Regional Aviation

Aircraft Lessors

Refer to important disclosures at the end of this report

DBS Group Research . Equity

2 Mar 2022

At the forefront of recovery

- Aircraft lessors are poised to lead the recovery in the aviation sector
- Lessors still on track for earnings growth despite drag from Russia sanctions; rising interest rates and inflation should benefit the sector
- Medium-term outlook remains positive as aircraft leasing becomes increasingly popular
- Maintain BUY on BOC Aviation and China Aircraft Leasing Group

Sanctions on Russia will weigh on near-term earnings, but impact should be contained. We are moderating our FY22F earnings projection for BOC Aviation (BOCA) and China Aircraft Leasing Company (CALC) to factor headwinds from Russian sanctions, but still estimate their net earnings to grow at a respectable 21% and 27% respectively between FY21-FY23F. Rental revenue should continue to grow on fleet expansion and higher rental yields as cash collection improves and rental rates increase. Historically, an inflationary environment has benefitted aircraft lessors because aircraft values tend to rise in tandem with inflation, and higher interest rates generally lead to higher rental rates as airlines become more inclined to lease, rather than purchase aircraft.

Aircraft leasing is poised to become more mainstream. Lessors are projected to account for 60-65% of all aircraft deliveries over the next few years, resulting in a greater share of leased aircraft as airlines increasingly depend on lessors for capacity. Airlines are still focused on paring down debt levels, which reduces available headroom for capital spending. Buoyant jet fuel prices will stimulate demand for fuel-efficient next-generation aircraft which are widely held by dominant aircraft lessors. Additionally, higher interest rates will also take a toll on the credit metrics of airlines and expand the gap in funding costs between lessors and their customers, making leasing a more attractive option.

Valuations are compelling after correction. Sanctions on Russia led to a correction in the sector, which we believe is overdone, given that the pain inflicted on lessors should be short-lived. BOCA and CALC are trading at around -0.5 and -2.0 standard deviations of their respective five-year averages, presenting attractive entry points in our view. Reiterate BUY on BOCA with a TP of HK$84.0 and BUY on CALC with a TP of HK$8.2.

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STOCKS

	Price HK$	Mkt Cap US$m	12-mth Target Price HK$	Performance (%) 3 mth	12 mth	Rating
BOC Aviation Ltd	65.20	5,795	84.00	22.3	(9.7)	BUY
China Aircraft Leasing Group	5.56	482	8.20	10.8	(23.0)	BUY

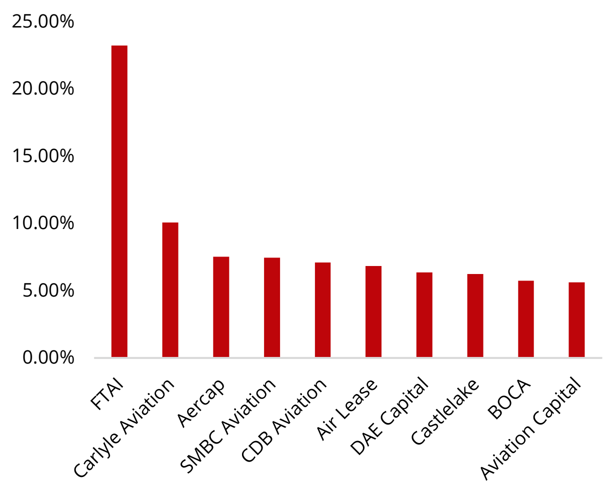
Source: DBS Bank, DBS HK, Bloomberg Finance L.P.
Closing price as of 1 Mar 2022

ed: JS/ sa: SM, PY, CS

Sanctions on Russia will bite aircraft lessors' near-term earnings, but sector fundamentals should still improve

Sanctions on Russia will be a drag on aircraft lessors' earnings in the near-term. EU sanctions announced on 27 February will prohibit the supply of aircraft to Russia, which means that aircraft lessors will have to terminate all contracts with airlines based in Russia over the next month. Furthermore, banning Russian banks from SWIFT will likely hinder Russian airlines from making timely payments to lessors, leading to cash collection issues and bad debts. Apart from having to deal with remarketing of affected aircraft and an increase in aircraft supply because of an outflow of aircraft from Russia, lessors may face challenges seizing aircraft given airspace restrictions imposed on Russian airlines or objection by the Russian regime. Our current base case assumes that the Russian airlines will honour their contractual obligations to the lessors to preserve their long-term relationships with the leasing community. Aircraft on lease to Russia by lessors domiciled out of the country represent around 3.2% of the global lease portfolio, based on data by Cirium. Hence, the sector will be in for some pain in the near-term at least. We are hopeful of an urgent resolution of the conflict, but acknowledge that prolonged sanctions on Russia could weigh on the sector's medium-term outlook.

