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ACG CEO Khanh Tran explains the lessor's business strategy amid the Covid-19 crisis

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A price worth **paying**?

The financial markets have remained open to airlines and lessors amid the Covid-19 crisis, but only for the right credits and at the right price.

Amid the dire financial results of the second quarter, lessors and airlines could take some comfort from the fact that the majority of the sources of financing that would normally be available remained open to them.

Easyjet, Jetblue Airways and Tui were just a few of the airlines that were able to avail of the sale and leaseback market to generate funds in recent weeks.

Easyjet sold and leased back five Airbus A321neos to Bocomm Leasing in August for aggregate cash sales proceeds of $266 million. The transaction marked the successful completion of the carrier's sale and leaseback under which it sold 23 aircraft for total proceeds of $771 million.

Tui has agreed a sale and leaseback deal with BOC Aviation for five new Boeing 737 Max aircraft for an aggregate sum of $226 million.

The enhanced equipment trust certificate (EETC) market ticked back into life in the summer, with Alaska Airlines, Federal Express (FedEx), Jetblue and Hawaiian Airlines among the airlines tapping this source of financing.

The Covid-19 crisis has witnessed the US airlines, in particular, working hard to translate any potential collateral into cash to shore up their balance sheets, whether via sale and leasebacks, EETCs, slots, routes and gates and loyalty programmes.

Even the Japanese operating lease with call option and Japanese operating lease markets are open, according to Sumitomo Mitsui Finance and Leasing managing executive officer and head of transportation, Shinichiro Watanabe, speaking in an interview in this issue.

Lessors have been able to tap the capital markets amid the crisis to keep their funding cycle running in some form.

Air Lease (ALC) priced its public offering of $700 million of senior unsecured medium-term notes due 15 January 2026, with an interest rate of 2.875% a year.

Comparisons with pre-Covid-19 financings are potentially misleading, but it is worth noting that ALC priced a $750 million seven-year note issue in May 2019 due in June 2026 at 3.75%.

Aircastle issued $650 million of five-year senior notes at 5.25% in August. In July 2019, the US lessor issued $650 million of senior 4.25% senior notes due 2026.

Portfolio sales could also be back after some lessors tested the market with number of aircraft. "Maybe it does no harm to softly see if one could sell something/anything," one bank source tells *Airfinance Journal*.

Another, from the same bank, adds that sources of finance and the appetite to lend is still subdued.

The creditworthiness of an airline or lessor and the backstop funding available, whether it be state aid, in the case of airlines, or shareholder equity, are critically important to satisfy nervous investors.

One financing tool that remains resolutely shut for the time being is the asset-backed securities (ABS) market, with existing ABSs coming under extreme revenue-generation pressure at present.

Panellists at the *Airfinance Journal* North America 2020 virtual conference were optimistic that the structures are designed to come under significant stress, and have the liquidity facilities in place to fund their survival, but new issuances any time soon are an unlikely prospect.

In recent months we have also seen major plays by private equity in the aviation space, with Oaktree Capital Management and Apollo Global Management providing funds to carriers in Chapter 11 bankruptcy.

Oaktree is providing $1.3 billion of debtor-in-possession (DIP) financing to LATAM.

Apollo is stumping up $1 billion of DIP financing for Aeromexico.

In both cases, the investors have the option of converting their loans into shares.

On the one hand, the involvement of private equity investments on this scale must be viewed as a positive for the industry – that some investors see a future after the crisis – but, on the other hand, their involvement comes as a risk.

"I am not so sure that the combination [aviation and private equity] is a fantastic one," one banking source tells *Airfinance Journal*.

"Basically, what private equity needs is to almost instantly satisfy their investors, so their investment needs to generate yield, and the question is whether that is really going to be the case for the next two or three years."

The source adds: "We have seen it very successfully done in the infrastructure space. We have worked a lot with them in all sorts of things: also in the land transportation, in the rail space, that's a bit more stable. We have seen them fail miserably in the shipping space, with perhaps the exception of Oaktree and maybe one or two others. Whether you can draw a parallel with aviation I don't know, but I am a bit sceptical."

Time will tell.

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CDB Aviation appoints new CFO

CDB Aviation has appointed Brendan O'Neill as chief financial officer (CFO), replacing Will Gramolt, who stepped down earlier this year.

O'Neill joins from DAE Capital, where he spent 11 years, including as part of AWAS, most recently as senior vice-president, financial reporting, planning and analysis.

CDB Aviation says he conducted a wide range of financial efforts, including capital raising, liquidity management, rating agency engagement, investor relations, and strategic financial planning and analysis.

In 2017, O'Neill played a key role in the sale of AWAS to DAE, and the subsequent integration of the two companies post-acquisition.


Brendan O'Neill

Genesis announces Smyth as financing head

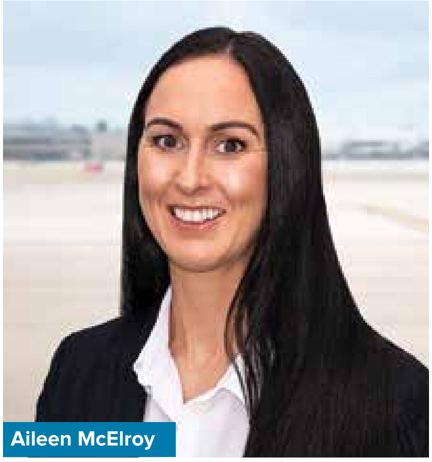
Dublin-based aircraft lessor Genesis has appointed Adam Smyth as CFO. He replaces Cian Mackey, who departed the company at the end of June.


Adam Smyth

Smyth is a founding member of Genesis, having joined the business in 2014. He has 12 years' experience with an extensive background in financial services and aviation finance.

Since joining Genesis, Smyth has held the roles of financial controller and director of portfolio companies, head of finance and, most recently, head of portfolio investments.

Zephyrus Aviation names director of structuring


Aileen McElroy

Zephyrus Aviation Capital has appointed Aileen McElroy as director of structuring and planning.

McElroy has more than 10 years' experience in the aircraft lease and finance sector. She previously served as director of financial services with Canyon CTS where she was involved in establishing and managing a range of services to multiple aviation structures.

Throughout her career, McElroy has worked closely with airlines, lessors, investment managers and private equity funds.

McElroy has been involved in the set-up of multijurisdictional asset-backed securitisation facilities, joint-venture fund platforms, warehouse debt-financing facilities and predelivery payment financing transactions to single-entity asset-owning vehicles.

Piiq Risk makes first hire for French office

Piiq Risk Partners has made a partner from Marsh its first hire for its new European business, which has been established to focus on customers after Brexit.

Anne-Laure Rosenwald has been recruited to work at Piiq Risk Partners SAS, a new office the company has established in France.

Rosenwald's Linkedin profile shows that she was vice-president at Marsh for almost three years, having previously worked for Sun Life Financial in Canada.


Anne-Laure Rosenwald

Aviation insurance specialist Piiq Risk Partners recently received regulatory approval to operate in France.

Piiq Risk Partners SAS will act as a base to expand the insurer's services across French and other mainland European markets and provide a "seamless service to its clients" after Brexit.

Spicejet's Koteshwar to join Green Africa

Outgoing Spicejet CFO Kiran Koteshwar has accepted the role of group CFO at Nigerian start-up Green Africa, effective September.

He has 22 years' experience in aviation, including 13 years at Spicejet, where he oversaw two major funding exercises for the airline. Before Spicejet, he played a key role in launching Go Air, where he held several commercial and financial leadership positions.


Kiran Koteshwar

Koteshwar says: "Despite the challenging backdrop that the industry is currently going through, the timing couldn't be better to launch and scale a world-class value airline in Nigeria, Africa's largest market."

South Korea sends out **distress signals**

Airlines and aviation players in South Korea are facing an uphill battle, which will inevitably force some carriers out of the market, leaving lessors in the dust. **Dominic Lalk** investigates.

The news in August that South Korean low-cost carrier Eastar Jet was returning the majority of its leased fleet to their lessor owners was a bellwether of just how distressed the Korean market continues to be. Flag carrier Korean Air (KAL) and Asiana Airlines are no exception.

Eastar Jet

Hoping to find investors to back a relaunch, Eastar says it wants to recommence operations once the Covid-19 crisis has subsided with a fleet of just five to seven aircraft, down from the 24 it operated before the pandemic.

Lessors with the largest exposure to Eastar include Minsheng Financial Leasing and NBB Leasing. Several lessor-owned aircraft in service with Eastar until the crisis struck were being advertised as available for sale or new lease as *Airfinance Journal* went to press, including two Boeing 737-900ERs owned by Fortress Transportation, which were Eastar's only -900ER aircraft.

In late August, Eastar appointed Deloitte Anjin, Yulchon and Heungkuk Securities as lead managers to seek new investors for the sale of a majority stake in the airline. This comes after the failure of a previously agreed takeover by Jeju Air which has caused much scorn, with both parties blaming each other.

After the botched buyout, Eastar senior vice-president, Kim You-sang, said the airline was in talks with two Korean private equity funds and hoped to sell a stake to them before the company is "placed under court receivership." However analysts say there is little hope anybody would want to risk putting their money in Eastar, which lost its air operator's certificate in June after it failed to meet minimum funding requirements. South Korea's anti-corruption agency, the Fair Trade Commission, views Eastar as an "unrecoverable company".

Jeju, 57%-owned by the AK Holdings conglomerate, had agreed to buy Eastar for a discounted W54.5 billion ($46 million). Korea Development Bank (KDB) and Korea Export-Import had pledged their support for the deal. Jeju has booked a W17.4 billion impairment from the failed takeover.

Fly Gangwon, T'Way

Another South Korean low-cost carrier, Fly Gangwon, has a "high risk of default" says Fitch Ratings. The agency identified Fly Gangwon as a serious concern in the Horizon III asset-backed securitisation serviced by BBAM.

