars. Should the RMB depreciate significantly against the US dollar, Air China would have to pay higher interest costs as well as report foreign exchange losses, which would lower its reported net profit.

CRITICAL FACTORS TO WATCH

Capacity to grow 28.5% by 2019F on fleet growth of 17% from 2016. Based on Air China's announced plans for its fleet over the next few years, its passenger aircraft fleet is expected to grow to 703 (excluding freighters and business jets) by 2019F, underpinning a 28.5% growth in Available Seat Kilometres (ASKs) to c. 300bn p-kms (passenger kilometres).

In terms of geographical split, we project capacity on international routes to grow 12% in 2017F, and 14% per annum in 2018F and 2019F while domestic routes grow by 6% per annum between 2017F and 2019F, along with 5% per annum growth in the Hong Kong, Macau and Taiwan routes.

RPKs to grow in tandem with capacity on stable load factors . We assume that load factors stay stable from 2016-2019F at 80.6%, and thus Revenue Passenger Kilometres (RPKs) should grow from 188bn p-kms in 2016 to 241bn p-kms by 2019F, representing a CAGR of 8.5% over the period.

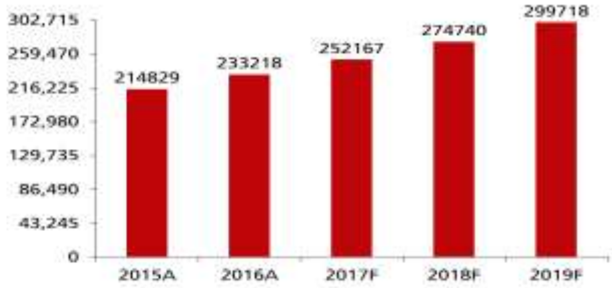
Yields to see modest increase as jet fuel price rises . The average price of jet fuel FOB Singapore fell from US$123 per barrel in 2013 to US$53 per barrel in 2016, and is averaging around US$63 per barrel in the first ten months of 2017. We project the average price of jet fuel FOB Singapore to rise from US$65 per barrel in 2017F to US$75 per barrel in 2018F and US$80 per barrel in 2019F.

Passenger yield already showed a modest increase in the first half of 2017, and we project that passenger yield will improve from RMB 54cts in 2017F to RMB 56.2cts in 2018F and RMB 57.7cts in 2019F, as airlines seek to pass on the higher cost of fuel to passengers, and with many of the country's top domestic routes now liberalised.

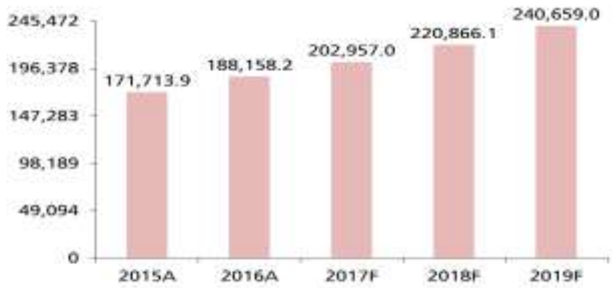
Core earnings to improve steadily from 2017F-2019F. While we project FY17F EBIT to fall by 19% y-o-y to RMB14,183m due to a 23% increase in the average cost of jet fuel with yields remaining flat, we expect FY18F and FY19F EBIT to grow by 14% to RMB16,5159 and by 16% to RMB18,745m respectively on a more moderate increase in fuel and improvement in yields.

Coupled with lower interest costs and better contributions from associates and JVs (namely Cathay Pacific), we project Air China's net profit to grow by 20% per annum from 2016-2019F to RMB12,664m.

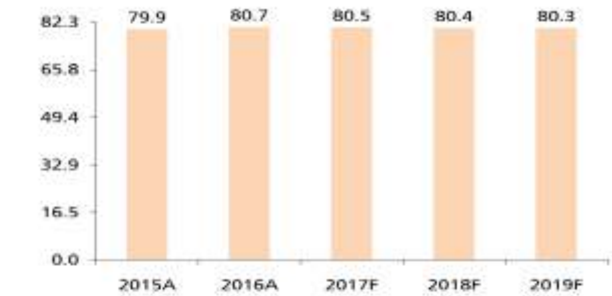
ASK (m p-km)



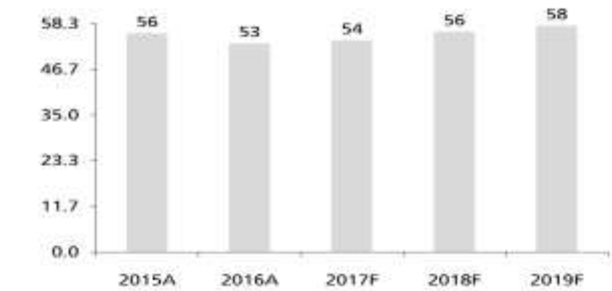
RPK (m p-km)



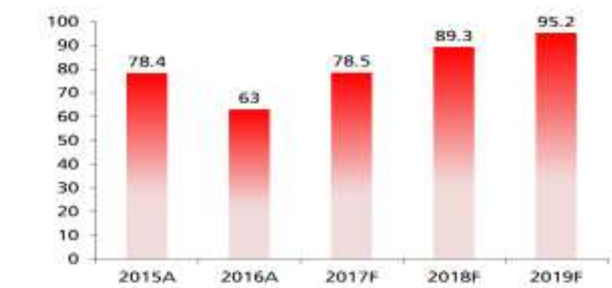
Passenger Load Factor (%)



Passenger Yield (RMB cts per RPK)



All-in Jet Fuel Price (US$/bbl)



Source: Company, DBS Vickers

Balance Sheet:

Balance sheet improving and stronger than ever. We project Air China's net gearing (total net debt over total shareholders' equity) to improve from 1.29x at the end of 2016 to c. 0.5x by end-2019F, following an 'A' share equity fund raising of RMB11.2bn in March 2017, and despite the expected continued investment in fleet expansion as operating cash flows are projected to remain firm and as retained earnings grow.

In its 2016 Annual Report, Air China disclosed that it expects to add a total of 56, 46, and 55 aircraft in 2017F, 2018F and 2019F respectively while phasing out 18, 17 and 20 aircraft. We assume that Air China will finance the majority of its capital expenditures through internal resources, averaging c. RMB16bn per year from 2017F-2019F.

Share Price Drivers:

Air travel demand in China to remain robust. We believe that continued economic growth in China, as well as rising disposable incomes in the country, will continue to spur firm demand for air travel, both domestically and for international flights.

Yield improvement and solid load factors also positives. Given the expected firm demand, we expect Air China to be able to pass on the higher cost of fuel in the form of higher ticket prices. Meanwhile, we also project load factors to stay near record highs.

Key Risks:

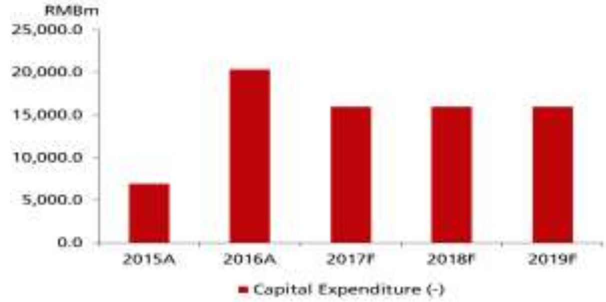
Key downside risks are: 1) if jet fuel prices increase more significantly than expected, this would substantially increase Air China's costs and hence its earnings, and 2) if there is an over-supply of seat capacity in the market, this would put pressure on yields and thereform impact Air China's revenues and earnings.

Company Background:

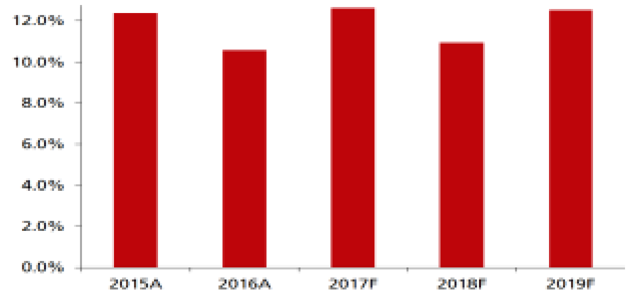
Founded in 1988 and headquartered in Beijing, Air China is the sole flag carrier of China and it completed its listing on the Hong Kong and London Stock Exchanges in 2004. Air China joined the Star Alliance in 2007, with its main hub in Beijing and secondary hubs in Shanghai and Chengdu.

Leverage & Asset Turnover (x)

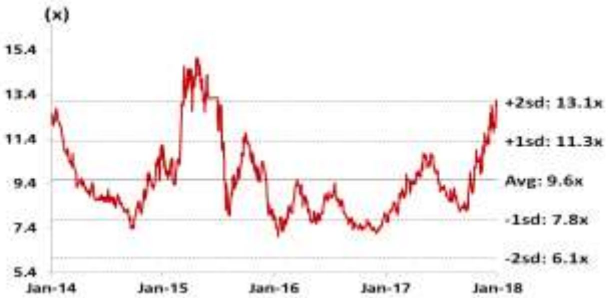
Capital Expenditure



ROE



Forward PE Band



PB Band

Source: Company, DBS Vickers

Key Assumptions

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
ASK (m p-km)	193,631.5	214,828.7	233,218.1	252,167.3	274,739.9	299,717.6
RPK (m p-km)	154,683.9	171,713.9	188,158.2	202,957.0	220,866.1	240,659.0
Passenger Load Factor (%)	79.9	79.9	80.7	80.5	80.4	80.3
Passenger Yield (RMB cts per RPK)	59.9	55.9	53.3	54.0	56.2	57.7
All-in Jet Fuel Price (US$/bbl)	127.0	78.4	63.0	78.5	89.3	95.2

Source: Company, DBS Vickers

Segmental Breakdown (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Revenues (RMB m)						
Passenger	92,599	95,921	100,280	109,658	124,197	138,974
Cargo	8,786	8,447	8,305	9,326	9,840	10,336
Others	4,580	5,689	6,560	6,920	7,300	7,702
Total	**105,965**	**110,057**	**115,145**	**125,903**	**141,337**	**157,012**

Source: Company, DBS Vickers

Income Statement (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Revenue	105,96	110,05	115,14	125,90	141,33	157,01
Cost of Goods Sold	(98,708	(94,505	(97,612	(111,72	(125,17	(138,26
Gross Profit	**7,257**	**15,552**	**17,533**	**14,183**	**16,159**	**18,745**
Other Opng (Exp)/Inc	0	0	0	0	0	0
Operating Profit	**7,257**	**15,552**	**17,533**	**14,183**	**16,159**	**18,745**
Other Non Opg (Exp)/Inc	(360)	(5,156)	(4,234)	1,350	0	0
Associates & JV Inc	859	1,620	22	(411)	326	1,074
Net Interest (Exp)/Inc	(2,621)	(2,661)	(3,108)	(2,661)	(2,488)	(2,282)
Dividend Income	0	0	0	0	0	0
Exceptional Gain/(Loss)	0	0	0	0	0	0
Pre-tax Profit	**5,135**	**9,355**	**10,213**	**12,460**	**13,997**	**17,537**
Tax	(801)	(1,846)	(2,454)	(2,741)	(3,079)	(3,858)
Minority Interest	(482)	(446)	(950)	(768)	(875)	(1,015)
Preference Dividend	0	0	0	0	0	0
Net Profit	**3,852**	**7,063**	**6,809**	**8,951**	**10,043**	**12,664**
Net Profit before Except.	3,852	7,063	6,809	8,951	10,043	12,664
EBITDA	19,149	25,027	26,795	29,901	32,461	37,111
Growth						
Revenue Gth (%)	7.9	3.9	4.6	9.3	12.3	11.1
EBITDA Gth (%)	7.0	30.7	7.1	11.6	8.6	14.3
Opg Profit Gth (%)	76.2	114.3	12.7	(19.1)	13.9	16.0
Net Profit Gth (%)	18.0	83.3	(3.6)	31.5	12.2	26.1
Margins & Ratio						
Gross Margins (%)	6.8	14.1	15.2	11.3	11.4	11.9
Opg Profit Margin (%)	6.8	14.1	15.2	11.3	11.4	11.9
Net Profit Margin (%)	3.6	6.4	5.9	7.1	7.1	8.1
ROAE (%)	7.1	12.4	10.6	12.6	11.0	12.5
ROA (%)	1.8	3.3	3.1	4.0	4.3	5.2
ROCE (%)	3.4	6.9	7.2	5.8	6.3	7.0
Div Payout Ratio (%)	19.7	11.3	23.3	19.5	20.2	18.4
Net Interest Cover (x)	2.8	5.8	5.6	5.3	6.5	8.2

Source: Company, DBS Vickers

Interim Income Statement (RMB m)

FY Dec	2H2014	1H2015	2H2015	1H2016	2H2016	1H2017
Revenue	56,033	51,918	58,139	53,984	61,161	58,746
Cost of Goods Sold	(51,119)	(45,281)	(49,224)	(45,987)	(51,625)	(52,939)
Gross Profit	**4,914**	**6,637**	**8,915**	**7,997**	**9,536**	**5,808**
Other Oper. (Exp)/Inc	0	0	0	0	0	0
Operating Profit	**4,914**	**6,637**	**8,915**	**7,997**	**9,536**	**5,808**
Other Non Opg (Exp)/Inc	(360)	0	(5,156)	0	(4,234)	0
Associates & JV Inc	614	639	981	259	(237)	(401)
Net Interest (Exp)/Inc	(592)	(1,479)	(1,182)	(3,217)	109	(233)
Exceptional Gain/(Loss)	0	0	0	0	0	0
Pre-tax Profit	**4,575**	**5,797**	**3,559**	**5,039**	**5,174**	**5,174**
Tax	(699)	(1,224)	(621)	(1,245)	(1,209)	(1,253)
Minority Interest	(534)	(370)	(76)	(326)	(623)	(580)
Net Profit	**3,342**	**4,203**	**2,861**	**3,468**	**3,341**	**3,341**
Net profit bef Except.	3,342	4,203	2,861	3,468	3,341	3,341
Growth						
Revenue Gth (%)	7.4	4.0	3.8	4.0	5.2	8.8
Opg Profit Gth (%)	82.6	183.2	81.4	20.5	7.0	(27.4)
Net Profit Gth (%)	57.7	723.4	(14.4)	(17.5)	16.8	(3.7)
Margins						
Gross Margins (%)	8.8	12.8	15.3	14.8	15.6	9.9
Opg Profit Margins (%)	8.8	12.8	15.3	14.8	15.6	9.9
Net Profit Margins (%)	6.0	8.1	4.9	6.4	5.5	5.7

Source: Company, DBS Vickers

Balance Sheet (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Net Fixed Assets	148,193	155,991	158,013	159,234	159,258	157,966
Invts in Associates & JVs	13,102	12,591	15,309	14,898	15,223	16,297
Other LT Assets	27,452	24,838	30,743	30,743	30,743	30,743
Cash & ST Invts	9,345	7,793	7,322	13,723	20,372	29,074
Inventory	1,100	1,731	1,681	1,897	2,130	2,366
Debtors	2,834	3,661	3,286	3,449	3,872	4,732
Other Current Assets	9,644	7,026	7,697	7,697	7,697	7,697
Total Assets	**211,670**	**213,631**	**224,051**	**231,641**	**239,296**	**248,875**
ST Debt	32,669	17,266	32,075	25,575	24,075	22,075
Creditors	9,789	9,271	10,832	12,073	13,553	15,486
Other Current Liab	19,968	24,011	21,273	21,273	21,273	21,273
LT Debt	80,263	86,791	74,129	67,629	66,129	64,129
Other LT Liabilities	9,102	9,770	9,345	9,345	9,345	9,345
Shareholder's Equity	54,274	59,748	68,799	87,380	95,680	106,311
Minority Interests	5,604	6,775	7,597	8,365	9,240	10,256
Total Cap. & Liab.	**211,670**	**213,631**	**224,051**	**231,641**	**239,296**	**248,875**
Non-Cash Wkg. Capital	(16,179)	(20,863)	(19,441)	(20,302)	(21,127)	(21,964)
Net Cash/(Debt)	(103,58	(96,264)	(98,882)	(79,481)	(69,832)	(57,130)
Debtors Turn (avg days)	9.8	10.8	11.0	9.1	9.5	10.0
Creditors Turn (avg days)	42.1	42.7	43.6	41.2	42.8	43.8
Inventory Turn (avg days)	4.5	6.3	7.4	5.6	6.7	6.8
Asset Turnover (x)	0.5	0.5	0.5	0.6	0.6	0.6
Current Ratio (x)	0.4	0.4	0.3	0.5	0.6	0.7
Quick Ratio (x)	0.2	0.2	0.2	0.3	0.4	0.6
Net Debt/Equity (X)	1.7	1.4	1.3	0.8	0.7	0.5
Net Debt/Equity ex MI (X)	1.9	1.6	1.4	0.9	0.7	0.5
Capex to Debt (%)	11.6	6.6	19.2	17.2	17.7	18.6
Z-Score (X)	1.1	0.0	NA	NA	NA	NA