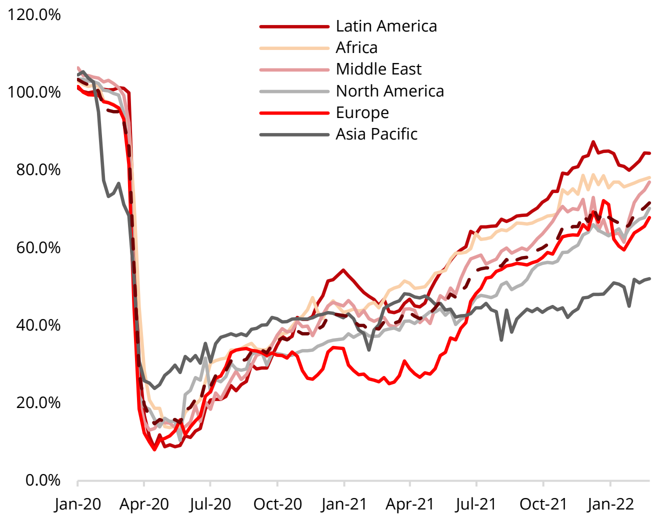
% of fleet on lease to airlines in Russia/Ukraine



Source: OAG, DBS Bank

Aircraft demand is growing as passenger volumes trend higher on easing of travel restrictions. We anticipate aircraft utilisation levels and demand to continue improving as more countries reopen driven by sustained momentum on the vaccination front and availability of effective treatment options like antiviral pills. While the initial onset of Omicron led to a reduction in flight capacity, its impact was considerably less pronounced compared to the Delta variant. Global flight capacity only dropped slightly to 65.0% in the week of 24 January-22, from 69.2% in the week of 27 December-21. We do not expect a soft Russian market to derail the recovery, and continue to see greater visibility on the recovery trajectory for airlines given that many countries are forging forward with plans to reopen their borders. Asia Pacific, which has been trailing the other regions, is also making solid progress. Countries like India, Australia, Vietnam, Malaysia, and the Philippines have recently opened or plan to soon open to fully vaccinated tourists. Meanwhile, Singapore and Thailand are further easing border controls.

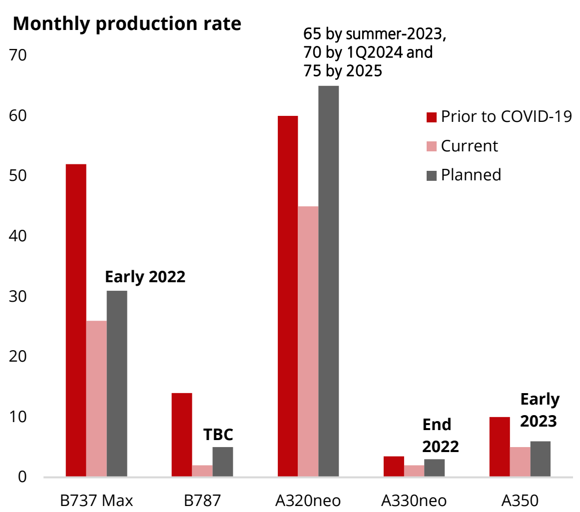
Airline capacity by region (2019 = base)



Source: CAPA, DBS Bank

Russian sanctions could lead to temporary manufacturing woes, but OEM production rates is anticipated to rise over the medium-term and drive fleet growth among lessors. Aircraft lessors were forced to delay and defer deliveries to customers amid a slowdown in aircraft production rates, impeding revenue growth in 2021. Boeing and Airbus both saw a decline in monthly production rates because of supply chain disruptions and manufacturing defects, hindering production of popular aircraft models like the A320neo, B737 Max and B787. Production issues for the A320neo and B737 Max appear to be under control for now, but regulatory challenges still linger for the B787. However, fresh sanctions on Russia could hamper access to raw materials for the OEMs, and negatively impact production rates in the near-term. Looking ahead, however, we anticipate aircraft lessors to grow their fleet at a faster clip as Airbus and Boeing ramp up production over the next few years, albeit with some nuances. Airbus's production rate of the A320 will grow, but it is unlikely to meet its ambitious targets due to supply chain snags.