"Fly Gangwon has limited operational history, so a high risk of default in the pool," Fitch said in a report. Fly Gangwon operates three 737-800 aircraft.

T'Way Airlines, yet another budget operator, should be watched closely, too, say analysts. Its chief executive, Jeong Hong-geun, said in late August that the carrier's liquidity was "not sufficient".

T'Way reported an W85 billion net loss for the first half of 2020 as Covid-19 all but wiped out its international network. T'Way operates an all-leased fleet of more than 20 737-800s. Of the more than 10 lessors exposed, Aercap and Avolon have the most aircraft placed with T'Way.

Air Premia, Aero K

Two new airlines – regional Aero K and long-haul Air Premia – are planning to launch operations in South Korea this year despite the ongoing pandemic.

Aero K, whose launch was postponed several times, is hoping to use three Airbus A320 aircraft. Air Premia tells *Airfinance Journal* that its launch may face hurdles because of "delayed aircraft production". The carrier and Boeing signed an order for five 787-9 aircraft at the *Airfinance Journal* Asia-Pacific 2019 conference. This came after an earlier agreement to lease three 787-9 units from Air Lease.

Asiana, Korean Air

South Korea's second-largest carrier, Asiana, faces nationalisation under KDB after a proposed takeover by the HDC-Mirae consortium hit the rocks in August, which prompted KDB to warn that HDC should not expect a refund of deposits if its takeover of Asiana is aborted.

Asiana's debt ratio has increased by 16,126% since the second quarter of 2019. In 2019, HDC and Mirae agreed to buy a 31.05% stake in Asiana from Kumho Industrial for W2.5 trillion, and to provide a capital injection. Asiana and its Air Busan and Air Seoul affiliates combined operate more than 90 leased aircraft, with ICBC Leasing, SMBC Aviation Capital and Aviation Capital Group (ACG) most exposed to the trio.

Flag carrier Korean Air will survive the Covid-19 crisis, analysts agree, if only as a show of face. KAL is shedding assets where it can, including but not limited to the flag carrier's maintenance, repair and overhaul division.

Over the summer, it sold its in-flight catering and duty-free business units for about W1 trillion, increasing its war chest to more than W4 trillion. Other financings include a W1 trillion sale of 79 million new shares; W1.2 trillion of aid, including W700 billion of asset-backed securities based on cargo sale bonds; W300 billion of perpetual bonds with stock conversion rights through the Korea Development Bank and The Export-Import Bank of Korea.

The flag carrier has some $400 million in domestic bonds due in 2020 but also about $4.3 billion in overall global debt maturing this year, according to a Moody's estimate. KAL's biggest challenge arguably comes from within as parent company Hanjin KAL chairman and KAL chairman and chief executive officer, Walter Cho, continues being challenged by his elder sister, Heather Cho.

In August, activist fund KCGI and partner Bando – with the backing of Heather Cho – acquired another 1.48% in Hanjin KAL after a successful public tender offer for 1.2 million warrants amid an ongoing feud to gain control of KAL and overhaul its governance structure, raising their combined stake to 45.23%.

Walter Cho, his relatives – including mother and other sister, Emily Cho – and backer Delta Air Lines have a combined stake of 43.83% after the transaction. Earlier this year, the alliance tried and failed to remove Walter Cho as chairman of Hanjin KAL, although it was reportedly a close call.

The Heather Cho and KCGI-led alliance remains committed to removing the incumbent management team, blaming it, among many other things, for the flag carrier's many annual losses.

Alive and kicking

The Japanese operating lease with call option and Japanese operating lease aircraft financing products have weathered past crises, and they are still seeing deals despite Covid-19, Sumitomo Mitsui Finance and Leasing managing executive officer and head of transportation, Shinichiro Watanabe, tells **Dominic Lalk**.

Since the beginning of the year many naysayers have said that demand for Japanese operating lease with call option (Jolco) and Japanese operating lease (Jol) financings was "gone"; others said the market was all but "dead".

Shinichiro Watanabe, Sumitomo Mitsui Finance and Leasing (SMFL) managing executive officer and head of transportation, begs to differ in an exclusive interview with *Airfinance Journal*.

"It's very important to distinguish between the Jol and Jolco markets. For the Jolco, the main investor focus is on tax solutions and deferral. For the Jol, it's investment-focused, so the investors expect a larger return for taking more risk," Watanabe explains.

The finance product market is heavily dependent on the state and the health of the greater Japanese economy. With Covid-19 still wreaking havoc everywhere, a slump in transactions is a temporary situation rather than a new normal, notes the seasoned SMFL financier.

"The Japanese economy is, of course, heavily impacted by the continuous spread of Covid-19, so overall demand and volumes are down and this translates into less demand for tax solutions like the Jolco," says Watanabe.

Under the umbrella of the SMBC conglomerate, which also includes lessor SMBC Aviation Capital, SMFL has consistently ranked among the top dealmakers in *Airfinance Journal*'s annual Jol/Jolco survey. This year will be no different, says Watanabe.

"The Jolco market is not dead like many seem to think. We still see some demand right now. For the first half of the year, volumes were 20% to 30% of 2019 levels. I believe that this is probably the bottom of the market. We expect demand to rise in the second half. You must remember that the fiscal year in Japan starts in April, so right now we are actually only in the second fiscal quarter, and typically the second halves have seen much stronger demand for tax solutions like the Jolco," he says.

The Japanese can be cautious investors. Convincing them to be less conservative, and enter the often-tumultuous aviation industry in the first place, is often no easy feat, especially when less-experienced small regional players get involved. The Covid-19 crisis hit just as Japanese investors were becoming more comfortable with aircraft assets, and Jolco underwriters were becoming more open minded in terms of structure, jurisdiction, lessees and aircraft types.

"The Jolco market is not dead like many seem to think. We still see some demand right now. For the first half of the year, volumes were 20% to 30% of 2019 levels."

Shinichiro Watanabe, managing executive officer and head of transportation, Sumitomo Mitsui Finance and Leasing

"The point is whether investors have confidence to invest in aircraft Jolco at the moment. There are alternatives as you know, like ships and container boxes, so some investors may find those safer alternatives for Jolco transactions as demand for freight and cargo is up and demand for passenger aircraft is down," says Watanabe.

"For us, we have more than 2,000 Jolco investors that we look after. Of course, we are in ongoing discussions with them about what their options and alternatives are. As you know, there's a lot of negative outlooks for the global aviation industry reported in the media, so Japanese investors may not be confident in aircraft Jolco except for some very experienced ones at the moment so they seek less risky alternatives," he adds.

In the second half of 2019, many financiers involved in Jolco transactions began bemoaning excess supply in the market, which forced arrangers to sell down their inventories at a discount. Are we still seeing those discounts in a market believed to be dead now?

"First of all, it's about pricing and quantity of the equity available to the investors. The market picked up at the end of 2018, beginning of 2019, in tandem with the Japanese economy. Then, demand declined in the second half of 2019 as the economy was slowing down. But still, Jolco demand was not too bad. It slowed down for sure, but what you need to consider is that we usually start structuring the deals about one year prior to the start of servicing the equity, so that means the equity we started to sell in the second half of 2019 was actually arranged in 2018, which was the peak period. So, if you talk about the pricing, the tax benefit, it was probably the least attractive to the investors at that time. That's the real reason why arrangers had difficulty in the second half of 2019 to sell their inventories without discounts. We started at a very high level and we discounted from those peak rates," says Watanabe.

In recent years, the market has observed the emergence of more Jolco transactions done directly with the operating lessors. This is a trend that will continue.

"This is an area we are very interested in because lessors are often considered less risky than airlines, owing to their robust financings in place, so this gives Japanese investors more confidence to invest in Jolco transactions done with lessors. As you know, until now we have done much less Jolco financings with lessors because we own a very large lessor in our own group – SMBC Aviation Capital," says Watanabe.

Other financing tools with growth potential, even in the current Covid-19 environment, are innovative Jolco products, such as debt structures combined with Aircraft Finance Insurance Consortium (AFIC) and export credit agency (ECA) debt.

"AFIC is a product we have jointly launched with Boeing. As an SMBC Group company, we are, of course, very supportive of this product. Under the very difficult credit environment for the aviation industry, AFIC and ECA financing demand is, of course, very strong now. AFIC Jolco with good airline credits is a good business, because even very cautious banks can provide debt finance, and some experienced investors are very familiar with those good airline credits even if they are not covered by the insurance," says Watanabe.

Impact of airline bankruptcies on Jol/Jolco investors

"We have seen some airline bankruptcies and Chapter 11-like proceedings in the past six months," says Watanabe. "Of course, some Jol and Jolco aircraft are attached to those airlines. We have been taking care of some very disappointed investors recently.

"As we all know, even though it's called 'with call option', in reality every Jolco investor expects that the call option will be exercised. In the case of some of the Covid airline fatalities, the aircraft won't be exercised, and some will be returned, so the Jolco structure will be terminated completely," says Watanabe.

Since the beginning of the year many airlines with Jol/Jolco financings have gone belly up, including large exposure with carriers such as Avianca, LATAM, Virgin Australia and AirAsia.

"Maybe we can say that we have become a little bit too lenient and optimistic in the past few years with airline credit risk assessments. We have to go back to the basics now. We need to start to exercise more discipline again when selecting our lessee credits, and that will certainly include more lessor Jolcos in the future. Some regional Japanese banks that provide the debt for Jolco transactions would be more comfortable doing lessor Jolcos in the future after learning from the current events," says Watanabe.

Many in the industry have been discussing what it means for the Japanese investors to have aircraft assets tangled up in Jolco structures with under-administration carriers, especially if they are still getting their monies and what recourse they have in case of default.

"Jolco aircraft are usually new or at least still relatively young aircraft so generally the expectation is that the under-administration carriers will still continue to use those aircraft. However, depending on the details of the proceedings and protections offered under different jurisdictions, investors may have to agree to restructured transactions. In many cases, the rentals will be paid based on what we call PBH, or power-by-the-hour, agreements," says Watanabe.