Source: Company, DBS Vickers

Cash Flow Statement (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Pre-Tax Profit	5,135	9,355	10,213	12,460	13,997	17,537
Dep. & Amort.	11,393	13,011	13,474	14,779	15,975	17,293
Tax Paid	(529)	(1,395)	(2,103)	(2,741)	(3,079)	(3,858)
Assoc. & JV Inc/(loss)	(859)	(1,620)	(22)	411	(326)	(1,074)
Chg in Wkg.Cap.	(476)	4,472	(1,522)	861	825	837
Other Operating CF	(1,102)	4,749	7,328	0	0	0
Net Operating CF	**13,562**	**28,572**	**27,366**	**25,770**	**27,392**	**30,736**
Capital Exp.(net)	(13,123)	(6,903)	(20,372)	(16,000)	(16,000)	(16,000)
Other Invts.(net)	627	(233)	477	0	0	0
Invts in Assoc. & JV	0	(59)	0	0	0	0
Div from Assoc & JV	439	781	628	0	0	0
Other Investing CF	1,522	(374)	254	0	0	0
Net Investing CF	**(10,535)**	**(6,788)**	**(19,013)**	**(16,000)**	**(16,000)**	**(16,000)**
Div Paid	(760)	(795)	(1,588)	(1,588)	(1,743)	(2,033)
Chg in Gross Debt	(7,175)	(22,585)	(7,194)	(13,000)	(3,000)	(4,000)
Capital Issues	0	0	0	11,218	0	0
Other Financing CF	0	0	0	0	0	0
Net Financing CF	**(7,936)**	**(23,381)**	**(8,781)**	**(3,370)**	**(4,743)**	**(6,033)**
Currency Adjustments	7	96	138	0	0	0
Chg in Cash	(4,902)	(1,502)	(290)	6,400	6,649	8,702
Opg CFPS (RMB)	1.07	1.84	2.21	1.71	1.83	2.06
Free CFPS (RMB)	0.03	1.66	0.53	0.67	0.78	1.01

Source: Company, DBS Vickers

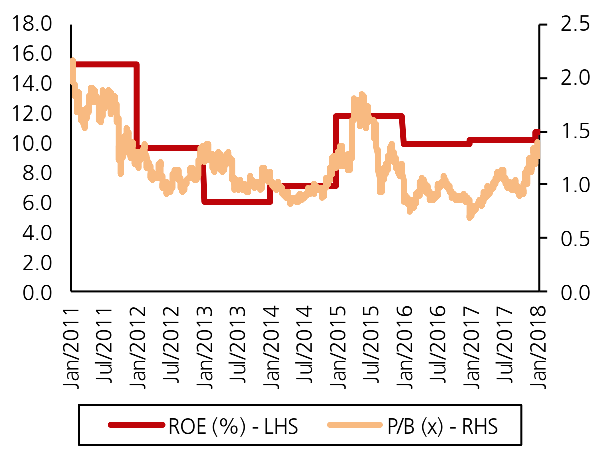
Valuation

12-month target price of HK$14.40 for Air China 'H'. Our target price of HK$14.40 for Air China is based on 1.67x FY19 P/BV against a projected ROE of 12.54% for FY19 based on an assumed cost of equity of 7.5%.

Historically (since January 2010), Air China has traded at an average of 1.29x P/BV, with a standard deviation of 0.47x. Our target multiple of 1.67x P/BV at +0.8x standard deviation (SD) for Air China, which we believe is warranted as explained aside.

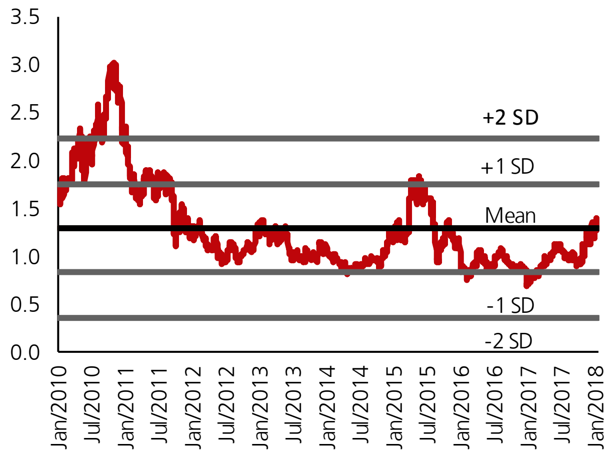
Since 2010, Air China has traded at an implied Cost of Equity of 9.4% but looking ahead we believe that a lower Cost of Equity of 7.5% is justified given 1) the company's net gearing is projected to fall from 1.4x at end-FY16 to 0.5x by end-FY19F, 2) a positive outlook for both China's aviation industry and Air China's earnings prospects, and 3) a sustained dividend payout (albeit at just 20%), with potential for more.

P/B vs ROE



Source: Thomson Reuters, DBS Vickers

PB band chart

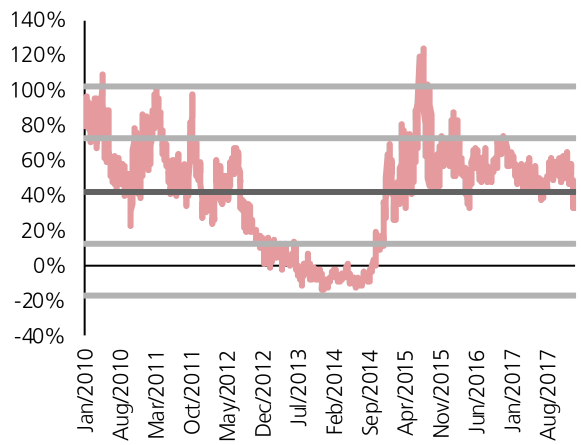


Source: Thomson Reuters, DBS Vickers

12-month target price of RMB15.86 for Air China 'A'. Our target price for Air China 'A' share is based on a 30% premium to our Air China 'H' share target price, which is around -0.5SD to its historical average premium.

Historically, China Air 'A' share has traded at an average premium of 42%, and median of 50%, over China Air 'H' share.

China Air 'A' share premium over China Air 'H'



Source: ThomsonReuters, DBS Bank estimates

China / Hong Kong Company Guide

China Eastern Airlines

Version 1 | Bloomberg: 670 HK EQUITY | 600115 CH Equity | Reuters: 0670.HK | 600115.CH

Refer to important disclosures at the end of this report

DBS Group Research . Equity

31 Jan 2018

H: BUY (Initiate coverage)

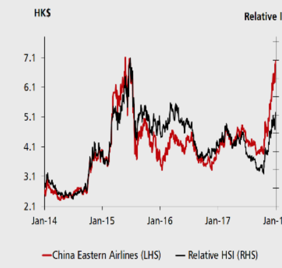
Last Traded Price (H) (30 Jan 2018):HK$6.90 (HSI : 32,607)
Price Target 12-mth (H): HK$8.60 (25% upside)

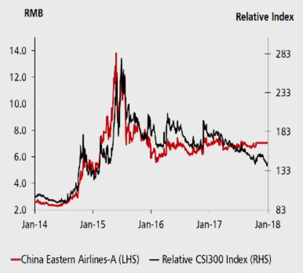
A: BUY (Initiate coverage)

Last Traded Price (A) (30 Jan 2018):RMB8.47 (CSI300 Index : 4,256)
Price Target 12-mth (A): RMB10.20 (20% upside)

Analyst
Paul YONG, CFA +65 6682 3712
paulyong@dbs.com

Price Relative





Forecasts and Valuation (H Shares)

FY Dec (RMB m)	2016A	2017F	2018F	2019F
Turnover	104,373	112,436	125,922	142,957
EBITDA	21,243	27,404	28,050	31,950
Pre-tax Profit	6,497	10,170	9,744	12,578
Net Profit	4,498	7,421	6,915	8,926
Net Pft (Pre Ex) (core profit)	4,498	7,421	6,915	8,926
EPS (RMB)	0.33	0.51	0.48	0.62
EPS (HK$)	0.40	0.63	0.59	0.76
EPS Gth (%)	(8.0)	57.5	(6.8)	29.1
Diluted EPS (HK$)	0.40	0.63	0.59	0.76
DPS (HK$)	0.06	0.06	0.06	0.06
BV Per Share (HK$)	4.23	4.80	5.33	6.03
PE (X)	17.2	10.9	11.7	9.1
P/Free CF (X)	nm	28.5	37.0	14.1
EV/EBITDA (X)	9.2	7.2	7.0	6.1
Net Div Yield (%)	0.9	0.9	0.9	0.9
P/Book Value (X)	1.6	1.4	1.3	1.1
Net Debt/Equity (X)	2.2	1.9	1.7	1.4
ROAE (%)	10.4	14.1	11.7	13.4
Earnings Rev (%):		New	New	New
Consensus EPS (RMB)		0.44	0.41	0.54
Other Broker Recs:		B: 12	S: 5	H: 5

ICB Industry: Consumer Services
ICB Sector: Travel & Leisure
Principal Business: China Eastern Airline is a major airline company in China, mainly engagiing in passenger and cargo service.

Source of all data on this page: Company, DBSV, Thomson Reuters, HKEX

Quality earnings growth ahead

- **Big beneficiary of price liberalisation**
- **Focusing on passenger business after selling the loss-making logistic arm**
- **We forecast EPS CAGR of 25.7% over FY16-19F**
- **Initiate coverage with a BUY, TP HK$8.60 for 'H' shares and TP of RMB10.20 for 'A' shares**

Buy China Eastern Airlines (CEA) for its high quality earnings growth ahead. We project CEA to see robust EPS CAGR of 25.7% over FY16-FY19F, driven by firm growth in demand for air travel in China and yield improvement from fare liberalisation in the domestic market. ROE is projected to reach 13.4% by FY19F, driven by firm core earnings growth over the next few years. Note that in 1H17, CEA booked a gain of RMB1.7bn on the sale of its logistics business.

Where we differ: We have higher-than-consensus forecasts as we are more positive on yield improvement, which would help to offset higher fuel costs.

Potential catalysts: CEA's share price can further re-rate as numbers continue to show firm growth in air travel, and an improvement in its yields. A potential equity fund raising to improve its balance sheet could also be a positive catalyst.

Valuation:
Our target price of HK$8.60 for CEA 'H' shares is derived on 1.49x FY19F P/BV, based on an assumed cost of equity of 9% while the target price of RMB10.20 for CEA 'A' shares is based on a 40% premium to the target price for CEA 'H', which is around -1 SD of the historical trading premium.

Key Risks to Our View:
Like all other airlines, CEA is vulnerable to a spike in oil prices (as it does not hedge) and increased competition. The company's earnings could also be affected by a substantial depreciation of the RMB vs. USD.

At A Glance

Issued Capital - H shares (m shs)	4,659
- Non H shares (m	9,808
H shs as a % of Total	32
Total Mkt. Cap (HK$m/US$m)	134,635 / 17,222
Major Shareholders	
China Eastern Air (%)	38.23
Major H Shareholders	
CES Global Holdings (Hong Kong)	62.63
JPMorgan Chase & Co.	10.00
LUO YI	6.20
H Shares-Free Float (%)	27.37
3m Avg. Daily Val. (US$m)	18.9

SWOT Analysis

Strengths	Weaknesses
• Prevails in most high-quality domestic routes. • Multiple strategic partnerships with first-mover advantage for SOE Reform. • Dominant in Yangtze River Delta region, the most developed area of China with strong air travel demand. • Firmly backed by the government.	• Lagging in long haul market. • Volatile cost control and profit performance. • Highly concentrated income source.

Opportunities	Threats
• China air travel demand remains strong with tremendous potential in international market. • Yield and load factor to be improved as the air fare marketisation process and supply-side reform progresses. • Network enlarged by Beijing Daxing International Airport.	• Competition from foreign competitors during expansion in international market. • Moving to Beijing Daxing International Airport might cause market share loss in the Beijing-Shanghai route market. • Rising jet fuel price.

Source: DBS Vickers

Company Background

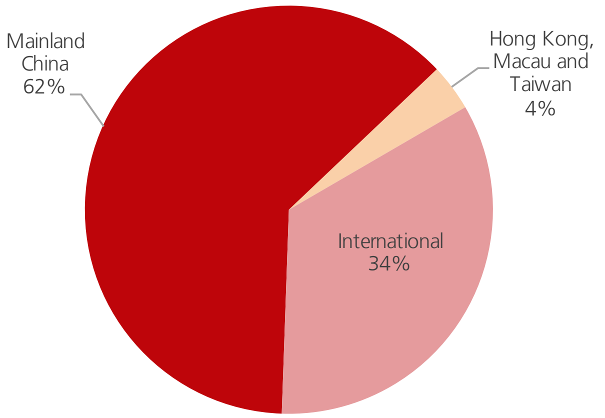
A major player based in Shanghai. China Eastern Airlines (CEA) was established in 1995 and listed on the New York, Hong Kong and Shanghai stock market all in 1997. CEA joined the SkyTeam in 2011, with its main hubs in Shanghai, Beijing, Xi'an and Kunming. In 2010, China Eastern Airlines merged with Shanghai Airlines, allowing it to move closer to Air China and China Southern Airlines in terms of scale. In 2015, Delta airlines acquired a 3.55% stake in CEA and became the largest international shareholder. In 2016, CEA issued RMB3bn equity to Ctrip. It also sold out its logistic subsidiary in 2017 and invested in Air France KLM. In 2H17, CEA announced strategic partnerships with both Tencent and Alibaba.

CEA has interests in a number of airlines including controlling stakes in CEA Jiangsu, CEA Wuhan, CEA Yunan, Shanghai Airlines and China United Airlines as well as associate stakes in non-airline companies like Shanghai Pratt & Whitney Aircraft Engine Maintenance and joint-ventures in other aviation service firms.

In 2016, CEA and its subsidiaries carried 101.7m passengers on over 822,400 flights and carried c. 1.40m tonnes in cargo and mail. As at the end of the year, the group operated a fleet of 572 passenger aircraft with an average age of 5.4 years and nine cargo aircraft with an average age of 7.4 years.

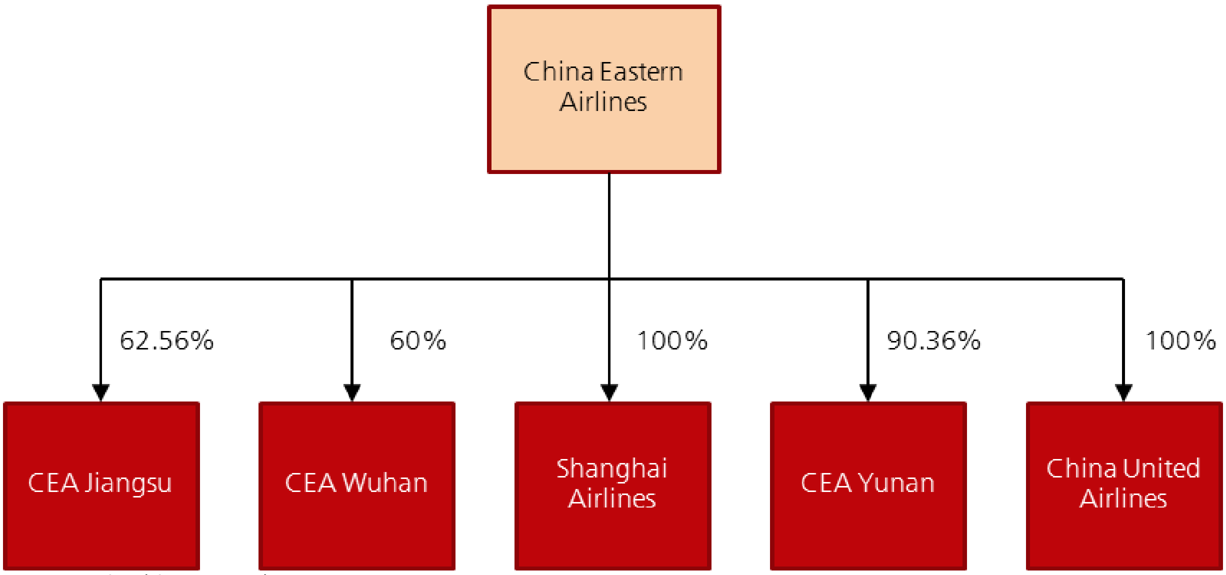
CEA recorded total revenues of RMB99bn in 2016, of which 84.5% was from passenger revenue, 6.0% from cargo revenue, and the remainder from Others. About 62.3% of CEA's total revenues was from Mainland China, with 33.9% from the international market and 3.7% from Hong Kong, Macau and Taiwan.