OEM historical and planned production rates



Source: Boeing, Airbus, DBS Bank

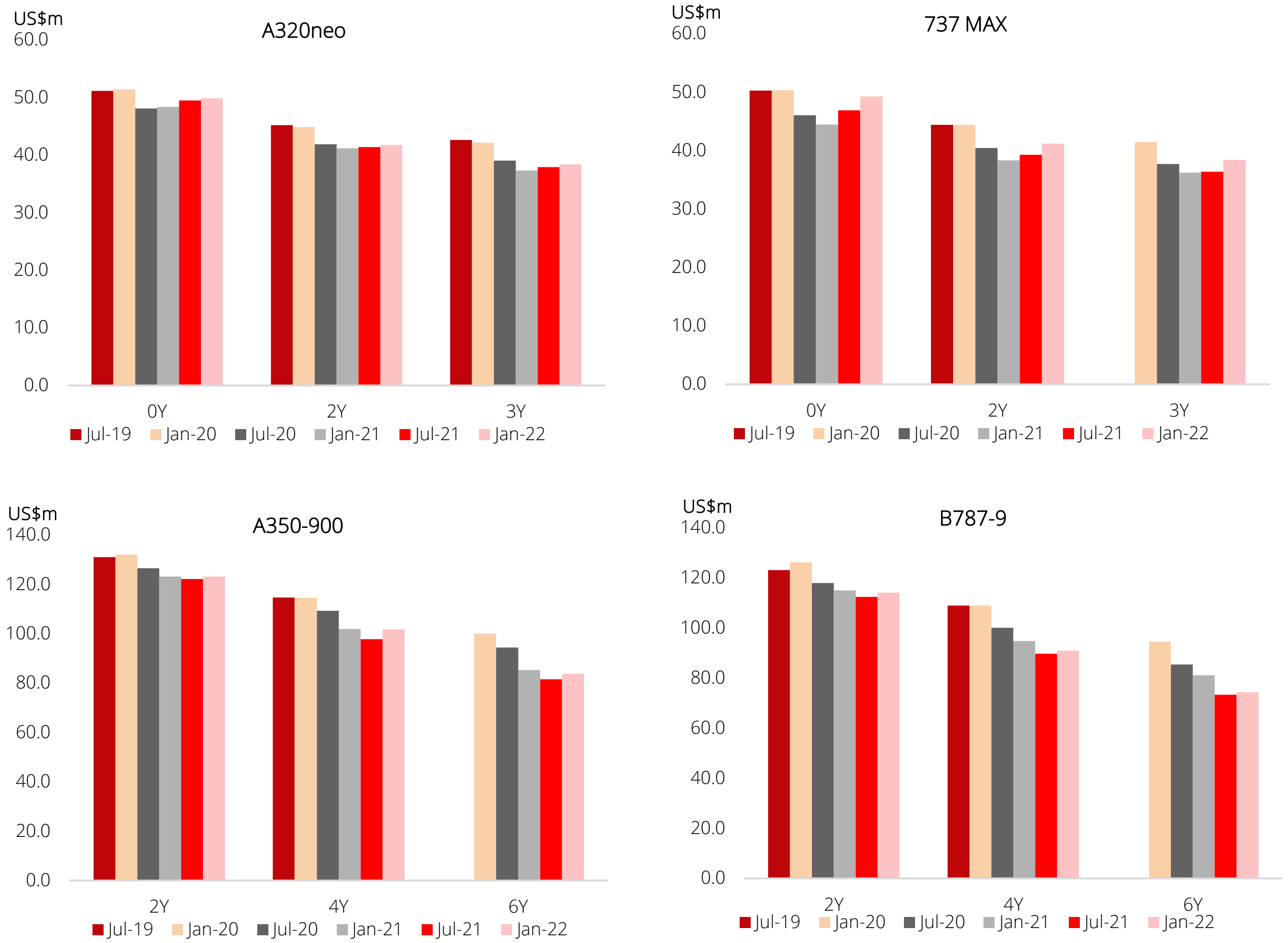
Cash collection levels from airlines based out of Russia should improve amid further recovery in airline earnings. To recap, aircraft lessors still encountered issues collecting payment in 1H2021 as air traffic level was still relatively depressed, and consequently had to stop recognising revenue from customers when lease receivables exceeded the safety deposits or collection could not be reasonably assured. However, the fortunes of airlines took a turn for the better in 2H2021 amid a rebound in air traffic and an exceptionally strong air freight market. Hence, the majority of aircraft lessors who recently reported financial results all showed considerably better collection rates at 98-100%. Though there are still challenges for airlines ahead, like elevated jet fuel prices and yield pressures, we believe their profitability should still improve as passenger volumes normalise. Lessors will certainly have difficulties collecting rental and maintenance payments from airlines based in Russia, but the overall impact should be manageable for lessors under our coverage due to their relatively low exposure (BOCA: 5.7%, CALC: 1.4%) to the region.

Net lease yields should widen despite higher interest rates as lease rates and collections improve. Aircraft lessors saw a decline in portfolio lease yields (lease revenue/average book value of aircraft) over the course of the pandemic because of protracted rent deferrals (lessors were unable to recognise revenue) and lease restructurings (leads to more aircraft in transition and potentially lower lease rates). Looking ahead, we anticipate lease yields to improve as cash collections from non-Russian airlines cease to be an issue. It is also important to note that lessors typically have interest rate escalators or adjustors on forward leases, meaning that lease rates will be revised upwards prior to aircraft deliveries to customers. Furthermore, aircraft lessors under our coverage have a high proportion of fixed debt, which renders them less susceptible to rate hikes in the near-term. An increase in supply from aircraft coming out of Russia will exert some stress on rental rates for a while, but we believe that a sustained recovery in aircraft demand (unless air travel demand is curtailed because of fear among consumers) should eventually absorb the excess supply.