> *"As you know, until now we have done much less Jolco financings with lessors because we own a very large lessor in our own group – SMBC Aviation Capital."*
>
> **Shinichiro Watanabe**, managing executive officer and head of transportation, Sumitomo Mitsui Finance and Leasing

PBH

Over the summer the industry has observed a proliferation of PBH requests from lessees to lessors as airlines continue to be largely grounded and those flights that do take off often show money-losing load factors. Some movers and shakers with lined pockets have said only "desperate" players would agree to PBH contracts but Japanese investors may take a different view.

"It's a global pandemic, so even if they repossess their aircraft, it will be really difficult to place them again given the economic environment. So, in those cases, PBH payments may be better than no payments at all," says Watanabe.

"The Jolco equity providers are admittedly in quite a weak position right now. In the case of Jol, they are the owners – it's basically 100% equity financing by themselves – so it's purely their choice whether they accept PBH. But in a Jolco structure, there are more parties to consider and consult, and some may feel that accepting PBH is still better than potentially nothing," he adds.

There is usually less flexibility in Jolco transactions vis-à-vis Jol transactions. In a typical Jolco structure, about 70% to 80% of the financing is provided by debt but the balance comes from Japanese investors.

"In the worst case, those investors may be squeezed by debt providers to recover the debt portion," says Watanabe.

"Individual Jolco investors may not have the financial power and resilience that some of the big lessors have, so that's why for some of them PBH may still be acceptable given the Covid environment. Our job is to advise and guide them through that process," he adds.

Typically, PBH requests in the market as *Airfinance Journal* went to press were for 12- to 24-month periods.

737 Max Jol/Jolco

SMFL says it still expects to close Jol and Jolco financings when the Boeing 737 Max programme returns. He notes that "it is all the lessee credit", so investors may still be persuaded to invest in Max variants so long as a strong airline or lessor credit backs the deal.

"If it's a really strong lessor or airline credit then I can still see that some Japanese tax investors will be interested because it's basically a credit deal. But in the case of Jol, it will be more complicated, given the nature of the asset deal, and Jol investors are more cautious about the future value of the 737 Max," says Watanabe.

He adds: "Of course, it's much easier for us right now to structure an [Airbus] A320neo or A321neo transaction rather than a Max transaction, but, having said that, there are still a lot of 737 operators out there who say they will need the Max to replace their current fleets, so I am confident that demand will return, at least to some degree."

EETCs **defy market crisis**

Several North American airlines have successfully tapped the enhanced equipment trust certificate (EETC) market to raise financing during the Covid-19 crisis, writes **Oliver Clark**.

Neither the greatest crisis to face the aviation industry in its history, nor LATAM's rejection of 23 aircraft that formed the collateral for an enhanced equipment trust certificate (EETC) appear to have stymied the attractiveness of the EETC structure among investors.

In the five months since the Covid-19 pandemic first struck, a number of airlines have been able to tap this structure to raise debt.

In June, Alaska Airlines came to market with what would ultimately be a $1.17 billion EETC backed by 61 aircraft.

Also in June, Air Canada completed a private offering of one tranche of class-C EETCs with a combined aggregate amount of about $315 million secured against 27 aircraft.

In August, Jetblue Airways came to market with an $808 million two-class offering secured by a collateral pool of 24 aircraft.

Hawaiian Airlines and Federal Express (FedEx) have also raised financing via EETCs since the onset of the crisis.

FedEx raised $970 million through a single tranche EETC to finance 13 Boeing 767-300Fs and six 777-200Fs.

Hawaiian Airlines' $262 million two tranches of certificates are secured by six A321-200neos as well as two 2013-vintage A330-200 aircraft.

This does not cover any private placements that may have been arranged during recent months.

The success of these EETCs comes in contrast to the asset-backed securities (ABS) market, which has not witnessed an issuance since the start of the crisis.

Panellists at the *Airfinance Journal* North America 2020 virtual event in July described continued demand for EETCs despite LATAM rejecting a number of aircraft in one vehicle as part of its Chapter 11 restructuring earlier this year.

"In the broader EETC market, the LATAM rejection was an event that investors, analysts, bankers and lawyers were watching," says Citi's director, global structured finance, Matthew Simonetti.

"For the broader market, we continue to see some of the top investors, including some that were included in the LATAM transaction, participate into the new EETC offerings, and they continue to send us enquiries expressing their interest in new transactions," he adds.

> *"In the broader EETC market, the LATAM rejection was an event that investors, analysts, bankers and lawyers were watching."*
>
> **Matthew Simonetti**, director, global structured finance, Citi

Simonetti says further problems arose, which were relevant to EETCs in general, about how investors would pay for the storage and insurance costs associated with the aircraft.

"Some investors were surprised that the liquidity facility was not going to be able to chip in for some of those costs. They were really sold in there for interest," he says.

Peter Sladic, managing director of capital markets and outreach, Boeing Capital Corporation, tells *Airfinance Journal* that investors may view an EETC structure more favourably at present than an ABS.

"Investors have different risk appetites, with some having a much lower tolerance. ABS structures can be less favoured by today's investor crowd versus an EETC because with the ABS you don't have recourse to the issuer, while investors have recourse to the issuer and security from the collateral with an EETC," he says.

Jonathan Root, senior vice president, corporate finance group at Moody's Investors Service, says EETCs are likely to remain "predominately" for US airlines, but adds that if "non-US airlines came to market they would probably be successful in that placement".

Root adds that "nothing extraordinary jumps out" at him in terms of the pricing or terms of recent EETCs being materially impacted by Covid-19.

"I think the collateral is important, be it redeliveries versus used and how used," he says, adding: "It's still a relatively small market, but the instrument performs very well over its history in terms of its default profile, with relatively few defaults.

"I think many investors recognise that in the near term demand for aircraft is going to be subdued, but the fleet decisions and strategies involve buying an aircraft is a 20-year investment for most airlines, so I am not surprised that the market is still open."

Root expects the EETC structure to remain popular because investors see beyond the immediate crisis and it is attractive compared with other forms of financing.

"Five years ago, the sale and leaseback market was very attractive in terms of relative cost because of all the new money going into the aircraft leasing industry."

He adds: "Now in today's environment, I think that Jetblue is demonstrating as an example and the airlines that pledged aircraft for their 364-day facilities, which they arranged back in March when the crisis hit, that the EETC market is an attractive option for refinancing those obligations."

Will aircraft ABS return this year?

The asset-backed securities market paused in March after five transactions were issued in the first quarter of this year, writes **Olivier Bonnassies**.

No new aircraft asset-backed securities (ABS) issuances have been on the radar since Covid-19 put the industry at a halt but there has been activity on existing transactions.

"Some issuers (or sponsors of issuers) have been buying back their own ABS debt on the open market at distressed prices," says a source.

"Non-issuers (ie, hedge funds, etc) are purchasing ABS debt at distressed prices. That being said, there has been fairly limited trading of ABS debt over the past few months. Other ABS issuers (or their sponsors) have purchased ABS notes in the secondary market," adds the source.

In early March, *Airfinance Journal* revealed that there were about 10 ABS transactions in the first half of 2020 pipeline. Work on a few transactions continued, albeit at a slower pace initially, but it became clear that ABS will only deliver the debt part of the transaction as the equity market closed.

"The issuances that were in the pipeline that include the sale of E-notes are dead in the water since there will not be an E-note market for a long time," says a source.

"We expect the first ABS post-Covid 19 to be debt only, likely not until 2021 when, hopefully, people are flying again," adds the source.

For Matthew Simonetti, Citi director, global structured finance, the ABS market will be back in the medium term but in a low leverage format. Speaking at *Airfinance Journal* North America 2020, Simonetti said one of the themes is that strong airlines would like to execute sale and leasebacks because they can raise close to 100% loan-to-value.

"Many of the lessors that financed through the securitisation market through interim bank warehouse facilities are going to be constrained on their sources of leverage capital for those leases."

Matthew Simonetti, director, global structured finance, Citi

"That could be an attractive source of liquidity for those airlines for their unencumbered assets. However, the lessors are equally struggling to raise capital in this market," he says.

"Many of the lessors that financed through the securitisation market through interim bank warehouse facilities are going to be constrained on their sources of leverage capital for those leases."

Simonetti explains that lessors were striking leases at the lease rates pre-Covid-19 on the basis that they could leverage those assets fairly significantly, especially in the securitisation market.

"Given that lessors are scrounging and trying to find any source of potential leverage for the sales and leasebacks, I believe that the securitisation market will come back in the medium term but at a significantly lower leverage point, and there will be issuers that will be willing to take a reduced leverage point. Equally so, investors that are trading in that market today are generally taking the view that the class-A tranche ultimately performs because they have reasonable leverage and are very tightly structured," he adds.

"From a positive point of view, once the market recovers, that may well pave the way to a whole new type of investor who has then become used to and experienced in holding positions in aircraft ABS."

Dominic Pearson, partner, Watson Farley & Williams

New investors?

ABS deals could attract new more risk-tolerant investors, Dominic Pearson, partner, Watson Farley & Williams, said early in the summer.

Talking in an industry webinar, Pearson predicted that the downgrading of ABS B notes could lead to a sell off by more risk-adverse noteholders such as pension funds and insurance companies.

"If they are downgraded, and some of them have been, to below investment-grade, I think that will usher in maybe quite a few fire sales by existing investors holding those B notes who are unable to hold anything less investment-grade without having to put aside much more capital," he says.

For him, it is unclear who would fill that gap but this could lead to the arrival of a different type of investor coming into the market who is "much less risk adverse" and aggressively seeking better yields.

They will want to gain their "pound of flesh" in terms of a discount on those B notes, he says.