Revenue contribution by geography in 2016: RMB99bn



Source: Company, DBS Bank estimates

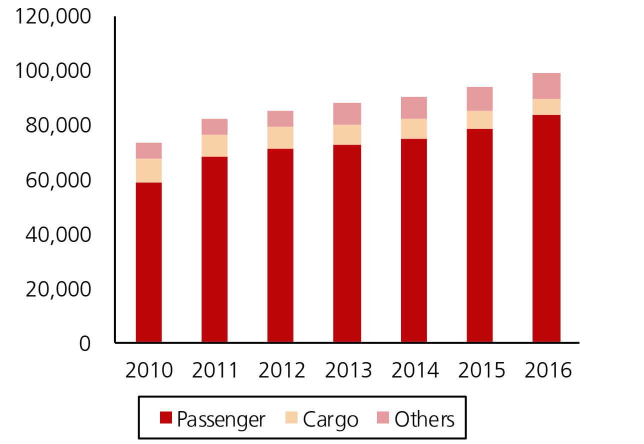
China Eastern Airlines and its key subsidiaries, associates and joint ventures



Source: Air China Annual Report 2016

Strengthening passenger business offsets the narrowed cargo income. CEA's total revenue grew at a 5.0% CAGR from 2010-2016 to RMB99bn, led by a 6.0% CAGR in passenger revenue over the same period to RMB84bn. While its cargo revenue compressed by 29% during this period, CEA sold the cargo business to its parent company in 2016.

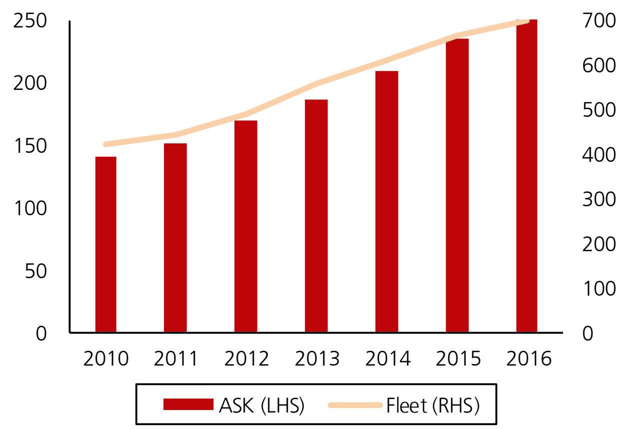
Segmental revenue from 2010-2016



Source: Company, DBS Bank estimates

Capacity ascended with the fleet expansion. Meanwhile, CEA's total passenger fleet (excluding freighters) grew at a CAGR of 9.2% from 2010-2016 to 572 aircraft, supporting a 9.5% CAGR in ASK over the same period to 206bn passenger-kilometres.

ASK (bn p-km) vs Fleet (no. of passenger aircraft)



Source: Company, DBS Bank estimates

Competitive Strengths

Biggest benefiary of price liberalisation. Compared with Air China and China Southern Airlines, CEA currently has the most exposure to the top 10 domestic routes in China, including Beijing-Shanghai and Shanghai-Shenzhen. This should help CEA's core earnings to improve significantly.

Dominant position in Yangtze River Delta. CEA is based in Shanghai, which lies in the most developed region of China, Yangtze River Delta region. The advanced economic status triggers the robust demand for air traffic. CEA owns c.50% share in the most popular domestic route, namely Shanghai-Beijing.

Strong government support. CEA received the highest amount of subsidies of up to RMB4.5bn in 2016 compared with its peers, mostly due to the operation of feeder routes.

Growth Strategies

Focus on passenger business. We believe CEA will not step into the cargo business again in the future after selling the logistic arm. The belly operation of aircrafts will be outsourced to a third party It is expected to focus all its attention on the passenger market in the long term.

Expanding with One Belt, One Road. To echo the OBOR initiative, CEA plans to further promote the European Profit Plan and Pacific Plan to keep introducing new routes in Europe and North America. It also aims to strenghthen its hubs in Kunming and Xi'an.

Intensifying its network with new Beijing airport. As CEA is expected to have a 40% share in the Beijing Daxing International Airport operating in 2019, it plans to introduce 150-200 passenger jets to expand its international market share from the new hub.

Key Risks

Competition. Increased competition, either domestically or on international routes, would impact the load factors or yields of CEA, and therefore lower its profitability.

Fuel price. We believe CEA has currently no intentions to hedge its jet fuel exposure, and should jet fuel prices rise more significantly than expected, this would impact its profitability if it cannot fully pass on the higher costs.

Forex. As at 31 December 2016, c. 45% (or RMB52.9bn) of CEA's total debt was denominated in US dollars. Should the RMB depreciate significantly against the US dollar, CEA would have to pay higher interest costs as well as report foreign exchange losses, which would lower its reported net profit.

CRITICAL FACTORS TO WATCH

Capacity to grow 34% by 2019F on fleet growth of 31% from 2016. Based on CEA's announced plans for the next few years, its passenger aircraft fleet is expected to grow to 751 (excluding freighters) by 2019F, underpinning a 34.0% growth in Available Seat Kilometres (ASKs) to 276bn p-kms (passenger kilometres).

By geographical distribution, we project capacity on international routes to grow 10% in 2017F, and 14% in 2018F and 20% in 2019F while domestic routes grow by 8% per annum between 2017F and 2019F, along with 4% in 2017F and 3% per annum growth in 2018F and 2019F for the Hong Kong, Macau and Taiwan routes.

RPKs to grow in line with capacity on stable load factors . The load factor is assumed to stay at 81.5% for 2017F and 2018F with 81.1% for 2019F respectively, and thus Revenue Passenger Kilometres (RPKs) should grow from 168bn p-kms in 2016 to 224bn p-kms by 2019F, representing a CAGR of 10.2% over the period.

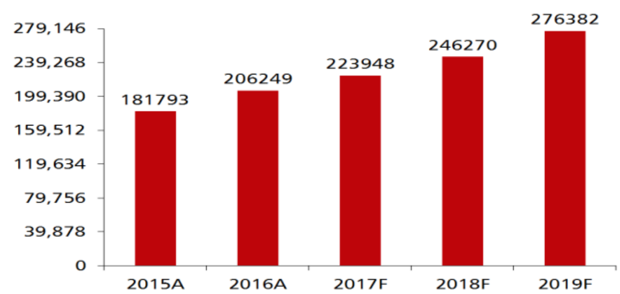
Yields to see modest increase as jet fuel price rises . The average price of jet fuel FOB Singapore fell from US$123 per barrel in 2013 to US$53 per barrel in 2016, and is averaging around US$63 per barrel in the first ten months of 2017. We project the average price of jet fuel FOB Singapore to rise from US$65 per barrel in 2017F to US$75 per barrel in 2018F and US$80 per barrel in 2019F.

We project that passenger yield will improve from RMB 51.8cts in 2017F to RMB 53.9cts in 2018F and RMB 55.2cts in 2019F, as airlines seek to pass on the higher cost of fuel to passengers and given fare liberalisation on major domestic routes.

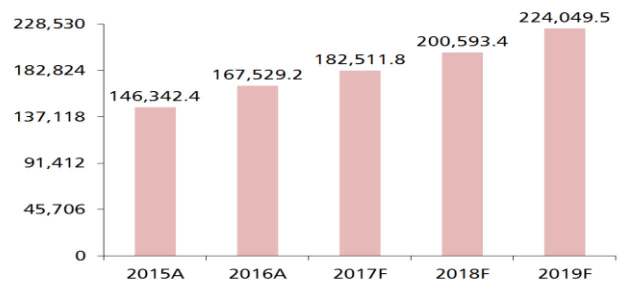
Core earnings to improve steadily from 2017F-2019F. 2017F EBIT is expected to rise 4.1% to RMB12,995m, helped by additional gains of selling the logistic arm but offset by higher fuel costs. With an expected 23% increase in the average cost of jet fuel, we expect 2018F EBIT to decline 2.2% to RMB12,715m and grow 21.7% to RMB15,476m in FY19F on a more moderate increase in fuel and large improvement in yields.

Coupled with slightly higher interest costs and strong economic support from the government, we project CEA's net profit to grow from RMB4,498m in FY16 to RMB8,929m by 2019F.

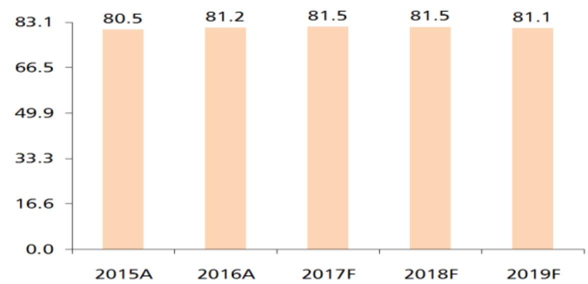
ASK (m p-km)



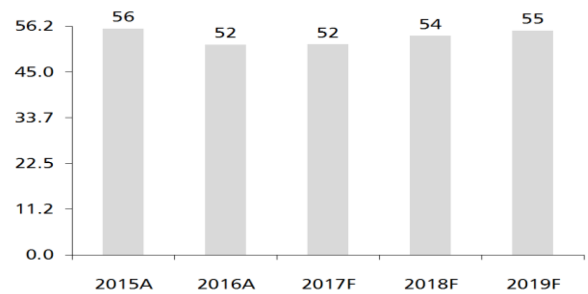
RPK (m p-km)



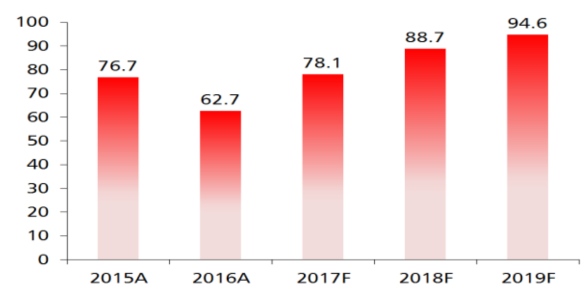
Passenger Load Factor (%)



Passenger Yield (RMB cts per rpk)



All-in jet fuel price (US$/bbl)



Source: Company, DBS Vickers

Balance Sheet:

Enhanced balance sheet still has room to improve. We project CEA's net gearing (total net debt over total shareholders' equity) to improve from 2.22x at the end of 2016 to 1.41x by end-2019F, as a result of deleveraging, and despite the expected continued investment in fleet expansion as operating cash flows are projected to remain firm and as retained earnings grow.

In its 2016 Annual Report, CEA disclosed that it expects to add a total of 73, 67, and 72 aircraft in 2017F, 2018F and 2019F respectively while phasing out 18, 15 and none. We assume that CEA will finance the majority of its capital expenditures through internal resources, but the company may also perform another equity fund raising. The capex is expected to average c. RMB20bn per year from 2017F-2019F.

Share Price Drivers:

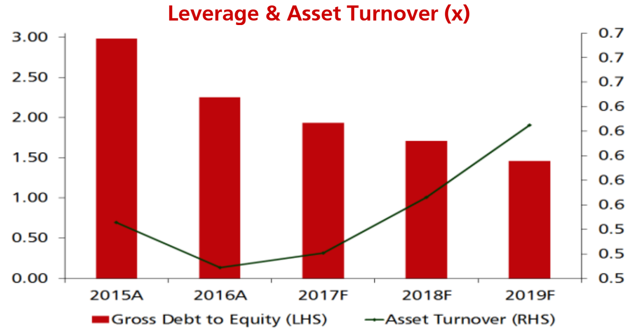
Air travel demand in China to remain robust. We believe that continued economic growth in China, as well as rising disposable incomes in the country, will continue to spur firm demand for air travel, both domestically and for international flights.

Yield improvement and solid load factors also positives. Given the expected firm demand and government bailout, we expect CEA to be able to mitigate the effect from the higher cost of fuel. Meanwhile, we also project load factors to stay near record highs.

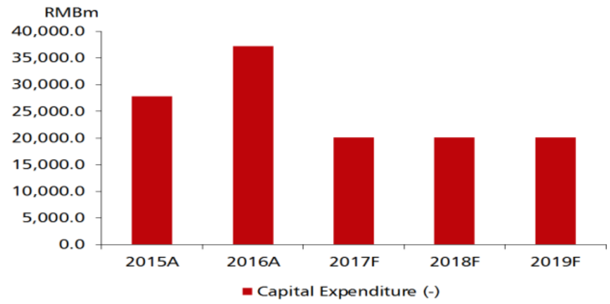
Key Risks:

Key downside risks are: 1) if jet fuel prices increase more significantly than expected, this would substantially increase CEA's costs and hence its earnings, and 2) if there is an oversupply of seat capacity in the market, this would put pressure on yields and therefore impact CEA's revenues and earnings; 3) the absence of equity placement while internal capital is insufficient to support the company's expansion.

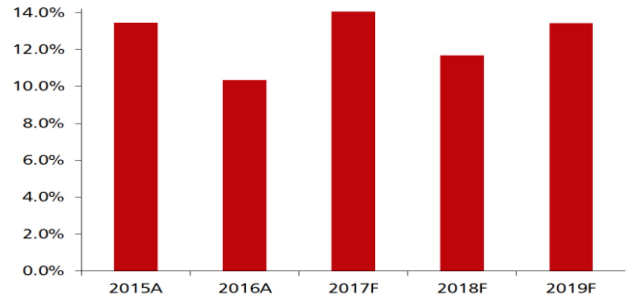
Leverage & Asset Turnover (x)



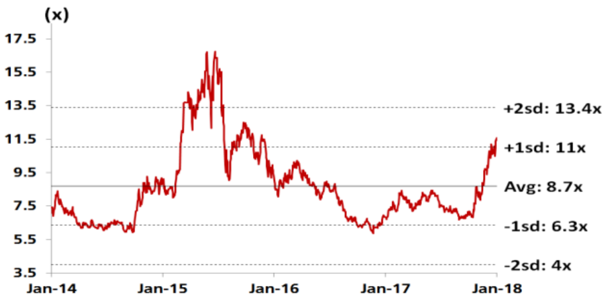
Capital Expenditure



ROE



Forward PE Band



PB Band

Source: Company, DBS Vickers

Segmental Breakdown (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Revenues (RMB m)						
Passenger	75,261	78,585	83,577	94,501	108,099	123,657
Cargo	7,328	6,491	5,977	3,497	3,725	4,028
Others	7,596	8,893	9,350	7,480	7,854	8,247
Total	**93,870**	**99,238**	**104,373**	**112,436**	**125,922**	**142,957**

Source: Company, DBS Vickers

Income Statement (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Revenue	93,870	99,238	104,37	112,43	125,92	142,95
Cost of Goods Sold	(87,812	(86,613	(91,887	(99,828	(113,20	(127,48
Gross Profit	**6,058**	**12,625**	**12,486**	**12,608**	**12,715**	**15,476**
Other Opng (Exp)/Inc	0	0	0	0	0	0
Operating Profit	**6,058**	**12,625**	**12,486**	**12,608**	**12,715**	**15,476**
Other Non Opg (Exp)/Inc	(203)	(4,987)	(3,573)	600	0	0
Associates & JV Inc	127	152	187	196	206	216
Net Interest (Exp)/Inc	(1,869)	(2,123)	(2,603)	(3,235)	(3,177)	(3,115)
Dividend Income	0	0	0	0	0	0
Exceptional Gain/(Loss)	0	0	0	0	0	0
Pre-tax Profit	**4,113**	**5,667**	**6,497**	**10,170**	**9,744**	**12,578**
Tax	(573)	(624)	(1,542)	(2,034)	(2,144)	(2,767)
Minority Interest	(130)	(506)	(457)	(715)	(685)	(885)
Preference Dividend	0	0	0	0	0	0
Net Profit	**3,410**	**4,537**	**4,498**	**7,421**	**6,915**	**8,926**
Net Profit before Except.	3,410	4,537	4,498	7,421	6,915	8,926
EBITDA	15,165	18,257	21,243	27,404	28,050	31,950
Growth						
Revenue Gth (%)	3.2	5.7	5.2	7.7	12.0	13.5
EBITDA Gth (%)	28.0	20.4	16.4	29.0	2.4	13.9
Opg Profit Gth (%)	284.3	108.4	(1.1)	1.0	0.8	21.7
Net Profit Gth (%)	43.7	33.0	(0.9)	65.0	(6.8)	29.1
Margins & Ratio						
Gross Margins (%)	6.5	12.7	12.0	11.2	10.1	10.8
Opg Profit Margin (%)	6.5	12.7	12.0	11.2	10.1	10.8
Net Profit Margin (%)	3.6	4.6	4.3	6.6	5.5	6.2
ROAE (%)	12.0	13.5	10.4	14.1	11.7	13.4
ROA (%)	2.2	2.5	2.2	3.4	3.1	3.9
ROCE (%)	4.2	7.3	5.5	5.5	5.3	6.3
Div Payout Ratio (%)	0.0	0.0	16.4	9.7	10.5	8.1
Net Interest Cover (x)	3.2	5.9	4.8	3.9	4.0	5.0