Lessors are less likely to incur asset impairment losses going forward as aircraft values stabilise and improve. Market values for most aircraft types appear to have stabilised or recovered in 2021. As per before, new aircraft market values have been the most resilient, and could potentially reach parity with their base values by end-2022 to early-2023, depending on the recovery trajectory. Values for older narrowbody aircraft evidently bounced back in 2H2021, while older widebody aircraft values as of December-21 were largely flat compared to June-2021.We believe that values for newer aircraft and outgoing generation narrowbody aircraft will continue to strengthen over 2022 in tandem with rising aircraft utilisation levels (included in Appendix).

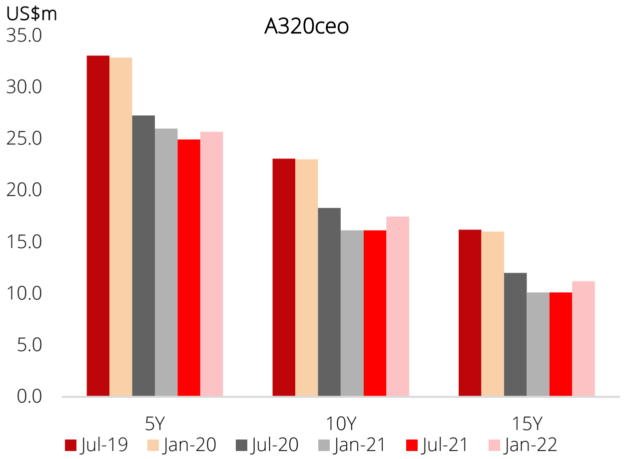
Meanwhile, older widebody aircraft values may stagnate at current low levels, as rising interest on passenger-to-freighter conversions mitigates soft demand owing to a slower turnaround in international air travel. We note that the influx of aircraft from Russia could impede asset appreciation, particularly for older widebody aircraft models. Furthermore, lessors may incur some impairment losses on aircraft on lease to Russian airlines, depending on their ability to re-market repossessed aircraft, but we are not too concerned about companies under our coverage at this point.

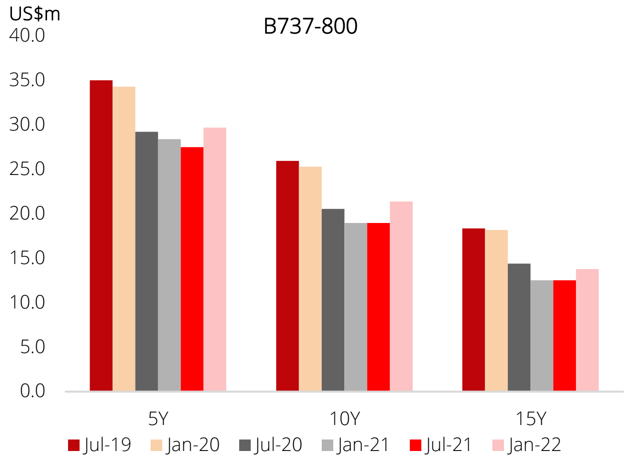
Historical market values of next generation narrowbody and widebody passenger aircraft

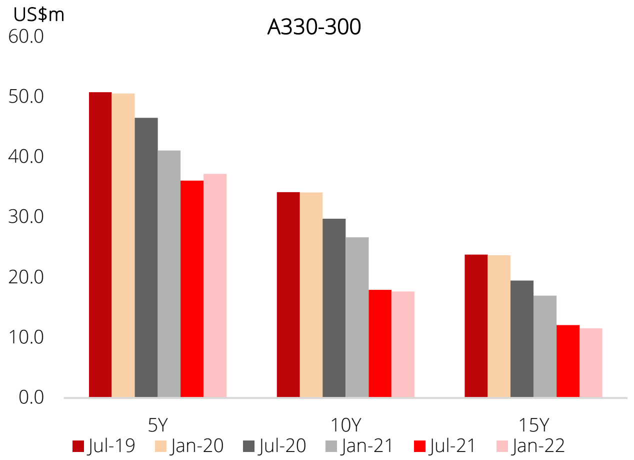


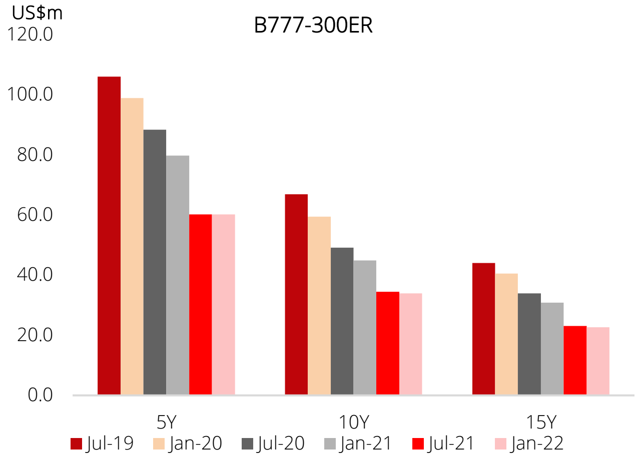
Source: IBA, DBS Bank

Historical market values of current generation narrowbody and widebody passenger aircraft