"From a positive point of view, once the market recovers, that may well pave the way to a whole new type of investor who has then become used to and experienced in holding positions in aircraft ABS," suggests Pearson.

He predicts this could lead to more C and D tranches in ABS structures if that type of investor "sticks around".

Resilience

Many ABS deals have had their liquidity facilities drawn, some have had their debt service coverage ratio (DSCR) triggered (or about to be triggered). As a result, deals have been downgraded or have been on negative watch.

But Carla Schriver, vice president, Goldman Sachs, observes that ABS transactions are "holding up" amid the Covid-19 crisis thanks to the way they are structured to deal with industry stress events.

She says that, despite the market seeing a lot of "stress" in terms of deferral, non-payment and bankruptcy events, at a high level "ABS structures are performing as expected".

Schriver ascribes this to the way that ABS structures are designed to be flexible and resilient in order to deal with the cyclical nature of the aviation industry.

This is despite no one but the rating agencies stress testing the structures to anything approaching the level of disruption created by the global pandemic.

"I think the deals are holding up. Why I say that is evidenced by you are not seeing deals in default, for example, so even when you are looking at lease cash flows 50% of what we predicted them to be, maintenance reserves cash flows are also down," she says.

Watson Farley & Williams' Pearson says the crisis has revealed how "resilient" the ABS structure is and suggested they are "too big", meaning in a worse-case scenario, a refinancing or recapitalisation will likely occur.

He recalls that ABS transactions have liquidity facilities that only apply to senior interest A and B and in almost every case offer nine months'-worth of coverage.

"They are standing up and to my knowledge no ABS has been defaulted," he said earlier this summer, adding that some of those liquidity facilities have been drawn, but "that's exactly what they are designed to do" – they are meant to bridge a gap when the market hits a low point.

Pearson suggests there was some optimism that nine months would be sufficient to bridge to sufficient cash flows that there will not be an event of default.

Maintenance forecasts

Schriver points out maintenance forecasts in ABS deals are slightly lagging behind the current environment of lower cash collections.

Maintenance reserves are an important part of an ABS structure because they rely on maintenance reserves for cash flow but, with fewer flights, the cash flows have dropped.

> *"You might see smaller leasing companies doing ABS transactions for the sake of finance but for outright huge sales of aircraft that create large ABS deals, it will take some time."*
>
> **Marjan Riggi**, senior managing director, head of aviation and transportation, KBRA

John Mowry, managing director of Alton Aviation Consultancy, says that with lower levels of flying, reserve collections are significantly down.

"The vast majority of the reserves required are related to the utilisation of the aircraft. If an aircraft performs in normal operations, about 80% of the reserves are related to the utilisation while the remaining 20% are fixed monthly [costs] for components that are maintained on a calendar basis," he explains.

But Mowry also points out that lower levels of flying pushes out the maintenance requirements into the future.

If an engine comes in for maintenance, Mowry anticipates airlines will use the "green time" lease of another engine rather than reinvest funds in performing maintenance.

Schriver notes that the target balance in the reserve accounts in ABS transactions is increasing but the percentage funded has been going down over time.

"This is not necessarily reflective of maintenance events being pushed out because the way those structures work is you get the maintenance forecast you are looking for based on that. You are not necessarily refreshing every single month and you see a bit of a lag in terms of maintenance forecasts catching up to what we see in the current environment," she says.

"That being said, the structure does not necessarily operate in black and white. There are mechanisms in the structure so that the service can actually override what these forecasts are saying. The structures are structured in a way that it does not necessarily flow through to the waterfall. It can stay within the structure," adds Schriver.

ABS collateral could be subject for a review, especially as to aircraft age limitation in future portfolios.

Certainly, there is going to be increasing risk-based pricing and maybe more differentiation between older and younger aircraft, depending on how things shake out. The same between single-aisle and twin-aisle, again given the bifurcation of what we think the performance will be over the next 12 months," said J.P. Morgan managing director, head of transportation and real estate credit research, Mark Streeter, in an *Airfinance Journal* webinar in July.

Andy Mansell, Split Rock Aviation partner, questions whether having a new aircraft puts you in a better position.

"If you own a [Boeing] Max or 787 aircraft, are you better secured than holding a 15-year-old aircraft? The answer here is how sophisticated the investor market is in terms of identifying risk, because, simplistically, you can argue you can be better off if you have a longer runway to recover with a new aircraft. But you can also argue, in some cases, that you would be better off closer to the exit point of the aircraft, which would suit a mid-life or older aircraft," says Mansell.

Bryson Monteleone, PwC senior adviser, says the end-of-life strategy was a very defined story that was being told. "That space now is a little bit polluted. That space is not so much needed now because airlines will use their own aircraft for their fleet to use remaining life on aircraft. The need for parts and tear down becomes a little bit punted going forward because that exit strategy becomes a little bit narrower now," he says.

KBRA senior managing director, head of aviation and transportation, Marjan Riggi, says at some stage the ABS market will come back.

"Right now it is not possible because there is a negative sentiment regarding cash flow deferrals," she says. "You might see smaller leasing companies doing ABS transactions for the sake of finance but for outright huge sales of aircraft that create large ABS deals, it will take some time."

China leads recovery but challenges remain

IATA says that China continues to lead the global aviation recovery. Challenges and risks, however, persist in a "new normal" Covid-19 governed Chinese market, local finance experts tell **Elsie Guan**.

In its latest market update, the International Air Transport Association (IATA) said that Chinese domestic operations continue to lead the industry's recovery.

June 2020 passenger traffic foreshadowed the slower-than-expected recovery. Traffic fell 86.5% compared to the year before. That is only a slight improvement from a 91% contraction in May. This was driven by rising demand in domestic markets, particularly China, according to IATA.

In July, the passenger transportation volume of China's civil aviation was 39.1 million, representing a year-on-year decrease of 34.1%, Civil Aviation Administration of China (CAAC) data indicates.

"Although the current air passenger traffic volume in China is much lower than the pre-Covid-19 pandemic level, pressure on Chinese airlines and aircraft lessors is decreasing compared with their foreign competitors," Yi Cheng, finance director of Chengdu-based Jinshi Leasing, tells *Airfinance Journal*. Chinese airlines introduced 22 new passenger aircraft in the six months to 30 June.

Ten of the 22 aircraft were COMAC ARJ21s. Three state-owned airline groups, Air China, China Eastern and China Southern, added one unit each, Genghis Khan Airlines and Jiangxi Airlines added two units each, and Chengdu Airlines, added three units. Several lessors including ICBC Leasing, ABC Leasing, China Southern Air Leasing and AVIC Leasing were involved in those deliveries. *Airfinance Journal* reported in June that lessors with a strong presence in China stood to weather the ongoing Covid-19 pandemic better than others because of the stronger recovery of China's domestic market since April.

ICBC Leasing has the biggest presence, with $7.4 billion across 192 aircraft placed with Chinese operators. This is followed by Aercap with $6 billion and 146 aircraft; Bocomm Leasing with $4.3 billion and 111 units; CDB Aviation with $3.5 billion and 105 aircraft; and GECAS with $3.4 billion and 95 aircraft placed with Chinese carriers.

"There is a huge gap in business strength between different kinds of Chinese aircraft leasing companies. Top-ranking aircraft leasing companies which have strong bank backgrounds are more likely to raise funds in the interbank market through their parent companies or parent banks during the pandemic period," says Yi.

Challenges

IATA's analysts believe that global passenger traffic (revenue passenger kilometres) will not return to pre-Covid-19 levels until 2024, a year later than previously anticipated.

For the first six months ended 30 June 2020, China's civil aviation industry suffered a total loss of Rmb74 billion ($10.7 billion), most of which were airlines losses, says CAAC. CAAC analysts estimate that the Chinese passenger market will recover to between 70% and 80% of pre-Covid revenue levels by 2022.

Based on this calculation, over the next 24 to 36 months, without considering foreign exchange impacts, China's civil aviation industry is still expected to lose between Rmb80 billion and Rmb100 billion a year, the CAAC data shows.

"Even if domestic passenger traffic can return to pre-Covid-19 levels in the next 24 months, airfares will also drop significantly, which in turn squeezes airline profits," says Yi.

Within a month of the Covid-19 outbreak in China, China Eastern Group and China Eastern issued Rmb17 billion super-short-term commercial bonds at an interest rate of 1.7% (including the first phase of Rmb2 billion "virus bonds").

China Southern raised Rmb12.4 billion through nine tranches of bond issuances by China Southern Group and affiliated listed companies. In June, China Southern completed another Rmb12.7 billion private A-share issuance. Flag carrier Air China has received approval to issue corporate bonds for no more than Rmb16 billion. It executed a first tranche of Rmb1.5 billion in April. "Under the current financing environment, differences in the size of enterprises will bring about significant differences in financing capabilities in the capital markets. Large and state-owned airlines and lessors find it easy to raise funds and have low financing costs; however, small and private units may find it difficult to raise low-cost funds," adds Yi.

Risk

If an airline's financial situation continues to deteriorate over a long period of time, it will not be able to pay aircraft rentals on time, resulting in bad debts for aircraft assets, and ultimately, bankruptcy of aircraft leasing companies, Wei Ying, financial analyst at CITIC Securities, tells *Airfinance Journal*.

"Our government, the Ministry of Finance and the CAAC could set up aircraft asset management companies to acquire aircraft assets from airlines and aircraft leasing companies, and then lease them back to airlines as needed," says Wei.

In the 1990s, when China's market economy was booming, lenders were extending loans to new entrepreneurs and investors without adequate corporate governance oversight. This led to the accumulation of bad debt. Consequently, the Ministry of Finance established four companies to deal with this: China Cinda Asset Management (for China Construction Bank); China Great Wall Asset Management (for Agricultural Bank of China); China Orient Asset Management (for Bank of China); and China Huarong Asset Management (for Industrial and Commercial Bank of China).