Source: Company, DBS Vickers

Interim Income Statement (RMB m)

FY Dec	2H2014	1H2015	2H2015	1H2016	2H2016	1H2017
Revenue	47,091	44,371	49,598	46,335	52,569	48,423
Cost of Goods Sold	(42,635)	(38,645)	(42,699)	(39,177)	(47,241)	(42,093)
Gross Profit	**4,456**	**5,726**	**6,899**	**7,158**	**5,328**	**6,330**
Other Oper. (Exp)/Inc	0	0	0	0	0	0
Operating Profit	**4,456**	**5,726**	**6,899**	**7,158**	**5,328**	**6,330**
Other Non Opg (Exp)/Inc	457	(56)	(4,931)	(1,355)	(2,218)	0
Associates & JV Inc	100	68	84	96	91	144
Net Interest (Exp)/Inc	(1,103)	(1,050)	(1,073)	(1,328)	(1,275)	(701)
Exceptional Gain/(Loss)	0	0	0	0	0	0
Pre-tax Profit	**3,910**	**4,688**	**979**	**4,571**	**1,926**	**5,773**
Tax	(414)	(831)	207	(1,041)	(501)	(1,152)
Minority Interest	(98)	(295)	(211)	(300)	(157)	(280)
Net Profit	**0**	**0**	**0**	**0**	**0**	**0**
Net profit bef Except.	3,398	3,562	975	3,230	1,268	4,341
Growth						
Revenue Gth (%)	1.0	3.0	5.3	4.4	6.0	4.5
Opg Profit Gth (%)	209.2	257.4	54.8	25.0	(22.8)	(11.6)
Net Profit Gth (%)	N/A	N/A	N/A	N/A	N/A	N/A
Margins						
Gross Margins (%)	3.7	9.5	12.9	13.9	15.4	10.1
Opg Profit Margins (%)	3.7	9.5	12.9	13.9	15.4	10.1
Net Profit Margins (%)	0.0	0.0	0.0	0.0	0.0	0.0

Source: Company, DBS Vickers

Balance Sheet (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Net Fixed Assets	109,439	133,242	153,180	159,505	164,701	168,769
Invts in Associates & JVs	1,591	2,061	2,060	2,256	2,463	2,679
Other LT Assets	36,556	39,611	41,196	41,004	40,812	40,620
Cash & ST Invts	1,355	9,080	1,695	1,810	1,273	3,305
Inventory	2,259	2,056	2,248	2,299	2,724	3,187
Debtors	3,862	2,867	2,660	3,531	3,906	4,583
Other Current Assets	10,767	9,075	9,285	9,285	9,285	9,285
Total Assets	165,829	197,992	212,324	219,691	225,163	232,428
ST Debt	33,272	44,323	35,289	35,289	35,289	35,289
Creditors	2,083	3,712	3,376	3,600	4,085	4,640
Other Current Liab	25,775	26,352	29,417	31,147	31,257	31,880
LT Debt	64,612	74,788	82,484	80,484	78,484	75,484
Other LT Liabilities	8,316	8,886	9,392	9,392	9,392	9,392
Shareholder's Equity	29,974	37,411	49,450	56,147	62,339	70,541
Minority Interests	1,797	2,520	2,916	3,631	4,317	5,201
Total Cap. & Liab.	165,829	197,992	212,324	219,691	225,163	232,428
Non-Cash Wkg. Capital	(10,970)	(16,066)	(18,600)	(19,632)	(19,428)	(19,465)
Net Cash/(Debt)	(96,529)	(110,03	(116,07	(113,96	(112,50	(107,46
Debtors Turn (avg days)	14.4	12.4	9.7	10.0	10.8	10.8
Creditors Turn (avg days)	12.9	13.9	16.2	14.8	14.3	14.3
Inventory Turn (avg days)	10.6	10.3	9.9	9.7	9.3	9.7
Asset Turnover (x)	0.6	0.5	0.5	0.5	0.6	0.6
Current Ratio (x)	0.3	0.3	0.2	0.2	0.2	0.3
Quick Ratio (x)	0.1	0.2	0.1	0.1	0.1	0.1
Net Debt/Equity (X)	3.0	2.8	2.2	1.9	1.7	1.4
Net Debt/Equity ex MI (X)	3.2	2.9	2.3	2.0	1.8	1.5
Capex to Debt (%)	24.6	23.3	31.6	17.4	17.7	18.2
Z-Score (X)	0.7	0.0	NA	NA	NA	NA

Source: Company, DBS Vickers

Cash Flow Statement (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Pre-Tax Profit	4,113	5,667	6,497	10,170	9,744	12,578
Dep. & Amort.	9,310	10,612	12,335	14,000	15,129	16,258
Tax Paid	(573)	(624)	(1,542)	(2,034)	(2,144)	(2,767)
Assoc. & JV Inc/(loss)	(127)	(152)	(187)	(196)	(206)	(216)
Chg in Wkg.Cap.	(5,245)	5,156	2,399	(698)	(314)	(586)
Other Operating CF	4,818	3,666	5,391	1,730	110	623
Net Operating CF	**12,296**	**24,325**	**24,893**	**22,971**	**22,319**	**25,889**
Capital Exp.(net)	(24,033)	(27,800)	(37,180)	(20,133)	(20,133)	(20,133)
Other Invts.(net)	0	0	0	0	0	0
Invts in Assoc. & JV	0	0	0	0	0	0
Div from Assoc & JV	0	0	0	0	0	0
Other Investing CF	0	0	0	0	0	0
Net Investing CF	**(24,033)**	**(27,800)**	**(37,180)**	**(20,133)**	**(20,133)**	**(20,133)**
Div Paid	0	0	(738)	(723)	(723)	(723)
Chg in Gross Debt	11,112	8,228	96	(2,000)	(2,000)	(3,000)
Capital Issues	0	2,855	8,540	0	0	0
Other Financing CF	0	0	(3,264)	0	0	0
Net Financing CF	**11,112**	**11,083**	**4,634**	**(2,723)**	**(2,723)**	**(3,723)**
Currency Adjustments	(15)	117	268	0	0	0
Chg in Cash	(640)	7,725	(7,385)	115	(537)	2,033
Opg CFPS (RMB)	1.38	1.50	1.63	1.64	1.56	1.83
Free CFPS (RMB)	(0.93)	(0.27)	(0.89)	0.20	0.15	0.40

Source: Company, DBS Vickers

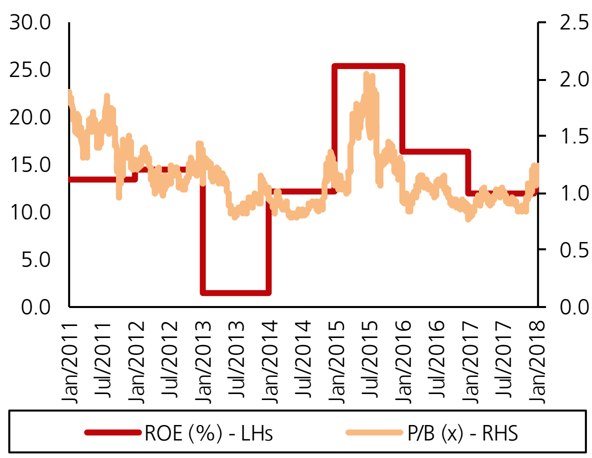
Valuation

12-month target price of HK$8.60 for CEA 'H' shares. Our target price of HK$8.60 for CEA is based on 1.49x FY19 P/BV against a projected ROE of 13.4% for FY19 based on an assumed cost of equity of 9%.

Since January 2010, CEA has traded at an average of 1.3x P/BV, with a standard deviation (SD) of 0.51x. Our target multiple of 1.49x P/BV, which is + 0.4SD for the stock, is warranted given its positive earnings outlook.

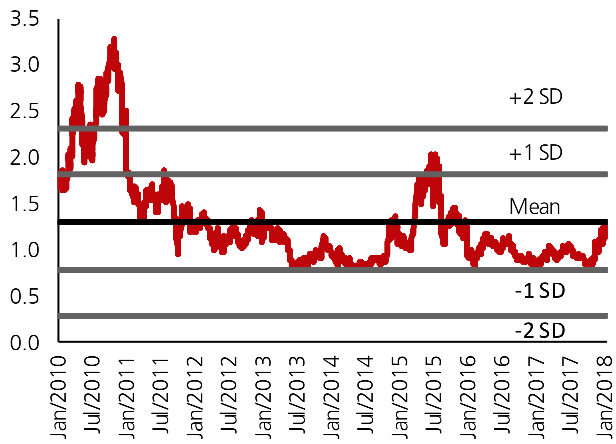
Since 2010, CEA has traded at an implied Cost of Equity of 11.9% but looking ahead we believe that a lower Cost of Equity of 9% is justified given 1) the company's net gearing is projected to fall from 2.2x at end-FY16 to 1.4x by end-FY19F, and 2) a positive outlook for both China's aviation industry and CEA's earnings prospects.

P/B vs ROE



Source: Thomson Reuters, DBS Vickers

PB band chart

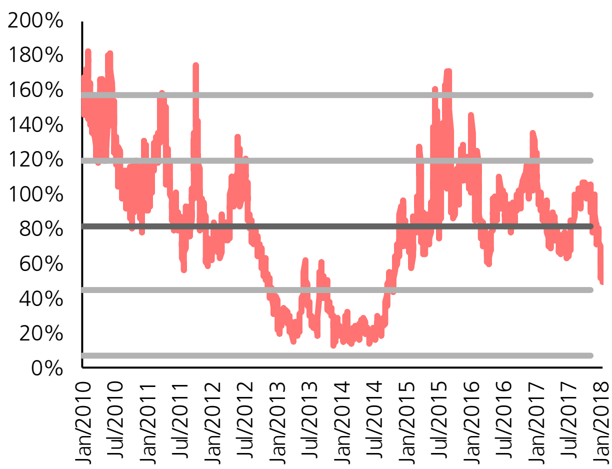


Source: Thomson Reuters, DBS Vickers

12-month target price of RMB10.20 for CEA 'A' shares. Our target price for CEA 'A' shares is based on a 40% premium to our CEA 'H' share target price, which is c. -1SD of its historical trading premium.

Historically, CEA 'A' shares have traded at an average premium of 82%, with an SD of 38%.

China Eastern Air 'A' share premium over 'H'



Source: ThomsonReuters, DBS Bank estimates

China / Hong Kong Company Guide

China Southern Airlines

Version 1 | Bloomberg: 1055 HK Equity | 600029 CH Equity | Reuters: 1055.HK | 600029.CH

Refer to important disclosures at the end of this report

DBS Group Research . Equity 31 Jan 2018

H: BUY (Initiate coverage)

Last Traded Price (H) (30 Jan 2018):HK$9.92 (HSI : 32,607)
Price Target 12-mth (H): HK$11.90 (20% upside)

A: BUY (Initiate coverage)

Last Traded Price (A) (30 Jan 2018):RMB11.77 (CSI300 Index : 4,256)
Price Target 12-mth (A): RMB14.12 (20% upside)

Analyst
Paul YONG, CFA +65 6682 3712
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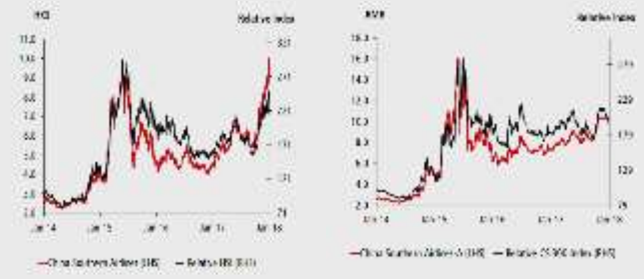
Price Relative



Forecasts and Valuation (H Shares)

FY Dec (RMB m)	2016A	2017F	2018F	2019F
Turnover	114,981	130,445	150,387	170,797
EBITDA	22,568	25,251	27,696	31,454
Pre-tax Profit	7,663	8,424	9,618	11,997
Net Profit	5,044	5,923	6,706	8,518
Net Pft (Pre Ex) (core profit)	4,958	5,929	6,714	8,526
EPS (RMB)	0.51	0.60	0.64	0.77
EPS (HK$)	0.64	0.75	0.79	0.95
EPS Gth (%)	35.0	17.4	6.3	19.7
Diluted EPS (HK$)	0.64	0.75	0.79	0.95
DPS (HK$)	0.10	0.12	0.12	0.12
BV Per Share (HK$)	5.47	6.12	7.46	8.29
PE (X)	15.7	13.3	12.5	10.5
P/Free CF (X)	10.0	52.2	30.9	13.8
EV/EBITDA (X)	8.6	7.7	6.7	5.9
Net Div Yield (%)	1.0	1.2	1.2	1.2
P/Book Value (X)	1.8	1.6	1.3	1.2
Net Debt/Equity (X)	1.9	1.7	1.1	0.9
ROAE (%)	12.2	14.0	11.6	12.1
Earnings Rev (%):		New	New	New
Consensus EPS (RMB)		0.58	0.64	0.77
Other Broker Recs:		B: 10	S: 6	H: 5

ICB Industry: Consumer Services
ICB Sector: Travel & Leisure
Principal Business: Provides air passenger and cargo services, with main hub in Guangzhou

Source of all data on this page: Company, DBSV, Thomson Reuters, HKEX

The Domestic Leader

- **We like China Southern Airlines for its large exposure to the lucrative Chinese domestic market**
- **ROE to maintain strong at c. 12% despite an expected equity raising in 2018**
- **We forecast EPS CAGR of 14.3% over FY16-19F**
- **Initiate coverage with a BUY, TP HK$11.90 for 'H' shares and TP of RMB14.12 for 'A' shares**

BUY CSA for its large domestic exposure. We are positive on the long-term earnings prospects of China Southern Airlines (CSA), as it has the largest revenue exposure among the Big 3 to China's domestic market, which has an oligopolistic structure and will see fare liberalisation play out over the next few years. We project CSA's EPS to grow at a CAGR of 14% over FY16-FY19F, even after taking into account an expected equity fund raising in 2018.

Where we differ: We have higher-than consensus-forecasts as we are more positive on yields as strong demand should help to offset rising fuel cost.

Potential catalysts: We believe CSA's share price can further re-rate as numbers continue to show firm growth in air travel, and an improvement in its PLF.

Valuation:
Our target price of HK$11.90 for China Southern Airlines 'H' shares is derived from 1.51x FY19F P/BV, based on an assumed cost of equity of 8% while the target price of RMB14.12 for China Southern Airlines 'A' shares is based on a 40% premium to the target price for its 'H' shares, which is lower than -0.5SD of its historical average premium.

Key Risks to Our View:
Like all other airlines, CSA is vulnerable to a spike in oil prices (as it does not hedge) and increased competition. The company's earnings could also be affected by a substantial depreciation of the RMB vs. USD.

At A Glance

Issued Capital - H shares (m shs)	3,066
- Non H shares (m	7,023
H shs as a % of Total	28
Total Mkt. Cap (HK$m/US$m)	132,377 / 16,933
Major Shareholders	
China Southern Air Holding Company (%)	40.04
Major H Shareholders	
China Southern Air Holding Company	38.1
Morgan Stanley Regional (Holdings) III	9.25
American Airlines Group Inc.	8.83
H Shares-Free Float (%)	43.82
3m Avg. Daily Val. (US$m)	28.5

SWOT Analysis

Strengths	Weaknesses
• The largest Chinese carrier with the most capacity and passenger traffic in terms of ASK and RPK. • Highest exposure to domestic routes which benefit from the airfare liberalisation reform. • Leading airline in One Belt One Road.	• Relatively lower load factors compared to the other Big 3 • Guangzhou Baiyun International Airport as the base hub of CSA faces the diversion of passengers from airports in Shenzhen and Hong Kong, which are base hubs of Shenzhen Airlines and Cathay Pacific.
Opportunities	**Threats**
• China air travel demand remains strong with tremendous potential in international market. • Yield and load factor to improve as the air fare marketisation process and supply-side reform progresses. • Network enlarged by Beijing Daxing International Airport.	• Competition from foreign airlines during expansion in international market. • High Speed Rail competing in domestic routes. • Rising jet fuel price.