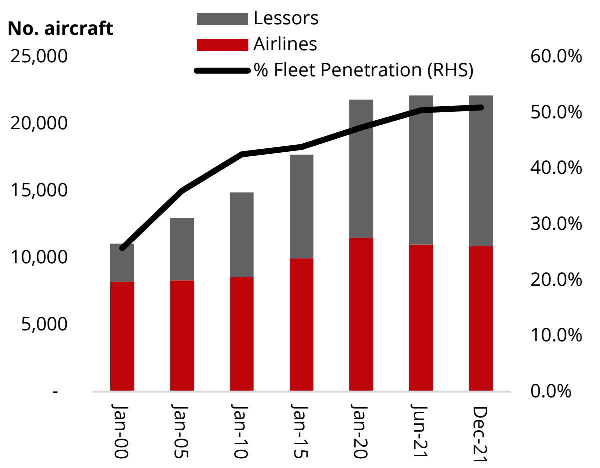
Source: IBA, DBS Bank

Medium term prospects remain positive with multiple drivers to catalyse shifts in aircraft leasing

Multiple drivers to fuel a shift to aircraft leasing over the medium-term. Aircraft leasing continued to gain ground in 2021 – the share of leased aircraft rose to 49.0% in January-2021 and nearly reached 51% in December-2021, up from 47.3% in January-2020. We believe that aircraft lessors will continue to gain more market share over the next few years by taking 60-65% of total aircraft deliveries during the period. This will be driven by multiple factors, but at its core, airlines want a younger and newer fleet, but they cannot afford to buy new aircraft now because of their financial situation.

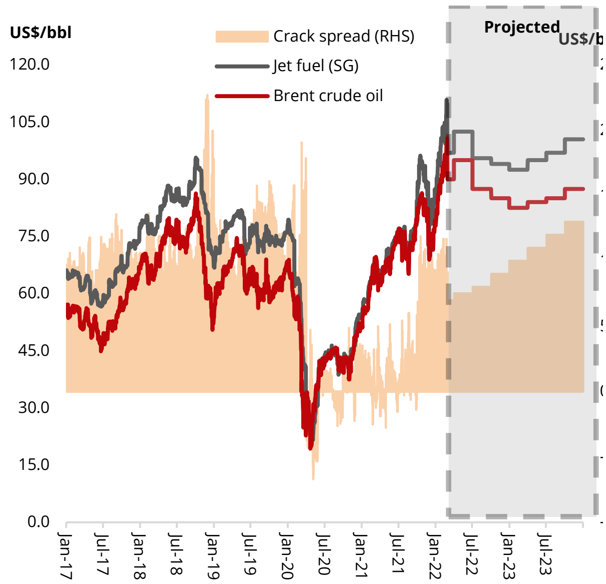
Renewed pressure on operating fuel-efficient aircraft will boost leasing market. Brent crude oil prices recently broke the US$100/bbl mark for the first time since 2014 amid the Russia-Ukraine conflict and looks to stay elevated in the near-term at least. The roaring rally in crude oil/jet fuel prices is making next-generation aircraft much more competitive compared to older planes, since new aircraft models consume 20-30% less jet fuel. Furthermore, we are seeing more airlines committing to reduce carbon emissions. The culmination of these two factors will drive demand for newer, more fuel-efficient aircraft models which are widely held by many of the leading aircraft lessors.

Lessor/airline share of passenger aircraft



Source: Cirium, DBS Bank

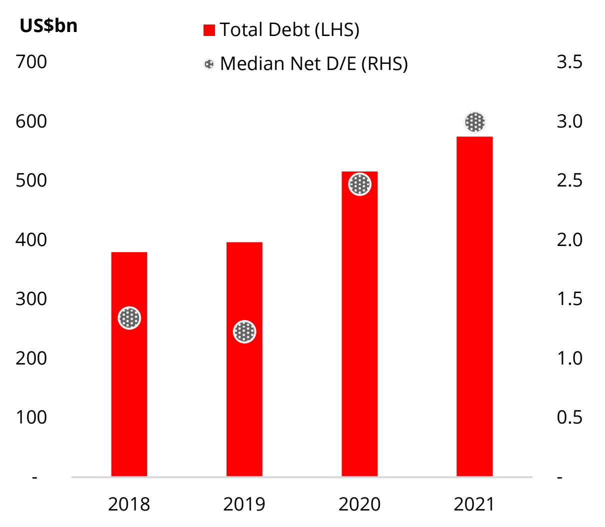
Lessor/airline share of passenger aircraft