"Once established, these aircraft asset management companies could quickly raise funds in the financial market, issue renminbi fixed-income products at home markets or US-dollar bonds in low interests at overseas markets to inject liquidity into airlines and aircraft leasing companies and ease their financial pressure caused by the pandemic," says Wei.

Asset managers can help airlines enter into an "asset-light" model, which could save airlines' costs in aircraft management and operation to focus on the improvement of products and services.

Also, according to Wei, asset management companies' acquisition of aircraft will reduce the number and proportion of global customer defaults of aircraft leasing companies, enhancing lessors' global competitiveness.

Testing time

As the recertification of the Boeing 737 Max appears to be nearing, what is the demand profile looking like for the type amid the impact of Covid-19? **Oliver Clark** reports.

The grounding of the Boeing 737 Max proved to be a defining event of 2019 for the aviation industry.

The sudden absence of the Max threw many airlines' fleet-planning strategies into disarray, while the political and economic fallout of the two crashes involving the type, which killed a total of 346 people, and the subsequent embarrassing investigation into their cause shook the company to its core. Boeing's new management team is putting its faith in the type's return to the skies.

Speaking on the original equipment manufacturer's (OEM) second-quarter results call, its chief financial officer, Greg Smith, estimated that the aircraft would gain the necessary regulatory approvals to allow the resumption of deliveries during the fourth quarter. While Boeing estimates that the Max will be recertified in the fourth quarter, Smith had said that the global regulators would ultimately determine the timing.

The US OEM expects to gradually increase 737 Max production rate to 31 a month by the beginning of 2022, with further gradual increases to correspond with market demand.

Speaking at a Jefferies Virtual Industrials conference, Smith said much was riding on the Max programme, with the aircraft along with the 787 providing a major "driver" of cash generation for the indebted airframer as it emerges from the Covid-19 crisis.

He expects the 450 Max aircraft in storage to be delivered during the first year after resumption of deliveries.

Numerous lessors and airlines have cancelled or deferred their orders for the type since the onset of the crisis. Lessors cancelled a total of 37 in July and accounted for 52 of the 60 cancellations in June.

Avolon has cancelled more than 100 orders since the start of the crisis. Aviation Capital Group cancelled 22 during the second quarter and Air Lease cancelled five 737 Max aircraft in July.

"I wouldn't expect a large amount of cancellations, though of course there may be a few depending on individual circumstances."

Kimberly Bergin, senior consultant, Avitas

Once the Max is recertified it will return to an aviation industry that has been hugely impacted by the pandemic. How much demand can there be for the type in these circumstances and can airlines afford to take them?

Kimberly Bergin, a senior consultant with Avitas, admits it is "not an ideal time" for the return of the aircraft,

given the ongoing reduction in demand resulting from the Covid-19 pandemic.

"However, while demand for international travel remains extremely weak, regional and domestic travel is slowly beginning to recover," she says.

"Demand for narrowbodies such as the 737 Max and A320neo families should return before demand for widebodies. The speed and degree to which the pandemic is controlled will play a major role in how demand for air travel, and thus aircraft, will recover," Bergin adds.

She says there are almost 4,000 aircraft that have either been produced or remain on firm order.

"I wouldn't expect a large amount of cancellations, though of course there may be a few depending on individual circumstances," she says.

"Fleet data as of July indicate just under 350 aircraft are scheduled to deliver between now and the end of 2021. I think deferrals would be more likely than a significant number of additional cancellations," she adds.

Whitetail issue

Ascend by Cirium's global head of consultancy, Rob Morris, says that the Max's firm orderbook has remained fairly robust even amid the crisis.

By the end of June, Boeing had recorded 373 Max cancellations, of which 244 have been from operating lessors. In the meantime, the ASC606 total has also increased to 626 aircraft, he notes.

"Thus, as much as 22% of the Max backlog at the start of year has been or may be cancelled, taking the effective backlog today as low as 3,546. With a large element of those cancellations this year coming from operating lessors.

Morris says that in context, there may be an emerging "whitetail issue".

"Some 142 of the 424 aircraft that have been built but not delivered (by which I mean built with an identified first flight date) are for operating lessors. Seventy-eight of those aircraft are with lessors who have cancelled Max orders this year.

"It is not certain that these specific airframes are the subject of those order cancellations – more likely the cancellations were applied to aircraft scheduled for delivery which had not yet been placed on lease – but it is possible that a large portion, if not all, could already be cancelled and thus potentially whitetail," he warns.

Morris believes that the hiatus in demand will have given Boeing time to finalise the return to service which may have "otherwise been under pressure if demand had remained strong. The lower average utilisation may also allow airlines to schedule the aircraft conservatively and rebuild their experience and passenger confidence in the type. All things considered, I think that this is a good time for Boeing to take their time to get the reintroduction of Max to service right," he adds.

> *"Some 142 of the 424 aircraft that have been built but not delivered are for operating lessors. Seventy-eight of those aircraft are with lessors who have cancelled Max orders this year."*
>
> **Rob Morris**, global head of consultancy, Ascend by Cirium

Lease rates and market value

George Dimitroff, head of valuations at Ascend by Cirium, says the appraiser began reducing market values in July 2019, which was more than three months after the grounding. The initial reductions were based on the aircraft's reduced revenue-earning potential because lease rates were so depressed, and 40% of the delivered and on-order fleet was with lessors.

Lease rates started to drop around March 2019 based on data evidence coming from deals signed in the preceding few months, says Dimitroff.

Values fell a second time in January 2020 with the new revisions being due to the extended grounding period, the further reduction of lease rates observed, waning market confidence in the type and excess availability of new aircraft.

Once the Covid-19 crisis struck, Ascend by Cirium made a further adjustment based on market conditions and supply-demand dynamics, including the growing number of "whitetails" (even if painted in airline livery there is a number of aircraft with no customer at the moment).

In late May, it reduced current market values (CMV) yet again based on some of the first sale and leaseback deals observed since both the grounding and the start of the pandemic.

Dimitroff estimates that a new-build Max 8 has a market value on delivery (full life) today of about $43.5 million.

"In January 2019, that same value for a new Max 8 was above $48 million, so a new aircraft CMV has essentially come down by 10% in four increments over the past 15 to 18 months. We believe lease rates for the type have bottomed out and the cancellation of some speculative lessor orders will further help to stabilise them. We would expect that with the reduced availability of new aircraft due to the lessor cancellations, lease rates may actually start improving once the aircraft is back in service," he adds.

Bergin says lease rates for new narrowbody aircraft had been weakening before Covid-19, but the pandemic has further reduced them.

Regarding current market lease rates, Avitas expects that rentals for new 737 Max 8 aircraft would likely be in the range of $260,000 to $280,000 a month.

This opinion takes into account the impact of the grounding and the Covid-19 pandemic on the commercial aircraft market and represents a reduction of about 10% to 15% from pre-Covid lease rates.

During a recent *Airfinance Journal* Asia-Pacific webinar, panellists estimated that Max lease rates could fall to between $250,000 to $300,000 a month.

Before the global 737 Max grounding in March 2019, 737 Max 8s were producing lease rental rates of $300,000 to $350,000 a month. "Even by the middle of 2018, lessors were already having problems placing the 737 Max," says Stuart Hatcher, IBA's chief operating officer.

"The lessors were having to go to weaker and weaker airline credits to place their Maxs, and for weaker and weaker lease rates. We were seeing Maxs by the end of 2018 structured way into the higher $200s and stretching further down. I've seen lease rate placements of $270s and $280s," he adds.

"There has been quite some spread on the pricing before the grounding and that will continue once the aircraft gets back into service. I'd say generally single placements will be in the mid-to-high $200s and sale and leasebacks in the high $300s. It's a very large range; it's one of the trickier things to put an exact number to," notes Hatcher.

Bergin believes the Max still has the potential to be successful.

Ascend by Cirium's Morris says that even taking the worst-case scenario of a backlog of about 3,500 Max aircraft, then if all the aircraft were delivered at the appraiser's full life base value for a Max 8 of $50.6 million, that would represent a $177 billion programme.

"Clearly, this is a gross oversimplification – there will be different variants and different prices – but it is intended as a simple illustration of the potential revenue value of the Max to Boeing," he says. "Of course, the issues and now consequent lower delivery volumes in the next few years will impact on the programme profitability, but as a revenue generator, the importance of the programme to Boeing is clearly evident."

Finding its **niche**

After weathering the initial impact of the Covid-19 crisis, regional lessor TrueNoord is cautiously optimistic about growth opportunities, its chief executive officer, Anne-Bart Tieleman, tells **Oliver Clark**.

When the Covid-19 pandemic first struck in the early months of 2020, TrueNoord was no more ready to handle the global nature of the virus and the disruption it wrought on every level of the aviation industry than any other lessor.

Chief executive officer, Anne-Bart Tieleman, tells *Airfinance Journal* that he looked on in "amazement" as the virus developed from a "bubble" in China to an unprecedented global pandemic.

As Europe shut down in the early months of the pandemic and flights were grounded, Tieleman says the lessor's first reaction was to take stock of the impact of the economic "disaster" on its business.

"At TrueNoord, our initial reaction was, what does this mean for our cash flow, for our lease revenues, and how do we manage? How, on the one hand, could we help our customers, and, on the other hand, how do we help ourselves.

"Initially, of course, we needed to consider what it [the crisis] would mean for us operationally. But also thinking of our clients – could we expect them to continue operating? In general, we asked ourselves what are our customers doing, what is the market doing, and how does our team need to react?"

TrueNoord had one early advantage amid the pandemic in that its fleet of regional aircraft, such as the ATR72-600, Embraer 170, E190 and E195, were well placed to be used once domestic and limited regional services resumed.

As Tieleman says, airlines are focusing now on trip cost instead of seat cost and this makes smaller regional aircraft more attractive, which creates some "comfort" for the lessor.