Source: DBS Vickers

Company Background

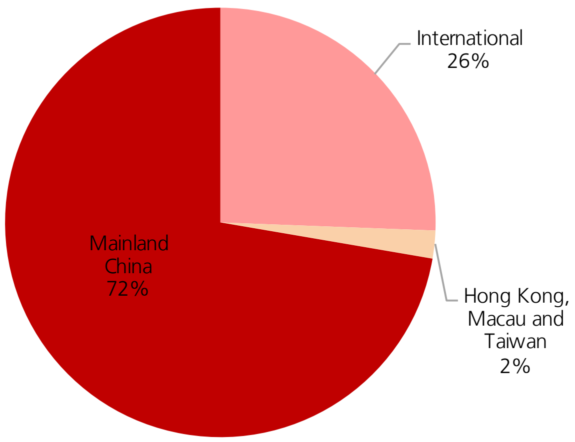
The biggest player in China. China Southern Airlines (CSA) was founded in 1989 and is based in Guangzhou. It was listed on the Hong Kong and New York Stock Exchanges in 1997, followed by a Shanghai listing in 2003. CSA joined the SkyTeam Alliance in 2007, with its main hub in Guangzhou Baiyun International Airport. Beijing will become its second hub as Beijing Daxing International Airport is completed in 2019.

CSA has six other airlines under its control, namely Xiamen Airlines, Shantou Airlines, Zhuhai Airlines, Guizhou Airlines, Chongqing Airlines and Henan Airlines, as well as an associate stake in Sichuan Airlines. It also has controlling stakes in Guangzhou Aircraft Maintenance Engineering Co.,Ltd and Zhuhai XiangYi Aviation Technology Company Ltd.

In 2016, CSA and its subsidiaries carried 115m passengers, ranking No.1 among all Chinese airlines for 38 consecutive years on over 959,110 flights and carried c. 1.61m tonnes in cargo and mail. As at the end of 2016, the group operated a fleet of 688 passenger aircraft with an average age of 5.8 years and 14 cargo aircraft with the same average age. CSA has the largest fleet size along with the most capacity (as measured by ASK and ATK) among all Chinese carriers.

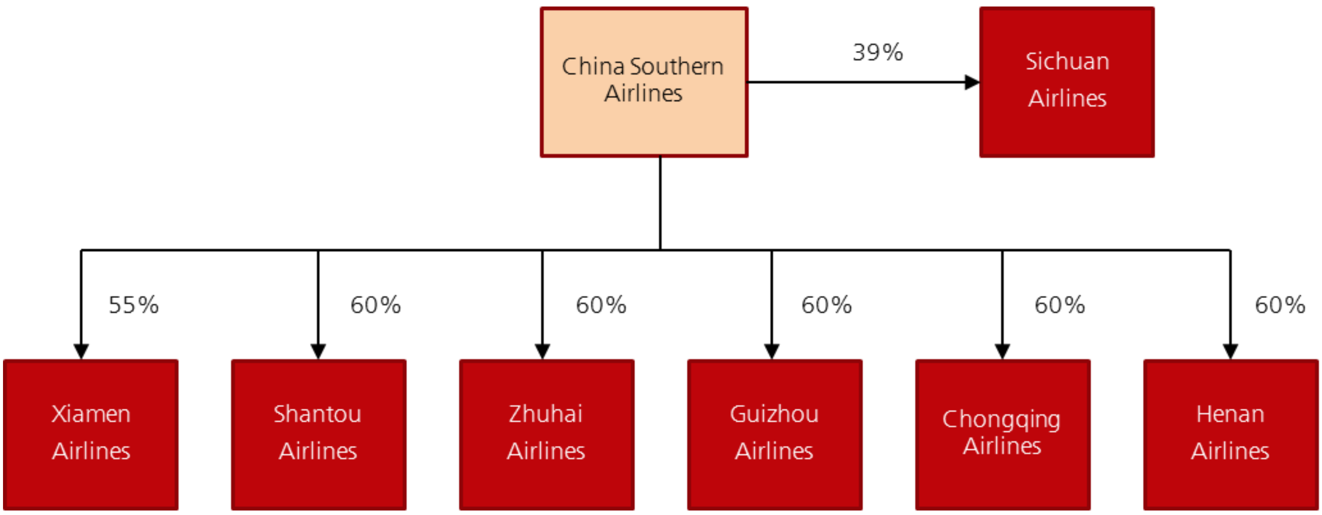
CSA recorded total revenues of RMB115bn in 2016, of which 89.1% was from the passenger business, 6.3% from cargo business, and the remainder from Others. About 72.3% of CSA's total revenues was from Mainland China, with 25.6% from the international market and 2.1% from Hong Kong, Macau and Taiwan.

Revenue contribution by geography in 2016: RMB115bn



Source: Company, DBS Bank estimates

Shareholding structure of China Southern Airlines and its key subsidiaries, associates and joint ventures



Source: China Southern Airlines Annual Report 2016

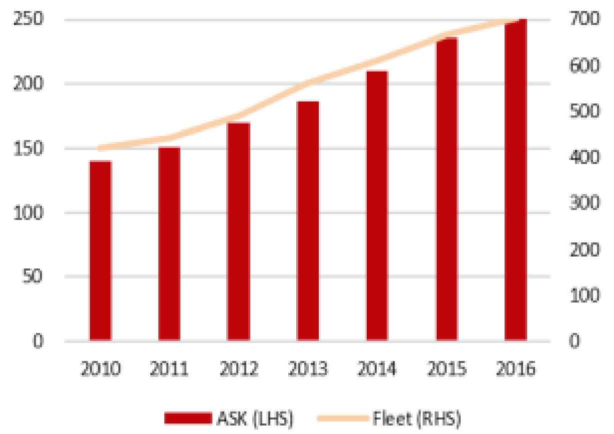
Revenue expansion has been led by the Passenger segment. CSA's total revenue grew at a 7.0% CAGR over 2010-2016 to RMB115bn, led mainly by a 6.9% CAGR in passenger revenue over the same period to RMB103bn and a 8.2% CAGR in other segments to RMB12bn.

Segmental revenue from 2010-2016

Source: Company, DBS Bank estimates

This has been underpinned by a rapid expansion in its fleet. CSA's total fleet has grown at a CAGR of 8.9% between 2010 and 2016 to 702 aircraft, of which 688 were passenger jets. This was the most aggressive among the Big Three, with a 10.5% CAGR in ASK, over the same period to 256bn passenger-kilometres.

ASK (bn p-km) vs Fleet (no. of passenger aircraft)



Source: Company, DBS Bank estimates

Competitive Strengths

The domestic leader in China. CSA has the largest capacity in terms of ASK and ATK, as well as fleet size, in China. With 70.2% ASK allocated to domestic routes in 2016, its total revenue was the highest among the Big Three for the past five years, mainly boosted by the mainland market in which Chinese airlines gain the highest yield thanks to oligopolistic structure.

Beneficiary of the Supply-side Reform. Since CSA has the highest exposure to the domestic market, the airfare liberalisation reform for domestic routes will bring it more price elasticity and the load factor can be boosted by the on-time performance requirement.

Improved balance sheet. With the enhanced core earning and repaid debt, CSA's net grearing ratio fell below 2x in 2016 from 2.2x in 2014. Under the planned equity placement, we project CSA's net gearing to further improved to c.0.98x by the end of 2019F.

Growth Strategies

Maintaining its position as the largest carrier. Based on the introduction plan, CSA is expected to have 848 passenger jets by 2019, which still ranks ahead in scale among its peers. We believe the capacity strategy will drive CSA to seize more market share.

Expanding with One Belt, One Road. CSA is the leading carrier on OBOR with hubs in Guangzhou and Urumqi. Responding to the initiative, CSA plans to introduce new routes, such as the Guangzhou to Iran, Austria and Hungary as well as Urumqi to Pakistan, Georgia and other eastern European countries. .

Improving its network via Beijing hub. CSA has already prevailed in the Australia and New Zealand market with Guangzhou hub, with 40% share of the new airport in Beijing, it is expected to further expand into the European and North American markets.

Key Risks

Competition. Increased competition, either domestically or on international routes, would impact CSA's load factors or yields, and therefore lower its profitability.

Fuel price. We believe CSA has currently no intentions to hedge its jet fuel exposure, and should jet fuel prices rise more significantly than expected, this would impact its profitability if it cannot fully pass on the higher costs.

Foreign exchange exposure. As at the end of 2016, c. 39% (or RMB41.5bn) of CSA's total debt and obligation under finance lease was denominated in US dollars. Should the RMB depreciate significantly against the US dollar, CSA would have to pay higher interest costs as well as report foreign exchange losses, which would lower its reported net profit.

CRITICAL FACTORS TO WATCH

Capacity to grow 37% by 2019F on fleet growth of 23% from 2016. Based on CSA's announced plans over the next few years, its passenger aircraft fleet is expected to grow to 848 (excluding freighters and business jets) by 2019F, underpinning a 36.5% growth in Available Seat Kilometres (ASKs) to 350bn p-kms (passenger kilometres).

By destination, we project capacity on international routes to grow 15% per annum through 2017F-2019F while domestic routes grow by 8.5% in 2017F and 10% per annum between 2017F and 2019F. We expect the HK, Macau and Taiwan routes to continue declining in 2017F by 10% and recover gradually by 3% and 2% in 2018F and 2019F respectively.

RPKs to grow relatively faster than ASK driven by PLF pick-up . Considering the capacity control led by supply-side reform, we assume the PLF to rise to 81.8% for 2017F and maintained for the next two years. The Revenue Passenger Kilometres (RPKs) should grow from 206bn p-kms in 2016 to 286bn p-kms by 2019F, representing a CAGR of 11.5% over the period.

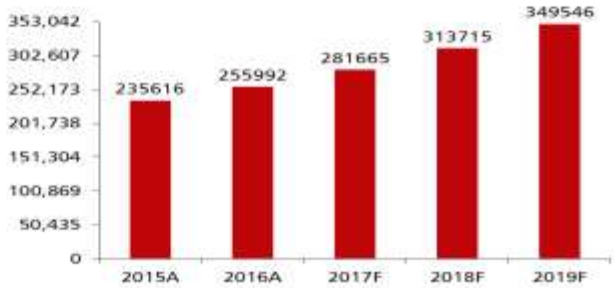
Yields to see modest increase as jet fuel price rises . The average price of jet fuel FOB Singapore fell from US$123 per barrel in 2013 to US$53 per barrel in 2016, and has averaged around US$65 in 2017. We project the average price of jet fuel FOB Singapore to rise from US$65 per barrel in 2017F to US$75 per barrel in 2018F and US$80 per barrel in 2019F.

Passenger yield already showed a modest increase in the first half of 2017, and we project it to improve from RMB 50.1cts in 2017F to RMB 52.1cts in 2018F and RMB 53.2cts in 2019F, as airlines seek to pass on the higher cost of fuel to passengers, coupled with fare liberalisation on domestic routes.

Core earnings to improve firmly from 2017F-2019F. While we project 2017F EBIT to fall by 19% y-o-y to RMB10,193m due to a 23% increase in the average cost of jet fuel with yields remaining flat, we expect 2018F and 2019F EBIT to grow by 14% in FY18F to RMB11,649m and by 18% to RMB13,763m in FY19F respectively on a more moderate increase in fuel and improvement in yields.

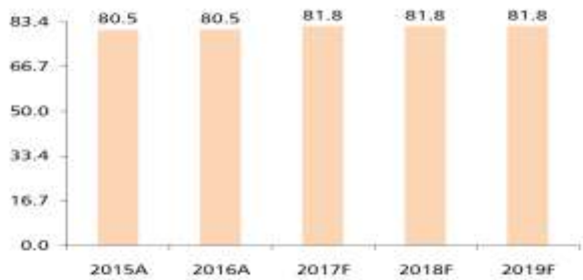
Coupled with slightly higher interest cost, we project CSA's net profit to grow by 19% per annum from 2016-2019F to RMB8,518m by 2019F. In terms of EPS, that will translate to a 14% CAGR over the same period.

ASK (m p-km)

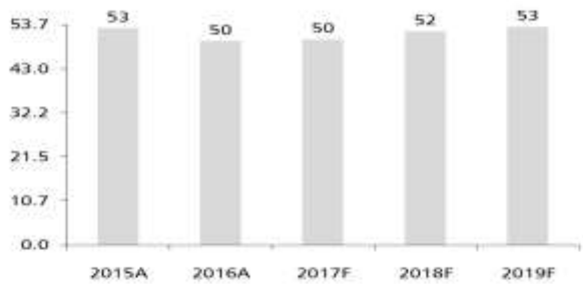


RPK (m p-km)

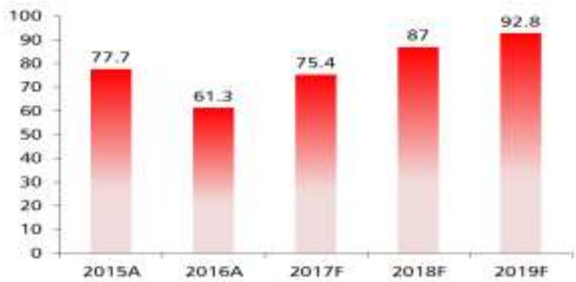
Passenger Load Factor (%)



Passenger Yield (RMB cts per rpk)



All-in jet fuel price (US$/bbl)



Source: Company, DBS Vickers

Balance Sheet:

A healthier balance sheet. We project CSA's net gearing (total net debt over total shareholders' equity) to improve from 1.88x at the end of 2016 to 0.94x by end-2019F, assuming the 'A+H' share equity fund raising of RMB12.6bn announced in September 2017 will be completed in 2018F. Also, this is despite the expected continued investment in fleet expansion as operating cash flows are projected to remain firm and help fund CSA's capital expenditure.

In its 2016 Annual Report, CSA disclosed that it expects to add a total of 86, 78, and 57 aircraft in 2017F, 2018F and 2019F respectively while phasing out 30, 19 and 12 aircraft. We assume that CSA will finance the majority of its capital expenditures by utilising the capital raised from equity, averaging c. RMB20bn per year 2017F to 2019F.

Share Price Drivers:

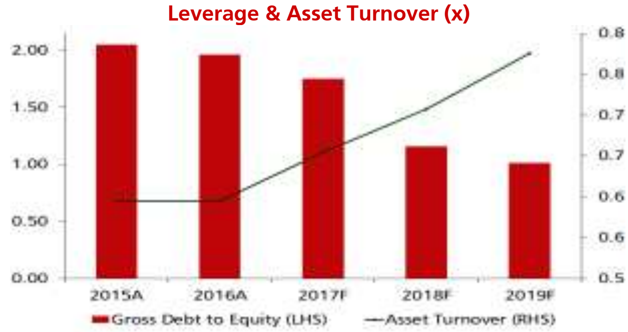
Air travel demand in China to remain robust. We believe that continued economic growth in China, as well as rising disposable incomes in the country, will continue to spur firm demand for air travel, both domestically and for international flights.

Yield improvement and solid load factors also positives. Given the expected firm demand and limited domestic supply, we expect CSA to be able to pass on the higher cost of fuel in the form of higher ticket prices. Meanwhile, we also project load factors to stay near record highs.

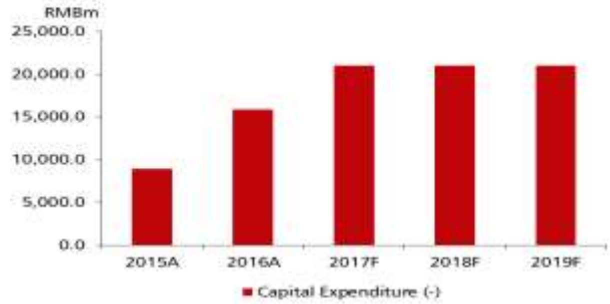
Key Risks:

Key downside risks are: 1) if jet fuel prices increase more significantly than expected, this would substantially increase CSA's costs and hence its earnings, and 2) if there is an oversupply of seat capacity in the market, this would put pressure on yields and therefore impact CSA's revenues and earnings, as well as 3) if the fund raising fails.