Source: Bloomberg Finance L.P., DBS Bank

Airlines are saddled with debt and will focus on repairing their battered balance sheets. A review of the 83 largest airlines (by market capitalisation) showed that total debt in the sector climbed by another 11% in 2021 (+30% y-o-y in 2020), with the median net debt to equity of airlines deteriorating to 3.0x from 2.5x in 2020. 23 airlines in the sample had negative equity balances as of December-21, compared to 17 the year before. It will take time for airlines to de-lever and mend their debt-laden balance sheets. And in the process, we believe the sector will have to demonstrate fiscal prudence and rely on leasing to restore and add capacity.

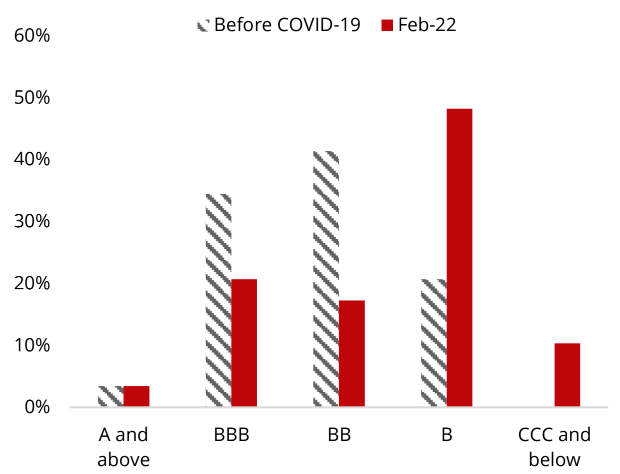
Airline sector total debt and credit metrics



Source: Bloomberg Finance L.P., DBS Bank

Rising interest rates will exacerbate the spread in funding costs between airlines and lessors. We believe higher interest rates will make purchasing aircraft seem much less attractive versus leasing, especially considering the stark divergence in credit quality between aircraft lessors and airlines. Approximately 58% of airlines were rated single 'B' and below as of February-22, as compared to just 21% prior to the pandemic. Though COVID-19 had some impact on the credit metrics of aircraft lessors, the credit ratings of all investment-grade lessors remained the same. We estimate that the current credit spread between investment grade lessors and airlines in the 'BB' rating category is 200-250bps. Assuming 80% debt financing as per industry norm, this means that airlines have to pay around US$1m and US$3m more than lessors in interest payments annually when purchasing a single next generation narrowbody and widebody aircraft respectively.

Credit rating distribution of 29 rated airlines



Source: S&P Global Ratings, Moody's, DBS Bank

Stock picks and recommendations

Key operational and financial metrics of aircraft lessors

	AerCap Holdings	Air Lease Corp	BOC Aviation	DAE Capital	Aircastle	CDB Financial Leasing	China Aircraft Leasing	ALAFCO
Number of owned aircraft in portfolio	1,762	382	380	296	250	241	104	79
Number of aircraft in orderbook	436	431	104	10	23	138	254	68
Weighted average lease expiry (years)	7.2	6.9	8.3	6.2	4.8	7.8	7.0	8.7
Weighted average fleet age (years)	6.6	4.3	3.9	6.7	10.6	4.6	6.5	4.7
Number of customers	200	115	86	112	79	72	35	23
Presence in number of countries	80	59	38	54	43	37	15	15
Collection rate (%)	100%	87%	96%	94%	100%	-	>95%	-
% of new technology aircraft in owned aircraft portfolio	27%	52%	44%	12%	6%	33%	14%	59%
% of narrow-body aircraft in owned aircraft portfolio	76%	78%	80%	83%	90%	73%	89%	64%
Current credit rating (S&P/Moody's)	BBB/Stable	BBB/Stable	A-/Stable	Baa3/Stable	BBB-/Stable	A/Stable	Ba1/Stable	Not rated
Return on equity (TTM)	10.1%	6.2%	9.1%	5,1%	-8.4%	13.3%	7.6%	-6.9%
Total debt/equity	2.8x	2.4x	3.4x	2.7x	2.2x	9.5x	6.4x	3.1x