This was especially true in the case of larger airlines operating a variety of aircraft types. Tieleman points to the example of KLM Royal Dutch Airlines, which continued to operate services, but at a lower frequency, and with the smaller aircraft such as the E190s, operated by KLM Cityhopper.

Deferrals

As with all the other lessors amid the crisis, TrueNoord was immediately faced with rental deferral requests from customers.

Tieleman says the lessor looked within its capabilities to help its customers, but also had to be realistic in judging which airlines were likely to be able to repay their debts in reasonable time.

"Overall, I think we have been able to keep lease revenues north of 60% to 65% over the past six months. This is indicative of the quality of our portfolio, not too much concentration on one lessee, and TrueNoord has a decent diversification with high-quality, good airlines," he says.

Of the 35% to 40% of remaining lease income, Tieleman says it is ether coming back via repayments of deferrals or via lease extensions, which he describes as a "win-win" outcome for both parties.

Tieleman says that the general perception in the market is that the recovery will be "slow", with three years or more until the industry is back to pre-crisis levels.

In such a situation, he says that the biggest challenge facing lessors is dealing with the "huge amount" of overcapacity in the market, and the need to manage this situation effectively.

"The lessor community is a service-providing community. It is a strange service providing specialised very capital-intensive assets. The good people within this industry know and understand not just the financial implications of the business, but also the operational capabilities of the assets. In this global crisis, strong lessors observe the overcapacity which operators experience and should be able to find markets which need capacity," he says.

Over the next 12 to 24 months or more, Tieleman says the "better" leasing companies will succeed in redeploying capacity, while those unable to move assets will struggle.

"Those perceptive leasing companies, in the end, are the potential winners, or perhaps 'survivors' is a better word, in this changing world," he believes.

Growth opportunities

The TrueNoord fleet consists of about 50 aircraft. *Airfinance Journal*'s Fleet Tracker shows the lessor has 12 ATR72-600s, 21 E190s, six E170s and smaller numbers of other ATR, De Havilland of Canada and Bombardier aircraft.

The portfolio is well spread geographically, with most of its units in Europe and Asia, six in North America, four in Latin America and three in the CIS.

Tieleman says that the forecasts of the big manufacturers before the Covid-19 crisis predicted significant growth, with new aircraft needed to meet increased capacity demands, and replacement of older aircraft.

"We are convinced, and our shareholders are convinced, that there is a market niche in the 50- to 150-seat market."

Anne-Bart Tieleman, chief executive officer, TrueNoord

"Although growth will be slower, you will see an acceleration of older technology being put to rest as the industry helps itself meet environmental targets," he says.

"We are convinced, and our shareholders are convinced, that there is a market niche in the 50- to 150-seat market. It is a specialist market with predominantly smaller airlines and correspondingly smaller deals that larger lessors are often unwilling to devote resources to.

"However, many large airlines also operate smaller aircraft in their fleet as they right-size for domestic or short-haul traffic, or now for lower demand," he adds.

The lessor has previously set a target of growing its portfolio by between 15 and 20 aircraft a year.

Since the crisis began it has purchased three aircraft and is examining further potential deals. Tieleman says that young E170s and E190s, A220-300s or E2s are on "our wish list".

He describes the approach as "opportunistic" but "cautious", adding: "We definitely look at credit risk when we enter into new deals."

Tieleman adds: "We focus on the good credits in our eyes and conclude the deals we think make sense. Those deals do exist, and we are looking at potential transactions. Let's see how the situation develops."

Sources of finance

When Nordic Aviation Capital (NAC) decided to restructure its creditor debts via a scheme of arrangement in Ireland earlier this year in the wake of the Covid-19 crisis, some speculated whether other regional lessors would need to follow suit.

Tieleman says it is important to "understand the difference" between his business and that of NAC.

"TrueNoord is a growing company. We are at a different point on our growth path to NAC with our fleet of 50 aircraft a tenth of their size, and our main source of debt being secured bank finance," he says.

"NAC used to be financed in that way too, but began some years ago a transition to a mix of secured and unsecured financing.

"Using private placements, NAC has started issuing unsecured financing and they were in the middle of this transition process to access other sources of finance – the US debt capital markets – when Covid-19 happened," he says.

"We are in a different position, but have definitely learned from their experience. We are still able to grow on the basis of using secured bank financing and, over time, we will see if the market for unsecured finance is there for us too," he adds.

Tieleman reveals that the lessor's shareholders have put more equity into the business in the past six months, but does not disclose the amount.

While banks are more cautious, partly because they are confronted with deals "in difficulty", he says that the capital markets are open for the "right credits". The industry may "need to be patient" for the private placement to return, though.

"In terms of private placement, clearly that market is still there – it will look for the right yields. The situation at NAC has impacted the regional aircraft market in general. Time will tell. We just need to be patient, but that market will return with the right risk/return proposals," says Tieleman.

Portfolio sale reports

Commenting on reports in late 2019 that TrueNoord was considering the sale of potentially all of its portfolio, Tieleman says there are "always rumours in the market", but also notes that TrueNoord's shareholders are private equity funds.

"TrueNoord's cornerstone investors are private equity investors and it has always been understood that at some point in time they will want to sell their investment resulting in TrueNoord getting new shareholders," he says.

"We have never considered selling our portfolio and that is still the case. Of course, we do sell aircraft. Last February we sold a CRJ200, for us a non-core asset, for a decent price. TrueNoord will sell assets, as all lessors do. We might even sell a portfolio, but we are firmly on a growth path," he adds.

"Right now, in the present market I am not sure there would be 'let's sell' deals for us to pursue. I expect there will be 'let's buy' transactions."

Tieleman is confident growth opportunities are out there for the lessor.

Noting that lessor ownership of the global fleet has reached about 48%, he says that in the regional aircraft, specifically the 50-seat market, ownership by lessors is lower but "it is catching up".

Business as usual

Aviation Capital Group expects its airline customers to honour their signed lease agreements regardless of the changed industry landscape the ongoing Covid-19 pandemic has created, its president and chief executive officer Khanh Tran tells **Dominic Lalk**.

Khanh Tran became chief executive officer (CEO) of Aviation Capital Group (ACG) on 1 January 2016. Before assuming leadership of ACG, he was president of Pacific Life with responsibility for its asset management, corporate development, corporate financial and investment management groups.

Tran is in charge of one of the industry's largest portfolios: as at 30 June, ACG had some 500 owned, managed and committed commercial aircraft under its remit. In its latest financial report for the quarter ended 30 June 2020, ACG stated it owned assets worth $12.2 billion, including $9.8 billion held for lease, against $8.5 billion in liabilities, including $7.5 billion in unsecured debt financings.

Founded more than 30 years ago, ACG leases its growing portfolio to about 100 airlines in about 45 countries. The Asia-Pacific region accounts for nearly 45% of its lessee base. After repossessing all its aircraft from Interjet, ACG is now most exposed to S7 Airlines, LOT Polish Airlines, Asiana Airlines and Vietnam Airlines (in that order) in terms of asset values.

In December 2019, Tokyo Century (TC) completed its acquisition of ACG, buying the remaining 75.5% interest for about $3 billion, which represented a premium of some 10% on top of ACG's book value.

With the buyout, TC plans to improve its aviation business value chain through collaboration among its aviation financing businesses, which are driven by Japanese operating lease products and aircraft aftermarket-related businesses that leverage expertise in used aircraft and parts. TC also has a 49.2% shareholding in Florida-based GA Telesis (GAT) and, in 2019, it set up an engine leasing joint venture along with All Nippon Airways Trading and GAT.

"Tokyo Century has been onboard for two years prior to owning 100% of ACG. They've gotten to know us very well. The transition has been very smooth. The folks in Japan are very, very meticulous and detail-oriented. They spend a lot of time on and with us, especially supporting areas like risk management, financials and marketing. It's been great to have them so engaged as owners who fully understand and support our business," Tran tells *Airfinance Journal* in an exclusive interview.

"Tokyo Century has been particularly helpful finding Japanese lenders and investors for potential Jols [Japanese operating leases] or Jolcos [Japanese operating leases with call options]."

Khanh Tran, president and chief executive officer, Aviation Capital Group

"Tokyo Century has been particularly helpful finding Japanese lenders and investors for potential Jols [Japanese operating leases] or Jolcos [Japanese operating leases with call options]," says Tran. He adds: "There has also been more cooperation, synergies and conversations with GAT since the full Tokyo Century takeover. GAT has bid on aircraft for sale from us and has been a good source of market insights."

Liquidity

In March, ACG's liquidity stood at about $1.6 billion, but as this was insufficient to weather the still ongoing Covid-19 storm, the lessor raised another $1 billion through an unsecured notes issuance this summer. The notes carry a 5.5% interest rate which mature in 2024. JP Morgan, Credit Agricole Corporate & Investment Bank, Credit Suisse, Societe Generale-CIB and Wells Fargo are the active joint bookrunners.

The $1 billion unsecured notes issuance came after the June closing of a $600 million unsecured revolving line of credit with owner Tokyo Century. The facility has an initial term of three years and will automatically extend for additional one-year periods with mutual consent. Also in June, ACG acquired a little more than one-third of its 7.125% senior notes due

15 October 2020, tendering $205 million of the $600 million aggregate principal amount of the notes outstanding. JP Morgan Securities acted as dealer manager for the tender offer; DF King & Co served as tender agent and information agent.

Separate from those new financings, ACG entered into a senior unsecured revolving credit agreement with a syndicate of lenders in June 2019. The five-year facility has a total borrowing capacity of $2 billion. As of 30 June 2020, $870 million was outstanding under that facility.

Furthermore, ACG has a $1.5 billion commercial paper programme under which it may issue notes in minimum denominations of $250,000 for periods ranging from one to 397 days, and for which the 2019 revolving credit facility serves as a backstop. As of 30 June 2020, ACG had issued $348 million-worth of commercial papers.

Fleet

Throughout its storied history ACG has been focusing on narrowbody aircraft, and this is not about to change.