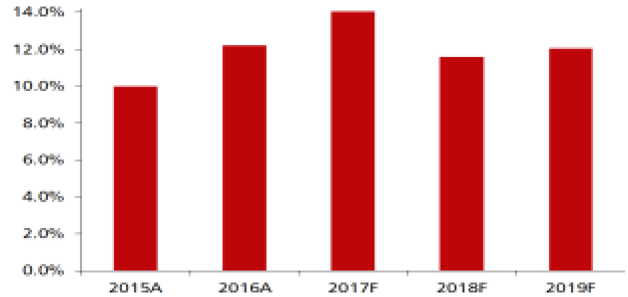
Leverage & Asset Turnover (x)



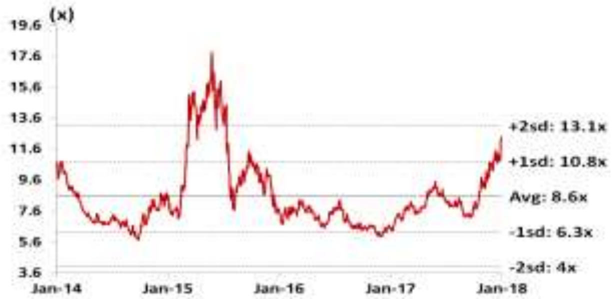
Capital Expenditure



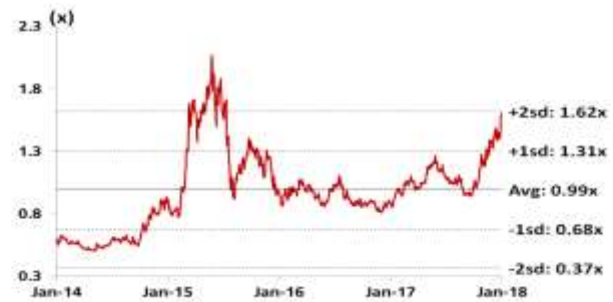
ROE



Forward PE Band



PB Band



Source: Company, DBS Vickers

Segmental Breakdown (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Revenues (RMB m)						
Passenger	97,145	100,238	102,502	115,398	133,579	152,027
Cargo and Mail	7,183	6,861	7,191	9,094	10,213	11,448
Others	4,256	4,553	5,288	5,953	6,595	7,322
Total	108,584	111,652	114,981	130,445	150,387	170,797

Source: Company, DBS Vickers

Income Statement (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Revenue	108,58	111,65	114,98	130,44	150,38	170,79
Cost of Goods Sold	(106,02	(101,49	(106,20	(124,35	(143,04	(161,55
Gross Profit	2,558	10,160	8,777	6,090	7,341	9,239
Other Opng (Exp)/Inc	2,190	3,278	3,835	4,103	4,309	4,524
Operating Profit	4,748	13,438	12,612	10,193	11,649	13,763
Other Non Opg (Exp)/Inc	(292)	(5,953)	(3,276)	500	0	0
Associates & JV Inc	401	568	611	642	674	694
Net Interest (Exp)/Inc	(1,817)	(1,935)	(2,376)	(2,914)	(2,709)	(2,464)
Dividend Income	2	2	2	3	4	4
Exceptional Gain/(Loss)	26	0	90	0	0	0
Pre-tax Profit	3,068	6,120	7,663	8,424	9,618	11,997
Tax	(668)	(1,300)	(1,763)	(1,602)	(1,967)	(2,486)
Minority Interest	(621)	(1,082)	(854)	(897)	(942)	(989)
Preference Dividend	2	2	2	3	4	4
Net Profit	1,777	3,736	5,044	5,923	6,706	8,518
Net Profit before Except.	1,755	3,740	4,958	5,929	6,714	8,526
EBITDA	15,687	19,900	22,568	25,251	27,696	31,454
Growth						
Revenue Gth (%)	10.2	2.8	3.0	13.4	15.3	13.6
EBITDA Gth (%)	10.9	26.9	13.4	11.9	9.7	13.6
Opg Profit Gth (%)	214.4	183.0	(6.1)	(19.2)	14.3	18.1
Net Profit Gth (%)	(10.5)	110.2	35.0	17.4	13.2	27.0
Margins & Ratio						
Gross Margins (%)	2.4	9.1	7.6	4.7	4.9	5.4
Opg Profit Margin (%)	4.4	12.0	11.0	7.8	7.7	8.1
Net Profit Margin (%)	1.6	3.3	4.4	4.5	4.5	5.0
ROAE (%)	5.1	10.0	12.2	14.0	11.6	12.1
ROA (%)	1.0	2.0	2.6	3.0	3.2	3.9
ROCE (%)	2.5	6.6	6.0	4.9	5.3	6.0
Div Payout Ratio (%)	22.1	10.5	15.6	16.6	16.5	13.0
Net Interest Cover (x)	2.6	6.9	5.3	3.5	4.3	5.6

Source: Company, DBS Vickers

Interim Income Statement (RMB m)

FY Dec	2H2014	1H2015	2H2015	1H2016	2H2016	1H2017
Revenue	58,359	53,359	58,293	54,119	60,862	60,488
Cost of Goods Sold	(55,597)	(48,529)	(52,963)	(48,636)	(57,568)	(57,854)
Gross Profit	**2,762**	**4,830**	**5,330**	**5,483**	**3,294**	**2,634**
Other Oper. (Exp)/Inc	1,211	1,155	2,123	1,568	2,267	1,948
Operating Profit	**3,973**	**5,985**	**7,453**	**7,051**	**5,561**	**4,582**
Other Non Opg (Exp)/Inc	817	(156)	(5,797)	(1,516)	(1,760)	561
Associates & JV Inc	326	428	140	413	198	316
Net Interest (Exp)/Inc	(947)	(952)	(983)	(1,161)	(1,215)	(1,286)
Exceptional Gain/(Loss)	26	0	0	0	90	0
Pre-tax Profit	**4,201**	**5,311**	**819**	**4,793**	**2,880**	**4,179**
Tax	(983)	(1,210)	(90)	(1,096)	(667)	(962)
Minority Interest	(378)	(616)	(466)	(573)	(281)	(439)
Net Profit	**2,846**	**3,491**	**269**	**3,130**	**1,938**	**2,784**
Net profit bef Except.	2,820	3,491	269	3,130	1,848	2,784
Growth						
Revenue Gth (%)	11.5	6.2	(0.1)	1.4	4.4	11.8
Opg Profit Gth (%)	146.3	672.3	87.6	17.8	(25.4)	(35.0)
Net Profit Gth (%)	72.5	N/A	(90.5)	(10.3)	620.4	(11.1)
Margins						
Gross Margins (%)	4.7	9.1	9.1	10.1	5.4	4.4
Opg Profit Margins (%)	6.8	11.2	12.8	13.0	9.1	7.6
Net Profit Margins (%)	4.9	6.5	0.5	5.8	3.2	4.6

Source: Company, DBS Vickers

Balance Sheet (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Net Fixed Assets	153,800	162,303	175,656	182,743	188,374	192,381
Invts in Associates & JVs	2,921	3,435	4,112	4,754	5,427	6,121
Other LT Assets	5,426	6,138	6,910	6,910	6,910	6,910
Cash & ST Invts	15,414	4,560	4,152	3,879	4,256	6,589
Inventory	1,661	1,606	1,588	2,326	2,682	3,046
Debtors	2,683	2,580	2,989	3,195	3,683	4,183
Other Current Assets	7,783	5,367	5,035	5,035	5,035	5,035
Total Assets	**189,688**	**185,989**	**200,442**	**208,842**	**216,367**	**224,265**
ST Debt	26,971	36,418	35,441	35,441	35,441	35,441
Creditors	1,657	2,500	1,903	3,182	3,581	4,067
Other Current Liab	25,458	26,617	30,588	32,675	34,501	36,514
LT Debt	85,985	65,292	72,285	71,285	57,285	54,285
Other LT Liabilities	5,124	5,538	5,249	5,249	5,249	5,249
Shareholder's Equity	35,748	39,045	43,456	48,594	66,953	74,362
Minority Interests	8,745	10,579	11,520	12,417	13,358	14,347
Total Cap. & Liab.	**189,688**	**185,989**	**200,442**	**208,842**	**216,367**	**224,265**
Non-Cash Wkg. Capital	(14,988)	(19,564)	(22,879)	(25,300)	(26,681)	(28,317)
Net Cash/(Debt)	(97,542)	(97,150)	(103,57	(102,84	(88,470)	(83,137)
Debtors Turn (avg days)	8.2	8.6	8.8	8.2	8.3	8.4
Creditors Turn (avg days)	5.9	8.5	8.6	8.0	9.7	9.7
Inventory Turn (avg days)	6.3	6.7	6.2	6.6	7.2	7.2
Asset Turnover (x)	0.6	0.6	0.6	0.7	0.7	0.8
Current Ratio (x)	0.5	0.2	0.2	0.2	0.2	0.2
Quick Ratio (x)	0.3	0.1	0.1	0.1	0.1	0.1
Net Debt/Equity (X)	2.2	2.0	1.9	1.7	1.1	0.9
Net Debt/Equity ex MI (X)	2.7	2.5	2.4	2.1	1.3	1.1
Capex to Debt (%)	6.2	8.8	14.7	19.7	22.6	23.4
Z-Score (X)	0.9	0.0	NA	NA	NA	NA

Source: Company, DBS Vickers

Cash Flow Statement (RMB m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Pre-Tax Profit	3,066	6,118	7,661	8,421	9,614	11,993
Dep. & Amort.	10,828	11,845	12,619	13,913	15,369	16,993
Tax Paid	(495)	(296)	(66)	(647)	(1,602)	(1,967)
Assoc. & JV Inc/(loss)	(401)	(568)	(611)	(642)	(674)	(694)
Chg in Wkg.Cap.	(1,323)	4,806	2,734	1,467	1,015	1,117
Other Operating CF	1,895	1,829	1,427	0	0	0
Net Operating CF	**13,570**	**23,734**	**23,764**	**22,512**	**23,723**	**27,442**
Capital Exp.(net)	(7,038)	(8,943)	(15,856)	(21,000)	(21,000)	(21,000)
Other Invts.(net)	(2,032)	1,693	193	0	0	0
Invts in Assoc. & JV	(657)	(109)	(221)	0	0	0
Div from Assoc & JV	86	73	161	0	0	0
Other Investing CF	(119)	355	(27)	0	0	0
Net Investing CF	**(9,760)**	**(6,931)**	**(15,750)**	**(21,000)**	**(21,000)**	**(21,000)**
Div Paid	(393)	(393)	(785)	(785)	(982)	(1,109)
Chg in Gross Debt	290	(28,251)	(7,475)	(1,000)	(14,000)	(3,000)
Capital Issues	0	0	0	0	12,635	0
Other Financing CF	15	(36)	(35)	3	4	4
Net Financing CF	**(131)**	**(27,695)**	**(8,459)**	**(1,785)**	**(2,347)**	**(4,109)**
Currency Adjustments	(13)	38	37	0	0	0
Chg in Cash	3,666	(10,854)	(408)	(273)	377	2,333
Opg CFPS (RMB)	1.52	1.93	2.14	2.14	2.17	2.37
Free CFPS (RMB)	0.67	1.51	0.81	0.15	0.26	0.58

Source: Company, DBS Vickers

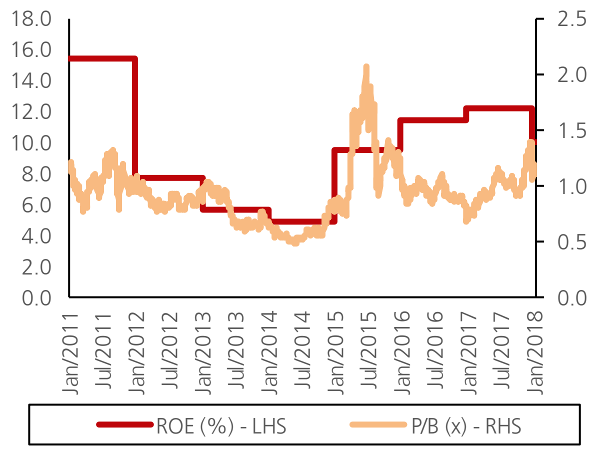
Valuation

12-month target price of HK$11.90 for China Southern Airlines 'H'. Our target price of HK$11.90 for CSA is based on 1.51x FY19 P/BV against a projected ROE of 12.06% for FY19 based on an assumed cost of equity of 8% for the company

Since January 2010, CSA has traded at an average of 0.95x P/BV, with a standard deviation of 0.26x. Our target multiple of 1.51x P/B is at c. +2 standard deviations (SD) for CSA, which we believe is warranted given its bright earnings outlook and significantly improved balance sheet.

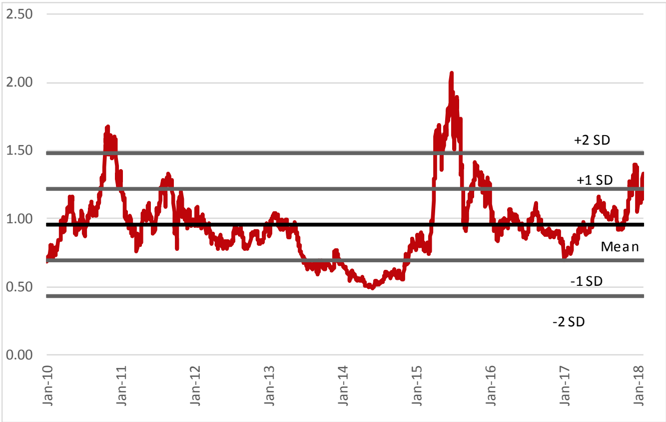
Since 2010, CSA has traded at an implied Cost of Equity of 10.4% but looking ahead we believe that a lower Cost of Equity of 8 % is justified given 1) the company's net gearing is projected to fall substantially from 1.9x at end-FY16 to 0.9x by end-FY19F, and 2) a positive outlook for both China's aviation industry and CSA's earnings prospects.

P/B vs ROE



Source: Thomson Reuters, DBS Vickers

PB band chart

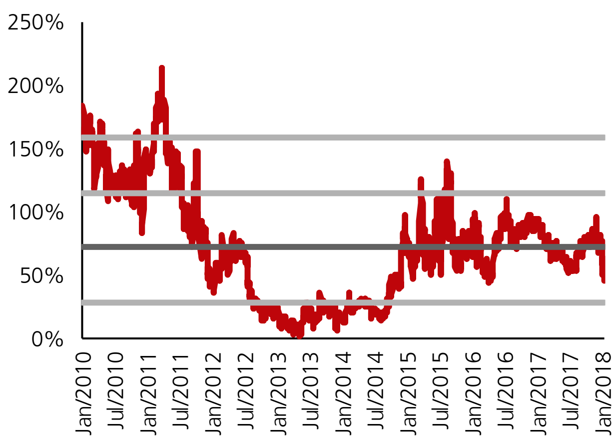


Source: Thomson Reuters, DBS Vickers

12-month target price of RMB14.12 for China Southern Airlines 'A'. Our target price for China Southern Air 'A' shares is based on a 40% premium to our China Southern Air 'H' share target price, which is lower than -0.5SD of its historical trading premium.

Historically, China Southern Air 'A' shares have traded at an average premium of 72%, with an SD of 44%, over China Southern Air 'H' shares.

China Southern Air 'A' share premium over 'H'



Source: ThomsonReuters, DBS Bank estimates

Cathay Pacific

Version 1 | Bloomberg: 293 HK EQUITY | Reuters: 293.HK

Refer to important disclosures at the end of this report

DBS Group Research . Equity 31 Jan 2018

HOLD (Initiate coverage)
Last Traded Price (30 Jan 2018):HK$12.26 (HSI : 32,607)
Price Target 12-mth: HK$12.80 (4% upside)

Analyst
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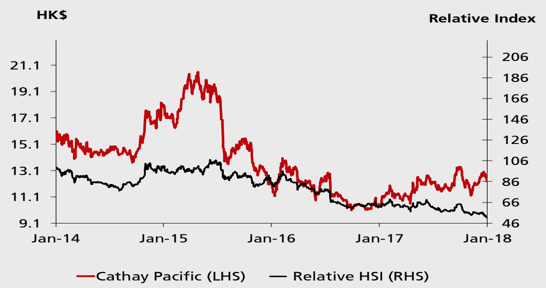
Price Relative



Forecasts and Valuation

FY Dec (HK$ m)	2016A	2017F	2018F	2019F
Turnover	92,751	93,707	99,597	105,565
EBITDA	10,074	7,830	12,614	16,712
Pre-tax Profit	223	(3,109)	606	3,796
Net Profit	(575)	(2,621)	536	3,258
EPS (HK$)	(0.15)	(0.67)	0.14	0.83
EPS Gth (%)	N/A	(355.8)	N/A	507.6
Diluted EPS (HK$)	(0.15)	(0.67)	0.14	0.83
DPS (HK$)	0.05	0.05	0.10	0.20
BV Per Share (HK$)	14.08	13.36	13.45	14.18
PE (X)	nm	nm	89.9	14.8
P/Cash Flow (X)	7.9	12.7	4.9	3.8
EV/EBITDA (X)	9.8	13.7	8.7	6.5
Net Div Yield (%)	0.4	0.4	0.8	1.6
P/Book Value (X)	0.9	0.9	0.9	0.9
Net Debt/Equity (X)	0.9	1.1	1.1	1.1
ROAE (%)	(1.1)	(4.8)	1.0	6.0
Earnings Rev (%):		New	New	New
Consensus EPS (HK$)		(0.60)	0.18	0.91
Other Broker Recs:		B:5	S: 4	H: 10

ICB Industry: Consumer Services
ICB Sector: Travel & Leisure
Principal Business: Provides air passenger and cargo services, with main hub in HK

Source of all data on this page: Company, DBSV, Thomson Reuters, HKEX

Visibility remains cloudy

- **Keen competition and the lack of a lucrative domestic market are key reasons why Cathay Pacific will likely continue to struggle**
- **Losses from fuel hedging contracts entered into 3 years ago will still be a drag on earnings in FY18F**
- **Expected to turn a stronger profit only in FY19F**
- **Initiate coverage with a HOLD recommendation and HK$12.80 target price**

Turnaround to take time. We are neutral on Cathay Pacific as we believe that its transformation plan will take time to yield material benefits on its bottom line. Meanwhile, stiff competition and the increasing availability of more direct flights to more cities in Mainland China will be a drag on growth in the medium term.