Source: Companies, CAPA, DBS Bank

BOC Aviation is our preferred pick in the sector; reiterate BUY with HK$84 TP. BOCA is our top pick for several reasons: the lessor has the longest weighted average lease expiry, and the youngest fleet with a relatively higher proportion of new-generation aircraft. Additionally, BOCA has one of the highest net rental yields due to its premium asset quality and low cost of funding (second highest credit rating behind CDB Financial Leasing). Although we are cutting our FY22F net profit estimate by 20% to reflect challenges surrounding recent sanctions on Russia (23 aircraft/5.7% of its owned fleet was on lease to airlines based in Russia and Ukraine), we still expect the lessor's earnings to grow at an impressive 21% CAGR between FY21-23, underpinned by its robust orderbook and healthier net lease margins. We believe that rising interest rates will have a net positive impact on earnings, given the lessor's high proportion of fixed debt (79% of total debt), and long weighted average maturity of debt. We see the recent correction as a good opportunity to accumulate, given that BOCA is priced at 1.1x FY22F P/BV, which is 0.5 standard deviation below its five-year average,

We are also positive on China Aircraft Leasing Group, maintain BUY with HK$8.20 TP. We also like CALC because of its elevated exposure to China (78.0% of CALC's total fleet was leased to Chinese clients), relatively longer lease expiry, and young fleet of primarily narrow-body aircraft (89% of total fleet). Furthermore, the lessor has limited remarketing risk over the next two years (only two aircraft coming out of lease over 2022-2023; forward placements secured for aircraft to be delivered), and minimal exposure to Russia (1.4% of total fleet). Interest rate risk is low given that the Group actively hedges its floating interest rate exposure – a sensitivity analysis by the company indicates that net profit would have decreased/increased by HK$6.2m if interest rates rose/declined by 50bps. We anticipate CALC's earnings to grow at a commendable 25-30% CAGR over the next two years on the back of its massive orderbook. Current valuations are not commensurate with its solid prospects - despite its stellar return on equity (FY22F) of 16-18%, CALC is only priced at 0.8x FY22F P/BV, which is slightly more than 2 standard deviations below its 5-year average.

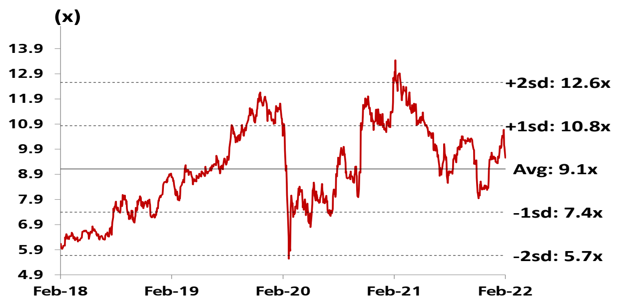
Global peer valuation comparison

Company	Market Cap (US$m)	P/E CY22F	P/E CY23F	EV-to-EBITDA CY22F	EV-to-EBITDA CY23F	P/B CY22F	P/B CY23F	ROE (%) CY22F	ROE (%) CY23F	Div Yield (%) CY22F	Div Yield (%) CY23F
AerCap Holdings	13,642	7.9x	6.7x	9.0x	8.5x	0.7x	0.7x	11.3%	10.5%	NA	NA
BOCA	6,018	8.2x	7.0x	10.4x	9.4x	1.1x	1.0x	13.7%	14.2%	4.3%	4.6%
Air Lease	4,830	8.4x	6.5x	10.3x	9.8x	0.7x	0.6x	9.5%	11.5%	1.7%	1.7%
FTAI	2,414	nm	15.2x	9.5x	nm	1.9x	1.6x	nm	21.4%	5.6%	5.4%
CALC	538	4.5x	3.9x	10.9x	9.7x	0.8x	0.7x	18.2%	18.8%	8.3%	10.0%
	Sector average	7.3x	7.9x	10.0x	9.3x	1.0x	0.9x	13.2%	15.3%	5.0%	5.5%

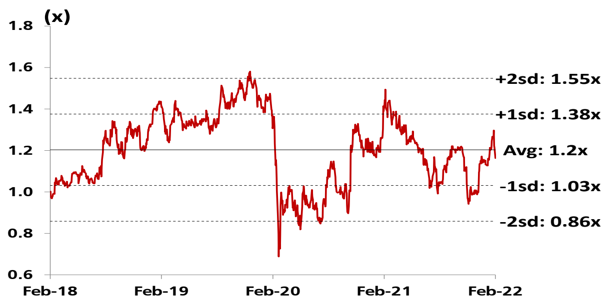
Source: Bloomberg Finance L.P., DBS Bank

BOC Aviation Ltd Historical PE and PB Band

Forward PE band (x)



PB band (x)