"We will continue to focus on narrowbody aircraft as we've done from day one. As you know, they continue to be very liquid assets. We do like selective widebodies; we prefer smaller types which we classify in the [Boeing] 787 and [Airbus] A350 families versus the 777 and A330 programmes," says Tran.

As at 30 June, ACG had unconditional purchase commitments for 129 Airbus and Boeing aircraft scheduled for delivery through 2025. This is down by 27 aircraft from 30 March, when the US lessor still reported commitments for 156 aircraft through 2025. After accounting for five aircraft delivered during the second quarter, ACG cancelled a total of 22 aircraft during the three months ended 30 June, all 737 Max units, shaving $1.2 billion off its committed capital expenditure (Capex).

ACG had initially placed orders for a total of 100 737 Max variants. After this year's cancellations to date that backlog is down to just 72 units. Before the grounding, ACG had delivered seven 737 Max aircraft that are on lease to four airline customers, including a sale and leaseback with China's Hainan Airlines.

As of 30 June, deposits made in relation to ACG's remaining $6.1 billion in committed aircraft purchase agreements totalled $875 million. As *Airfinance Journal* went to press, the lessor has committed Capex of $358 million for the remainder of 2020; $1.4 billion in 2021; $2.3 billion in 2022; $1.1 billion in 2023; $693 million in 2024; and $287 million "thereafter".

"We have cancelled 737 Max aircraft based on contractual rights, but having said that, one of the things that we did very early on, shortly after the grounding, was to push out our deliveries into later years

> *"Current 737 operators aren't going to all suddenly become Airbus operators – they don't have the crews and the pilots for that – and Airbus alone can't supply all the narrowbodies the industry will need."*
>
> **Khanh Tran**, president and chief executive officer, Aviation Capital Group

to avoid the ungrounding risks," says Tran. He notes that ACG has come to "a mutually acceptable agreement with Boeing and we continue to be in dialogue to find other solutions with them.

"I do believe that the Max is going to come back once the industry recovers. Current 737 operators aren't going to all suddenly become Airbus operators – they don't have the crews and the pilots for that – and Airbus alone can't supply all the narrowbodies the industry will need. The question about the Max is: when it is ungrounded, how long will it take to get back to normal?" asks Tran.

"Covid-19 has also impacted aircraft manufacturers due to temporary closures of certain assembly and supplier facilities. We are in active discussions with Boeing and Airbus to determine the estimated impact and duration of said delays. Our leases contain lessee cancellation clauses related to aircraft delivery delays, typically for delays greater than one year. Our purchase agreements with Boeing and Airbus contain similar clauses," notes ACG.

So far in 2020, Boeing's net orders, including ASC606 adjustments, are at negative 836, reducing Boeing's total firm order backlog to 4,496 aircraft. Rival Airbus's order tally after cancellations has grown by 302 aircraft this year, increasing its total firm backlog to 7,539 aircraft.

The 737 Max lease rates could fall to between $250,000 to $300,000 a month, according to panellists of an *Airfinance Journal* Asia-Pacific webinar in August. And while rates for aircraft transacted in the sale and leaseback market will be much higher, direct placements by lessors "will be almost free money", said a panellist.

Tran says ACG need not be too concerned about these developments, at least for the time being. "We don't have to worry about Max lease rates for a while, after having pushed out our deliveries, but somewhere sub-$300,000 seems to be the market today," he adds.

Before the global 737 Max grounding order of March 2019, 737 Max 8s were producing lease rental rates of $300,000 to $350,000 a month.

Tran says ACG is eyeing more widebody opportunities through its Aircraft Financing Solutions (AFS) programme, "where effectively we offer an airline the ability to finance the aircraft with us and we arrange everything".

"AFS is a good example of how we can offer our customers the full product line, with operating and finance leases. We have added one A350 to our portfolio through the AFS programme last year and we're looking to add another this year," says Tran.

The firm's AFS programme focuses on the development and marketing of credit-enhanced financing structures that provide ACG's customers more alternatives and greater access to additional sources of capital for aircraft purchases, while providing improved risk-adjusted returns for the lenders and capital providers involved.

Tran says the "AFS initiative provides ACG with a compelling complement to its core operating lease services, enabling us to offer a broader set of fleet financing solutions to airlines". ACG managing directors Robert Roy, Andrew Falk and Robert Lewandowski launched the AFS initiative. Previously, the trio collectively served more than 50 years as key members of the Export-Import Bank of the United states Bank's aircraft finance team.

In June, ACG structured and provided secured financing for six 737-800 aircraft for Southwest Airlines through the AFS programme.

Delivering aircraft amid Covid-19

As it became obvious that the Coronavirus pandemic would wreak severe havoc with original equipment manufacturer (OEM), airline and lessor delivery schedules, Airbus began delivering aircraft remotely through the e-channel in March. The revamped process allows customers to take delivery of an aircraft remotely via an e-tool, but it also requires significant trust between the parties, because the buyers give up some control.

"We've done several e-deliveries since the crisis began earlier this year. I believe we were one of the first to execute an e-delivery in March in Toulouse and we did one last month in Tianjin. It is a different process and it is important to have good contractors you can rely on and that you give yourself ample time to do all the last minute fixes that usually come with deliveries," Tran says.

There are two challenges to delivering aircraft in 2020, says the lessor CEO. "Sometimes the customer can't or doesn't want to travel to Toulouse or Hamburg because of quarantine/too much downtime and the second thing is that many airlines would like to defer taking deliveries during Covid," says Tran.

"It takes a lot of mutual cooperation to come to an agreement between us, Airbus and the customer. For example, the Juneyao delivery was supposed to happen earlier, but because the delivery was in Tianjin instead of Toulouse all parties had to come together to work out a mutually agreeable delivery plan."

ACG has only delivered "about a dozen aircraft, including an AFS aircraft" during the first half of 2020, says Tran. "Between now and the balance of the year we have another handful of aircraft to deliver," he notes.

It has been reported across the industry that amid the ongoing Covid-19 pandemic, and the uncertainty it has created, most airlines are looking to defer, if not outright cancel their direct orders with the OEMs, as well as their agreements with lessors. ACG has not been spared but says it has not run into significant issues to date.

"With signed lease agreements we would expect our customers to take deliveries of their aircraft. Because of Covid, we try and work far in advance with our customers to discuss any necessary delivery flexibility and, to date, it has worked out well for everyone," says Tran.

"Airbus has only been flexible to some degree, like putting aircraft into temporary storage for short-term delivery delay, but their focus on delivering aircraft makes it quite challenging and they are very cash focused," reveals Tran.

Distressed lessee requests

"Since the start of the Covid-19 pandemic, we have seen an increase in delinquent rental payments from certain of our lessees. As of 30 June, most of the lessees of our owned aircraft have requested some form of rental relief. We evaluate such requests on a case-by-case basis. Our evaluation and approvals of such requests are based on factors including our assessment of (1) the long-term viability of the lessee and its affiliates, (2) our existing security package with respect to the relevant aircraft, (3) the strength and history of our relationship with the lessee and its affiliates and (4) potential ability to facilitate other commercial transactions or objectives with the lessee in exchange for granting a deferral," says Tran.

Deferrals granted have generally involved near-term deferrals of a portion of contractual rent payments, including interest, and are scheduled to be repaid during the remainder of 2020.

"Generally, we've been offering a relatively short deferral period to those who requested it, and with a pretty rapid repayment. I'm happy to say that a number of customers we did this with very early on this spring are already repaying us now. There have been a few customers who have now come back to us for more help and we will only consider any on a very limited case-by-case basis and within the consistent framework of short-term deferral and rapid repayment," adds Tran.

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>
> **Khanh Tran**, president and chief executive officer, Aviation Capital Group

ACG says that about 75% of its customers have approached the firm for relief, although "some have walked away from their requests when they saw our framework for rent relief was not going to be free money".

Tran says: "As of 30 June, deferral agreements in place was approximately 6% of our annual operating revenue and therefore quite manageable from our perspective. Our collections last month were north of the 50% to 70% range you noted."

He agrees that the market is experiencing a surge in sale and leaseback (SLB) demand but the US lessor is being choosy in picking the right deal.

"We have not done any SLBs since Covid. It is surprising how aggressive the SLB market continues to be, with lease rate factors sub-0.7, in the low 0.6. Taking on additional aircraft with such lease rental factors doesn't make sense for us. We still think that SLBs in this market should command a premium but that's not what we've been seeing lately, so we haven't done any," reveals Tran.

Airline bankruptcies and PBH requests

"We avoided exposure to some of the bigger bankruptcies like Avianca, LATAM, South African Airways, Thai Airways, etc, and have very limited exposure to Aeromexico, Virgin Australia and Norwegian," says Tran.

ACG has run into some trouble with delinquent Mexican carrier Interjet, which has had more than 60 Airbus aircraft repossessed since the beginning of 2020 after defaulting on its lease rentals.

"Interjet was our large exposure and we have repossessed all our aircraft from Interjet and getting them back into our possession was more expedient than expected. We don't have an interest in the reconstituted Interjet. We would prefer to keep our aircraft, even if it means they're staying on the ground a little longer. They're good assets, A320neos and A321neos, and we should be able to find new homes for them, versus putting them back with Interjet," says Tran.

ACG says it has India on its radar with regards to potential trouble on the horizon.

"In terms of exposure to other troubled customers, we're concerned about India. We've had some not so good experiences in India in the past, with Kingfisher and then Jet," says Tran. ACG has placed narrowbodies with AirAsia India, Go Air, Indigo and Spicejet.

"Another region that worries us is of course Latin America, and the carriers in Israel on our radar, too," says Tran. ACG has placed aircraft with 10 operators in Latin America, including seven each with Aerolineas Argentinas, Copa and Brazil's Gol; in Israel, ACG has A321neo aircraft placed with Arkia, and 737-800 and 787-9 aircraft with El Al. As *Airfinance Journal* went to press, Arkia was still advertising two A321LR aircraft as available "for immediate wet or damp lease".