We project the group's earnings to turn around from a loss in FY17F to a small profit of HK$536m in FY18F on cost reduction and yield improvement, dragged by fuel hedging losses, before recovering firmly to HK$3.3bn profit in FY19F.

Where we differ: We have higher-than-consensus forecasts as we are more positive on the impact of the group's cost reduction programme, and higher Air China profit forecasts.

Potential catalysts. Cathay Pacific's share price can re-rate if demand and/or yield is stronger than expected.

Valuation:

12-month target price of HK$12.80 for Cathay Pacific. Our target price of HK$12.80 is based on 0.9x FY19 P/BV against a projected ROE of 6% for FY19F. The multiple we apply represents -0.75 standard deviation (SD) of its trading mean.

Key Risks to Our View:

Like all other airlines, Cathay Pacific is vulnerable to a spike in oil prices, and also to intensifying competition.

At A Glance

Issued Capital (m shrs)	3,934
Mkt. Cap (HK$m/US$m)	48,229 / 6,167
Major Shareholders	
Swire Pacific (%)	45.0
Air China (%)	30.0
Qatar Airways	9.4
Free Float (%)	15.6
3m Avg. Daily Val. (US$m)	8.8

SWOT Analysis

Strengths	Weaknesses
• Long history of strong earnings track record and brand recognition. • Diversified income channels from both passenger and cargo businesses. • Leading player in HK, a major financial and logistic hub globally.	• Competes solely in the international market, which faces intense competition. • Large fuel hedging losses carried over into 2018. • High cost base.
Opportunities	**Threats**
• Cargo business to remain strong as global trade picks up. • Having three significant shareholders could trigger a bidding war. • Proxy for strong economic growth.	• Chinese airlines seizing international market share. • More direct flights between mainland cities and overseas destinations, bypassing Hong Kong. • Market share in Hong Kong could be challenged by Low Cost Carriers.

Source: DBS Vickers

Company Background

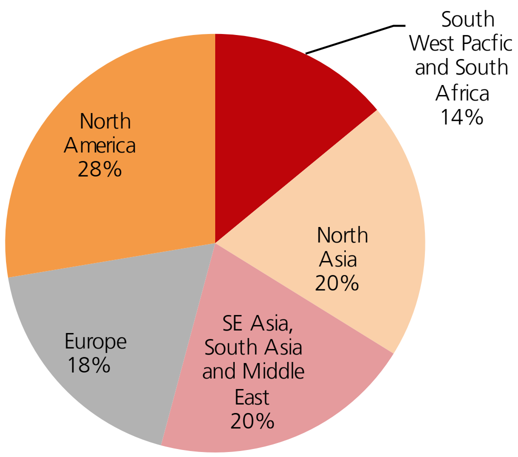
Corporate History. Founded in 1946, Cathay Pacific is an international airline based in Hong Kong with scheduled passenger and cargo services to 198 destinations in 49 countries and territories. Together with its regional airlines Cathay Dragon, and its cargo arm Air Hong Kong, the group operated 203 aircraft at the end of June 2017, with a further 53 new aircraft due for delivery up to 2024. It also owns 18.13% of Air China.

Cathay Pacific made its debut on the Hong Kong Stock Exchange in May 1986.

Two consecutive years of revenue decline since 2014. With yield decline outpacing carriage growth in both 2015 (11.5% yield decline against 9% RPK growth) and 2016 (9.2% yield decline versus 0.9% RPK growth), Cathay Pacific's overall revenue fell from HK$106bn in 2014 to HK$102bn in 2015 and HK$93bn in 2016. As at 1H17, revenue was up marginally by 0.4% y-o-y to HK$45.9bn.

Profitability has also been under pressure recently. Despite the fall in revenue in 2015, Cathay Pacific reported a near doubling of net profit to HK$6bn, largely on lower fuel costs, but since the first half of 2016, the carrier's profitability has been hit by a combination of weak yields and fuel hedging losses. It reported a loss of HK$757m, and is projected to post a loss of HK$2.6bn for 2017.

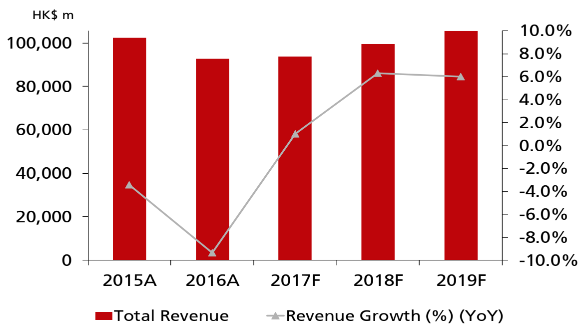
2016 Revenue Passenger Kilometres (134 bn p-km)



Source: Company

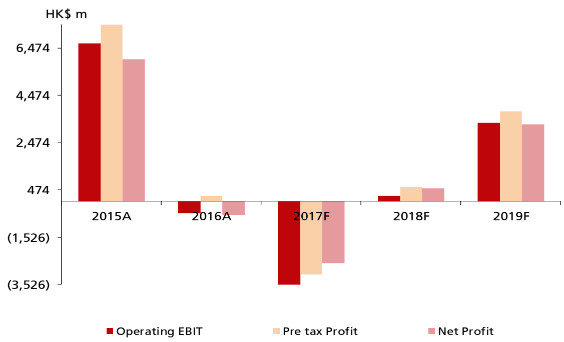
Well-diversified revenues geographically. In 2016, c. 72% of Cathay Pacific's total revenue was derived from Passenger services (c. 22% from Cargo services), which was well diversified among the various regions that the carrier serves. North America had the biggest share of Revenue Passenger Kilometres flown by Cathay Pacific with 28%, followed by North Asia with 20%, and other regions close behind.

Sales Trend



Source: Company, DBS Vickers

Profitability Trend

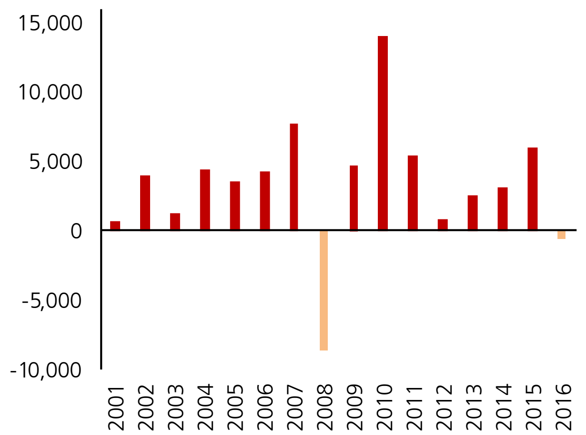


Source: Company, DBS Vickers

Competitive Strengths

Long history with stong earnings track record. Cathay Pacific has been in operation for many decades, with a a strong earnings track record. Since the beginning of 2000, the carrier has reported full year profit in all but two years – 2008 and 2016, underlining management's capability in steering the company throughout the years.

Cathay Pacific net profit (HK$m) since 2000



Source: Company, DBS Bank Estimates

Strong brand presence and recognition. Cathay Pacific is a highly recognised brand among global travellers and has long been synonymous with Hong Kong's success. Its products and services have won numerous awards inluding for lounges, cabin and cabin service, and overall best airline.

Strong position and scale in the Cargo business. The group is among the top 5 players worldwide in terms of air cargo capacity, benefitting from its position as a major cargo player based in Hong Kong, a major trade and financial hub in the fast-growing Asia region.

Leading player in Hong Kong, a major global financial hub. Cathay Pacific is the dominant player in Hong Kong Airport, which is among the top 5 busiest international airports in the world, with about 45% market share. As such, it is well positioned to benefit from the continued growth of Hong Kong as a major financial hub globally.

Growth Strategies

Cost reduction a key component of Transformation Programme. Cathay Pacific is aiming to rediscover its profitable ways to achieve a ROCE (Return On Capital Employed) that is above its WACC (Weighted Average Cost of Capital) by 2019 via a Transformation Programme. The key targets of this plan are to a) reduce unit costs (ex-fuel) over three years, and b) reduce HQ management costs by 30% by becoming a more agile, productive and competitive organisation.

Leveraging on the OneWorld Alliance and other partnerships. As a founding member and affiliate member of the **one**world global alliance, whose combined network serves more than 1,000 destinations worldwide, Cathay Pacific is able to offer to its customers an extensive and seamless travel network while raising its own cabin factor. Additionally, the carrier is also growing its partnerships (codeshare and freqeunt flyer programme) with other airlines to further extend its network reach and improve productivity.

Fleet investment, rationalisation and simplification. In terms of fleet rationalisation, the group is aiming to maximise the use of available slots in HKIA and drive efficiency gains to derive growth without additional aircraft or crew resources. Meanwhile, it is continuing to invest in newer, more fuel efficient aircraft such as the A350-900/1000, which will help to open up new markets and lower trip costs. Cathay Pacific is also looking to simplify the number of sub-fleets to reduce costs and reduce deployment complexity.

Key Risks

Competition. Cathay Pacific faces keen competition from major carriers worldwide, including those from the Middle East, Europe, North America and the Asia-Pacific. If competition further intensifies in the form of more capacity being deployed or a price war, this would impact Cathay Pacific's load factors or yields, and hence affect its profitability.

Fuel price volatility. Net fuel costs made up 30-41% of Cathay Pacific's total operating costs during the last five financial years, making up the single largest cost item for the carrier, even when fuel prices fell. A large spike in fuel prices would affect its profitability while a quick drop would also lead to hedging losses.

CRITICAL FACTORS TO WATCH

Critical Factors

Modest capacity growth projected ahead. Cathay Pacific's capacity increased by 1.1% y-o-y in the first six months of 2017, and we project full-year growth in 2017 to be 1%, followed by 4% growth per annum in 2018F and 2019F. This will take its capacity from 146bn p-kms in 2016 to 160bn p-kms in 2019F.

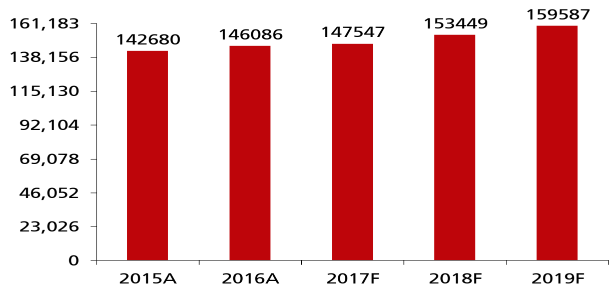
Passenger load factors to remain stable. Cathay Pacific achieved an overall passenger load factor of 85.7% in 2015 and 84.5% in 2016, and we expect it to remain steady at c. 85% from 2017F-2019F. In 1H17, the carrier recorded a passenger load factor of 84.7%.

Passenger yields under pressure. While passenger yields have fallen alongside the decline in fuel prices since 2015, it has also been under pressure due to keen competition among full-service carriers regionally. These include Chinese carriers such as China Eastern Airlines and China Southern Airlines, Middle East carriers such as Emirates and Etihad, and other Asia-Pacific carriers such as Singapore Airlines and Qantas. As a result, despite the gradual recovery of oil prices since mid-2017, yields have been slow to rebound.

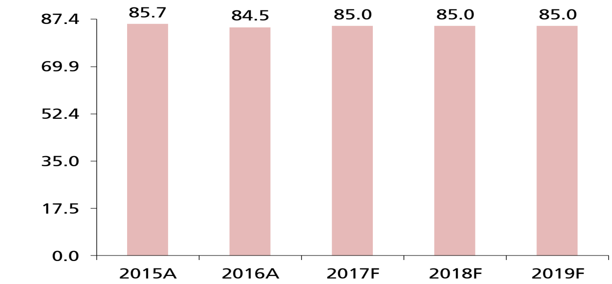
Despite net fuel costs having jumped 13% y-o-y in 1H17, passenger yield fell by 5.2% over the same period, reflecting the intense competition that Cathay Pacific is facing. We are expecting passenger yields to start recovering moderately from 2H17 onwards, which is largely driven by the fact that fuel prices have risen substantially since early 2017. We have assumed that passenger yield will increase from HK 53cts in FY17F to HK 54.5cts in FY18F and HK 56cts in FY19F.

Jet fuel prices on the rise. The average price of jet fuel FOB Singapore fell from US$123 per barrel in 2013 to US$53 per barrel in 2016, and averaged around US$65 per barrel in 2017 while ending the year at c. US$79 per barrel. We assume that the average price of jet fuel FOB Singapore will rise from US$65 per barrel in 2017F to US$75 per barrel in 2018F and US$80 per barrel in 2019F.

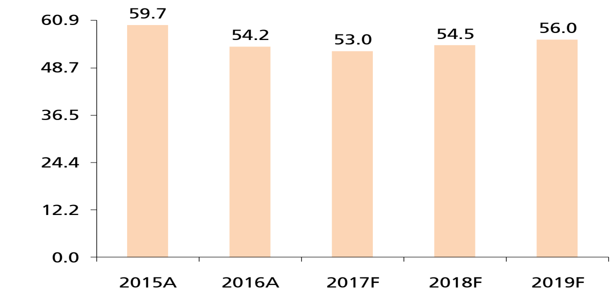
Passenger ASK (m)



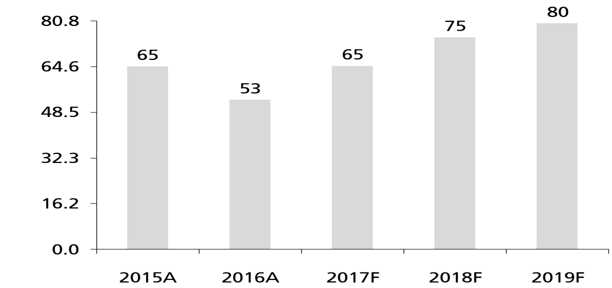
Passenger Load Factor (%)



Passenger Yield (HK cts)



Jet Fuel Price (US$ per barrel)



Source: Company, DBS Vickers

Balance Sheet:

Net gearing to remain stable at around 1.1x net debt-to-equity. While Cathay Pacific is not looking to significantly grow its capacity over the next few years, it is embarking on a fleet modernisation programme and taking delivery of more fuel-efficient aircraft in the years ahead. We assume that capital expenditure will average around HK$11.5bn in FY18F and FY19F, which will be primarily funded by internal cashflows, and that the group's net gearing will remain stable at around 1.1x.

Share Price Drivers:

Stronger-than-expected demand and yields can re-rate the stock. We believe the group's share price can re-rate if demand is stronger than expected and yields rebound more than anticipated. This would lead to an accelerated earnings recovery for Cathay Pacific.

Potential corporate actions could also be catalyst. Cathay Pacific has three major shareholders in Swire Pacific, Air China, and Qatar Airways owning 45%, 30% and 9.6% of its total outstanding share capital respectively. An attempt by any of these three major shareholders to increase their stake and/or gain control of the group could result in a bidding war and increase its share price. In addition, the group itself could also make acquisitions to further grow its business and/or improve its profitability.

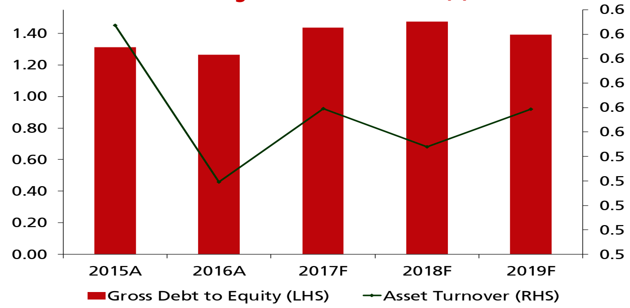
Key Risks:

Key downside risks are: 1) if jet fuel prices increase more significantly than expected, this would substantially increase Cathay Pacific's costs and hence its earnings, and 2) if there is an oversupply of seat capacity in the market, this would put pressure on yields and thereform impact the group's revenues and earnings.