Source: Thomson Reuters, DBS HK

China Aircraft Leasing Group Historical PE and PB band

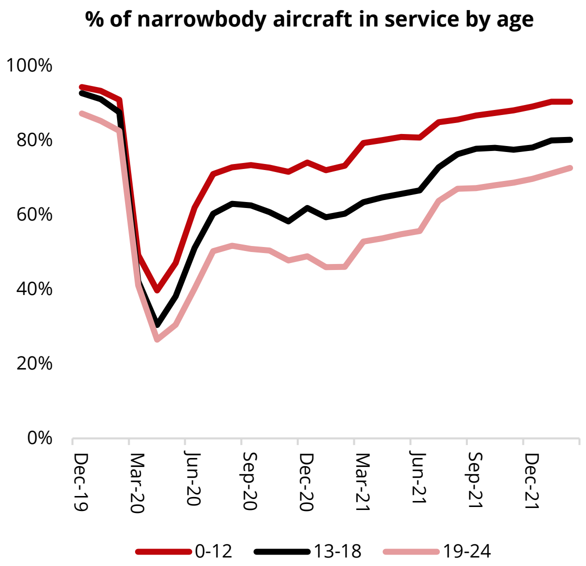
Forward PE band (x)

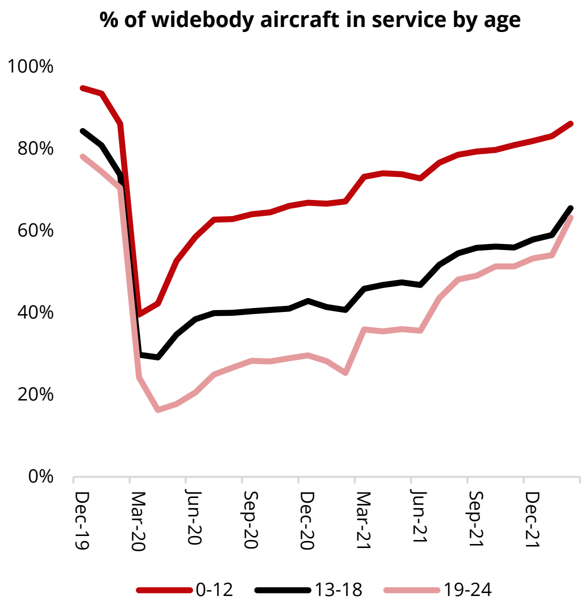
PB band (x)

Source: Thomson Reuters, DBS HK

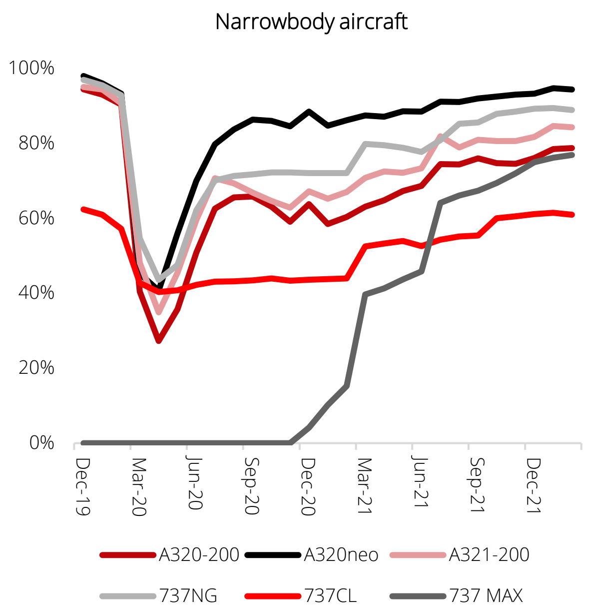
Appendix: Historical aircraft utilisation by age, type, and variant series

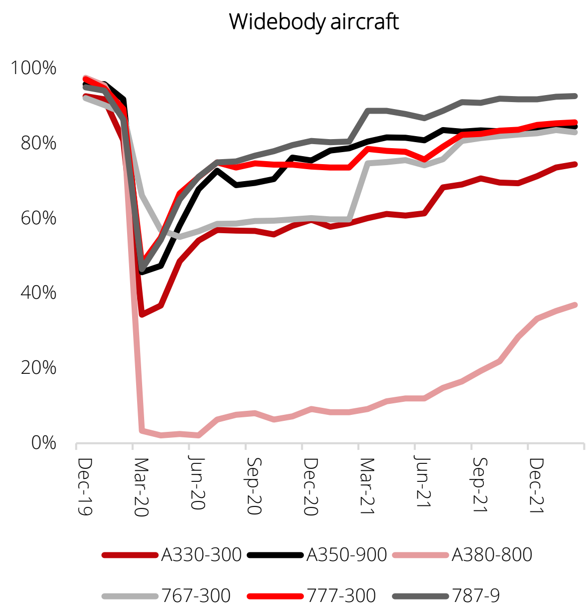
Historical passenger utilisation by type and age





Historical passenger utilisation by variant series





Source: CAPA, DBS Bank

DBS Bank recommendations are based on 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 share price catalysts within this time frame)

**Share price appreciation + dividends*

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Sources for all charts and tables are DBS Bank, DBS HK unless otherwise specified.

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