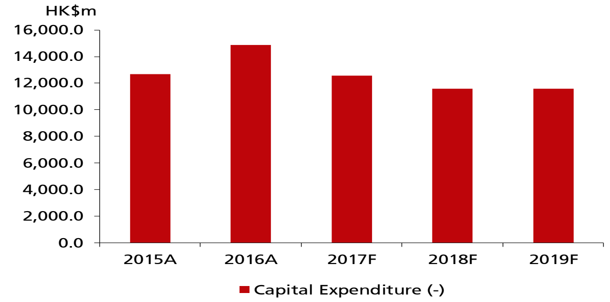
Company Background:

Cathay Pacific is a Hong Kong-headquartered international airline with scheduled passenger and cargo services to 198 destinations worldwide. It is ranked among the top 20 airlines globally by capacity as measured by Available Passenger Kilometres while its cargo arm is ranked among the top 5. It was listed on the Hong Kong Exchange in 1986.

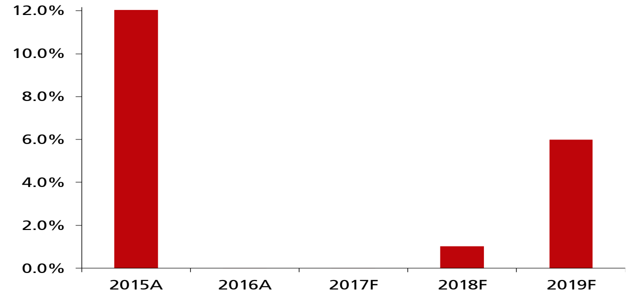
Leverage & Asset Turnover (x)



Capital Expenditure



ROE



Source: Company, DBS Vickers

Income Statement (HK$ m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Revenue	105,99	102,34	92,751	93,707	99,597	105,56
Cost of Goods Sold	(101,55	(95,678	(93,276	(97,232	(99,367	(102,24
Gross Profit	**4,435**	**6,664**	**(525)**	**(3,525)**	**229**	**3,325**
Other Opng (Exp)/Inc	0	0	0	0	0	0
Operating Profit	**4,435**	**6,664**	**(525)**	**(3,525)**	**229**	**3,325**
Other Non Opg (Exp)/Inc	0	0	0	0	0	0
Associates & JV Inc	772	1,965	2,049	1,915	2,245	2,609
Net Interest (Exp)/Inc	(1,158)	(1,164)	(1,301)	(1,498)	(1,869)	(2,138)
Dividend Income	0	0	0	0	0	0
Pre-tax Profit	**4,049**	**7,465**	**223**	**(3,109)**	**606**	**3,796**
Tax	(599)	(1,157)	(497)	804	262	(190)
Minority Interest	(300)	(308)	(301)	(316)	(332)	(348)
Net Profit	**3,150**	**6,000**	**(575)**	**(2,621)**	**536**	**3,258**
Net Profit before Except.	3,150	6,000	(575)	(2,621)	536	3,258
EBITDA	13,546	17,488	10,074	7,830	12,614	16,712
Growth						
Revenue Gth (%)	5.5	(3.4)	(9.4)	1.0	6.3	6.0
EBITDA Gth (%)	13.4	29.1	(42.4)	(22.3)	61.1	32.5
Opg Profit Gth (%)	18.0	50.3	(107.9)	571.5	(106.5)	1,351.0
Net Profit Gth (%)	20.2	90.5	N/A	(355.8)	N/A	507.6
Margins & Ratio						
Gross Margins (%)	4.2	6.5	(0.6)	(3.8)	0.2	3.1
Opg Profit Margin (%)	4.2	6.5	(0.6)	(3.8)	0.2	3.1
Net Profit Margin (%)	3.0	5.9	(0.6)	(2.8)	0.5	3.1
ROAE (%)	5.5	12.0	(1.1)	(4.8)	1.0	6.0
ROA (%)	1.8	3.5	(0.3)	(1.6)	0.3	1.7
ROCE (%)	2.7	4.1	0.5	(2.6)	0.2	2.0
Div Payout Ratio (%)	45.0	34.8	N/A	N/A	73.4	24.2
Net Interest Cover (x)	3.8	5.7	(0.4)	(2.4)	0.1	1.6

Source: Company, DBS Vickers

Interim Income Statement (HK$ m)

FY Dec	2H2014	1H2015	2H2015	1H2016	2H2016	1H2017
Revenue	55,151	50,388	51,954	45,683	47,068	45,858
Cost of Goods Sold	(52,292)	(48,026)	(47,652)	(45,019)	(48,257)	(48,392)
Gross Profit	**2,859**	**2,362**	**4,302**	**664**	**(1,189)**	**(2,534)**
Other Oper. (Exp)/Inc	0	0	0	0	0	0
Operating Profit	**2,859**	**2,362**	**4,302**	**664**	**(1,189)**	**(2,534)**
Other Non Opg (Exp)/Inc	0	0	0	0	0	0
Associates & JV Inc	1,037	771	1,194	683	1,366	533
Net Interest (Exp)/Inc	(537)	(559)	(605)	(607)	(694)	(814)
Exceptional Gain/(Loss)	0	0	0	0	0	830
Pre-tax Profit	**3,359**	**2,574**	**4,891**	**740**	**(517)**	**(1,985)**
Tax	(403)	(444)	(713)	(237)	(260)	84
Minority Interest	(153)	(158)	(150)	(150)	(151)	(150)
Net Profit	**2,808**	**1,977**	**4,033**	**358**	**(923)**	**(2,046)**
Net profit bef Except.	2,808	1,977	4,033	358	(923)	(2,876)
Growth						
Revenue Gth (%)	6.3	(0.9)	(5.8)	(9.3)	(9.4)	0.4
Opg Profit Gth (%)	4.9	49.9	50.5	(71.9)	(127.6)	(481.6)
Net Profit Gth (%)	8.0	463.2	43.6	(81.9)	N/A	N/A
Margins						
Gross Margins (%)	5.2	4.7	8.3	1.5	(2.5)	(5.5)
Opg Profit Margins (%)	5.2	4.7	8.3	1.5	(2.5)	(5.5)
Net Profit Margins (%)	5.1	3.9	7.8	0.8	(2.0)	(4.5)

Source: Company, DBS Vickers

Balance Sheet (HK$ m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Net Fixed Assets	98,471	100,552	106,456	110,106	112,056	113,368
Invts in Associates & JVs	22,918	22,878	23,298	25,153	27,338	29,888
Other LT Assets	17,118	16,172	16,275	16,275	16,275	16,275
Cash & ST Invts	21,098	20,647	20,290	17,370	18,472	19,308
Inventory	1,589	1,366	1,514	1,530	1,626	1,723
Debtors	10,591	9,715	9,557	9,656	10,262	10,877
Other Current Assets	189	1,497	31	31	31	31
Total Assets	171,974	172,827	177,421	180,120	186,061	191,471
ST Debt	9,781	13,238	11,263	11,263	11,263	11,263
Creditors	23,543	23,025	19,104	19,301	20,514	21,743
Other Current Liab	12,437	13,514	13,725	12,214	12,756	13,208
LT Debt	55,315	49,867	58,906	64,906	67,906	67,906
Other LT Liabilities	19,045	25,116	18,897	19,412	19,927	20,442
Shareholder's Equity	51,722	47,927	55,365	52,547	52,887	55,751
Minority Interests	131	140	161	477	809	1,157
Total Cap. & Liab.	171,974	172,827	177,421	180,120	186,061	191,471
Non-Cash Wkg. Capital	(23,611)	(23,961)	(21,727)	(20,299)	(21,351)	(22,320)
Net Cash/(Debt)	(43,998)	(42,458)	(49,879)	(58,799)	(60,697)	(59,861)
Debtors Turn (avg days)	35.2	36.2	37.9	38.1	36.5	36.5
Creditors Turn (avg days)	81.7	97.9	90.7	76.4	81.4	84.3
Inventory Turn (avg days)	6.1	6.2	6.2	5.7	6.5	6.7
Asset Turnover (x)	0.6	0.6	0.5	0.6	0.5	0.6
Current Ratio (x)	0.7	0.7	0.7	0.7	0.7	0.7
Quick Ratio (x)	0.7	0.6	0.7	0.6	0.6	0.7
Net Debt/Equity (X)	0.8	0.9	0.9	1.1	1.1	1.1
Net Debt/Equity ex MI (X)	0.9	0.9	0.9	1.1	1.1	1.1
Capex to Debt (%)	19.9	20.1	21.2	16.5	14.6	14.6
Z-Score (X)	1.7	0.0	NA	NA	NA	NA

Source: Company, DBS Vickers

Cash Flow Statement (HK$ m)

FY Dec	2014A	2015A	2016A	2017F	2018F	2019F
Pre-Tax Profit	4,049	7,465	223	(3,109)	606	3,796
Dep. & Amort.	8,339	8,859	8,550	9,440	10,139	10,778
Tax Paid	(1,395)	(469)	(750)	(707)	804	262
Assoc. & JV Inc/(loss)	(772)	(1,965)	(2,049)	(1,915)	(2,245)	(2,609)
(Pft)/ Loss on disposal of FAs	0	0	0	0	0	0
Chg in Wkg.Cap.	5,418	47	(2,439)	83	510	517
Other Operating CF	(5,354)	2,058	2,573	0	0	0
Net Operating CF	**10,285**	**15,995**	**6,108**	**3,792**	**9,813**	**12,744**
Capital Exp.(net)	(12,954)	(12,664)	(14,863)	(12,575)	(11,575)	(11,575)
Other Invts.(net)	4,540	(2,521)	3,013	0	0	0
Invts in Assoc. & JV	(2,617)	(77)	7	0	0	0
Div from Assoc & JV	221	280	422	60	60	60
Other Investing CF	45	329	1,726	0	0	0
Net Investing CF	**(10,765)**	**(14,653)**	**(9,695)**	**(12,515)**	**(11,515)**	**(11,515)**
Div Paid	(1,314)	(2,329)	(1,447)	(197)	(197)	(393)
Chg in Gross Debt	(108)	(1,782)	6,800	6,000	3,000	0
Capital Issues	0	0	0	0	0	0
Other Financing CF	206	193	68	0	0	1
Net Financing CF	**(1,464)**	**(4,155)**	**6,224**	**5,803**	**2,803**	**(393)**
Currency Adjustments	(204)	(191)	(66)	0	0	0
Chg in Cash	(2,148)	(3,004)	2,571	(2,920)	1,102	836
Opg CFPS (HK$)	1.24	4.06	2.17	0.94	2.37	3.11
Free CFPS (HK$)	(0.68)	0.85	(2.23)	(2.23)	(0.45)	0.30

Source: Company, DBS Vickers

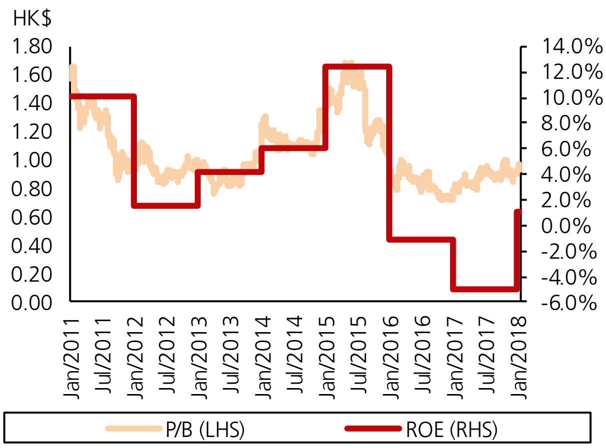
Valuation

12-month target price of HK$12.80 for Cathay Pacific. Our target price of HK$12.80 is based on 0.9x FY19 P/BV against a projected ROE of 6% for FY19F.

Since January 2010, Cathay Pacific has traded at an average of 1.08x P/BV, with a standard deviation of 0.24x. Our target multiple of 0.9x P/BV is at -0.75 SD its historical trading average.

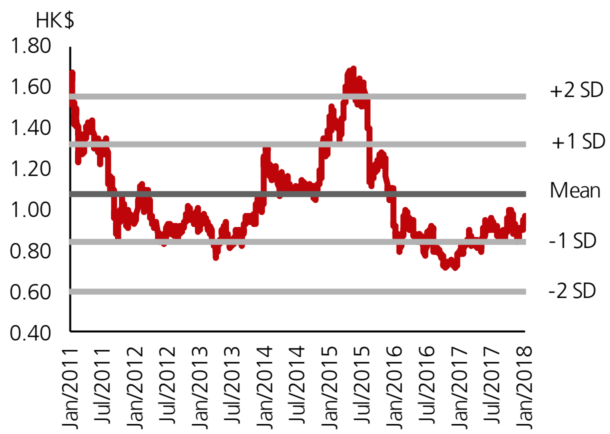
Based on consensus estimates, Cathay Pacific is currently already trading at a premium to its global peers in terms of PE, as well as P/VB vs ROE. Hence, we see Cathay Pacific's current share price as fair.

P/B vs ROE



Source: Thomson Reuters, DBS Vickers

PB band chart



Source: Thomson Reuters, DBS Vickers

Global airlines valuations comparision (consensus estimates) – Prices as at 30 January 2018

Company		Last Px	Mkt Cap US$m	PER Hist	PER Crnt	PER Forw	EPS CAGR	EV/EBITDA Hist	EV/EBITDA Crnt	EV/EBITDA Forw	Price-to-Book Hist	Price-to-Book Crnt	ROE Hist	ROE Crnt	Crnt Yield
Delta Air Lines Inc	USD	56.12	40,012	11.5	9.0	7.8	21%	5.84	5.76	5.22	2.69	2.35	23.4%	26.1%	2.3%
American Airlines Group Ir	USD	52.59	25,164	10.9	9.4	7.7	19%	6.43	6.82	5.55	5.32	3.78	48.9%	40.2%	0.9%
United Continental Holdin	USD	67.01	19,852	10.0	9.0	7.4	17%	5.58	5.96	5.95	2.20	1.94	22.0%	21.5%	0.0%
Deutsche Lufthansa AG	EUR	28.71	16,751	9.4	6.1	6.4	21%	3.87	4.25	4.19	2.34	1.38	25.0%	22.7%	2.5%
International Consolidated	GBP	6.39	18,405	9.0	7.2	6.8	15%	4.93	5.42	4.80	2.49	2.43	27.7%	33.7%	3.9%
Air France KLM SA	EUR	12.24	6,493	8.6	5.7	5.7	23%	4.10	4.49	4.07	6.47	1.53	74.9%	27.0%	0.2%
Singapore Airlines Ltd	SGD	11.45	10,488	22.4	22.1	25.9	-7%	4.71	5.44	6.17	1.03	1.01	4.6%	4.6%	2.4%
Cathay Pacific Airways Lt	HKD	12.26	6,169	100.2	-21.6	63.2	26%	7.67	12.45	9.06	0.98	0.92	1.0%	-4.2%	0.2%
Air China Ltd	HKD	11.26	27,510	16.3	13.9	13.1	12%	5.23	6.53	5.87	1.93	1.53	11.8%	11.0%	1.5%
China Eastern Airlines Cor	HKD	6.90	17,231	13.7	12.0	13.4	1%	6.44	8.38	8.04	1.77	1.45	13.0%	12.1%	1.9%
China Southern Airlines Cc	HKD	9.92	16,942	14.1	12.9	12.7	5%	5.48	8.32	7.50	1.96	1.61	13.9%	12.5%	1.6%
Japan Airlines Co Ltd	JPY	4,162	13,512	9.1	11.8	11.2	-10%	3.94	4.97	4.68	1.53	1.39	16.8%	11.8%	2.5%
ANA Holdings Inc	JPY	4,484	14,514	18.6	10.9	12.6	22%	5.65	6.26	5.81	1.79	1.52	9.6%	13.9%	1.4%
Qantas Airways Ltd	AUD	5.25	7,442	10.0	8.9	8.4	9%	4.54	4.04	3.82	2.60	2.52	25.9%	28.3%	3.2%
Average				18.8	8.4	14.5	12.4%	5.32	6.36	5.77	2.51	1.81	22.8%	0.19	1.8%
Median				11.2	9.2	9.8	15.8%	5.36	5.86	5.68	2.08	1.53	19.4%	17.7%	1.7%

Source:ThomsonReuters

DBSVHK recommendations are based an Absolute Total Return* Rating system, defined as follows:
STRONG BUY (>20% total return over the next 3 months, with identifiable share price catalysts within this time frame)
BUY (>15% total return over the next 12 months for small caps, >10% for large caps)
HOLD (-10% to +15% total return over the next 12 months for small caps, -10% to +10% for large caps)
FULLY VALUED (negative total return i.e. > -10% over the next 12 months)
SELL (negative total return of > -20% over the next 3 months, with identifiable catalysts within this time frame)

Share price appreciation + dividends

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Sources for all charts and tables are DBS Vickers unless otherwise specified.

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