At the start of 2020, when Airbus was still struggling to keep up with A321neo demand, it was almost unthinkable that A321neo aircraft would be found in the secondary market, least of all A321LRs.

China's HNA Group continues to be distressed, but the conglomerate keeps paying, although at reduced rates and on an unpredictable schedule.

"We continue to get irregular payments from them on an inconsistent basis with promises of more; but it keeps getting delayed for one reason or another. We don't understand their logic, how they pay, what they pay, but until things change, we expect to get paid over time," says Tran. ACG has operating agreements with HNA's Hainan Airlines, Capital Airlines, Lucky Air, China West and Urumqi Airlines.

As it became more apparent that the Covid-19 crisis would last much longer than anticipated at the beginning of the year, more airline lessees are resorting to seek usage-based aircraft rental agreements, also known as power-by-the-hour (PBH) arrangements. Under-administration Virgin Australia is one of the airlines which has requested PBH deals; under-hibernation AirAsia X is another.

"The Virgin Australia RFP [request for proposal] is aggressive. We took a good look at the proposal but it's not for us. Surprisingly, they went out to the broad market with it. We have an aircraft with them, but we're going to take that back," says Tran.

He adds: "The question with parked aircraft is that you have to make a judgment call as to whether you are better off giving someone PBH without even any minimums, or to preserve your asset. As you know, it takes a lot just to place an aircraft with a new lessee – just the transition is very complex and costly – so unless warranted I'm not sure why anyone would agree to PBH."

Hedging its bets

Joon-Ho Lee, senior vice-president at Burnham Sterling & Co, explains the benefits for Hawaiian Airlines of refinancing six aircraft with Yen-denominated loans.

When Hawaiian Airlines decided to refinance four Airbus A330-200s and two A321neos in 2019 it chose to do so with yen-denominated loans because of the natural hedge benefits that such an approach afforded the carrier.

With Burnham Sterling acting as exclusive financial adviser, the airline structured and placed the transaction with eight institutional investors in Japan, all of which were first-time investors in Hawaiian.

The financing tenor of the deal was 12 years for the A321neos and approximately 5.5 years for the A330-200s.

Joon-Ho Lee, senior vice-president at Burnham Sterling, says the natural hedge provided by yen, a currency that was becoming increasingly important to Hawaiian, plus the lower financing costs made it a compelling offer for the US carrier.

Natural hedge

"The premise of doing a non-US dollar transaction is that while forward expectations of real interest rate around the world should be the same, at least theoretically, ex-post results do not always reflect this outcome," Lee tells *Airfinance Journal*.

"So if your borrow rate in dollars is, say, 2% and your borrow rate in yen is 1%, well, that's great, but in that case the yen is expected to appreciate (over the course of the financing term) the equivalent of 1% per year to bring the net (of currency appreciation/depreciation) cost of borrowing in dollars or yen to be the same," he notes.

Lee says that by issuing debt in the Japanese currency Hawaiian was effectively "shorting yen" and going long (buying) dollars at closing.

When Burnham Sterling first began consultations with Hawaiian over the refinancing, Lee says the airline's yen-denominated currency revenue stood around 10%, but had, pre-Covid-19, grown to around 13-15% to become the US carrier's biggest source of foreign currency sales. "And it is probably fair to say Japan is one of or the most important international market for Hawaiian today".

"In the case of Hawaiian they have yen revenues that are expected to come into the company over the course of the financing term, so yen appreciation doesn't really matter for Hawaiian because although they are short yen at closing, they earn yen back throughout the financing term in yen ticket sales that it can use to pay yen debt service," he says. And they can also save on costs related to yen hedging, which also reduces the derivative mark-to-market fluctuation in the airline's financial reporting.

> *"And it is probably fair to say Japan is one of or the most important international market for Hawaiian today."*
>
> **Joon-Ho Lee**, senior vice-president, Burnham Sterling & Co

If yen were to depreciate, Lee says the Honolulu-based airline benefits from a mark-to-market decrease in the US dollar value of yen debt outstanding, as they are a US dollar-reporting airline. "The obvious benefit in a yen depreciation case is that Hawaiian would be paying back the yen that's worth less in the future (in dollar terms) so they reap the benefit not just of the low Yen borrow rate but also the overall depreciation of the currency," he says.

"In a yen depreciation case, Hawaiian's yen ticket sales should also increase in yen terms, reflecting higher than expected inflation in Japan."

Lower pricing

The transaction achieved record low pricing for Hawaiian Airlines, in both Japanese yen and on a swapped equivalent basis in US dollars, against the airline's US dollar debt pricing.

Lee explains that on a fully hedged basis, if Hawaiian were to borrow yen and then enter into a series of forward currency transactions to buy yen at a locked-in rate in the future to make their yen debt service payments, the resulting US dollar equivalent return would be "about half the margin" that they would pay to naturally borrow in dollars, using market pricing of their EETCs at the time.

This is possible because the credit spread the carrier was able to place the debt with yen investors with was, in dollar coupon terms, half of what US dollar lenders would require, Lee says.

So how was this achieved?

Lee explains that one reason was that rather than approaching large domestic or international underwriting banks, it placed 100% of the debt directly with Japanese regional banks and institutional investors in Japan.

By working directly with buy and hold institutions and lenders, Hawaiian captured fees that would have been paid to large underwriting institutions," he explains. We are particularly grateful to the eight lending partners we worked with on this transaction.

"So we were able to get good pricing in dollar coupon terms by working directly with the most attractive source of yen capital in Japan," Lee adds.

This was not only the first Hawaiian deal for the regional banks involved, but for some, it was an opportunity to directly participate in a transaction with the airline.

Lee explains that numerous roadshows by Hawaiian in Tokyo and one-to-one meetings with potential investors helped to convince them of the merits of the deal.

Collateral

Of the two aircraft types that made up the collateral in the deal, Lee says that there is a "very unfair view" that the A330s are "always tough collateral to finance".

He points out the aircraft type's significance for Hawaiian, noting that "there is no other aircraft in HA's fleet capable of Asia routes or East Coast flying" from Hawaii.

"That's the key thesis, while market values may be challenged the airline has been investing a significant amount of capital into its A330-200 fleet," he adds.

The financing faced potential obstacles such as loan-to-value (LTV) under currency volatility. A potential Japanese yen appreciation over time may result in LTV volatility. The financing LTVs at closing were typical.

Lee says that in the yen-dollar case "if you look historically 95% confidence range is plus or minus 20%. So when you are advancing an 80% LTV, you are looking at an effective LTV that could blow out to 100%".

He explains that a way to mitigate this is to have "really strong collateral" like the A321, with the A330 case able to mitigate that through a "shorter tenor of financing term, and slightly lower advance rate at closing".

"The merits of the transaction is really on the credit strength of the carrier, which really mitigates risk from asset values not holding up to expectations," he adds.

CIGA implications for aircraft leasing and financing sector

Richard Sharman, partner with Bird & Bird, provides a commentary on the permanent measures introduced into UK insolvency law in June by the Corporate Insolvency and Governance Act 2020, as relevant to lessors and financiers of aircraft.

The Corporate Insolvency and Governance Act 2020 (CIGA) has been described as the biggest shake-up of UK insolvency laws for two decades. Notably, there is a shift in focus to business recovery instead of formal insolvency and administration. CIGA was fast tracked through the UK legislative process with a view to preventing a slew of Covid-19 bankruptcies.

It has been widely reported that one of the new measures introduced by CIGA – the restructuring plan – is already being used by Virgin Atlantic to facilitate a solvent restructuring. On 25 August 2020, the airline announced that it had "secured the overwhelming support of all four creditor classes." The next step is a court hearing on 2 September to sanction the plan.

CIGA's key features

Restructuring plan

CIGA introduces a new restructuring procedure for companies in financial difficulty.

It allows companies to propose a restructuring plan to compromise claims of their creditors.

Under a restructuring plan, creditors are separated into different classes having similar rights (for example, for a UK airline: aircraft lessors, lenders, shareholders, trade creditors) with the possibility that a single class of creditors voting by 75% majority in value only may bind all other classes (the so-called "cross-class cram down") provided certain safeguards are satisfied and the plan is sanctioned by the court.

This new procedure provides greater flexibility than the debtor compromise procedures existing under English law prior to CIGA: the scheme of arrangement (which requires 75% majority in value and majority in number of each class of creditor to consent before court approval is sought) and the company voluntary arrangement (which cannot bind secured creditors).

Standalone moratorium

CIGA introduces a standalone moratorium for viable companies, allowing a holiday from certain payments and protection from enforcement for an initial period of 20 business days (extendable subject to conditions). Before CIGA, a moratorium could arise only when a company enters formal bankruptcy proceedings.

Termination prohibition

CIGA amends existing insolvency laws to prohibit suppliers of goods and services (with some exceptions, predominantly suppliers of financial services) from terminating supply on commencement of an insolvency procedure (such as a moratorium or restructuring procedure) for so long as the insolvency procedure is continuing.

This goes further than pre-CIGA termination prohibitions which were limited to "essential supplies" and means all suppliers (unless exempted) must continue to supply goods and services during the period of the insolvency procedure, subject to relief in the form of super-priority rules for certain payments falling due during the relevant period.

Implications for aircraft lessors and financiers

From the viewpoint of lessors and financiers of aircraft, CIGA must be considered in the context of the Convention on International Interests in Mobile Equipment and the Protocol thereto on Matters Specific to Aircraft Equipment (Cape Town).

Readers will be aware that Cape Town gives certain rights and protections (including special insolvency rules called "Alternative A") to lessors and financiers in their capacity as creditors holding an international interest in respect of airframes/engines (called "aircraft objects"). This includes a lessor's right under a lease and a creditor's right under a mortgage.

The special insolvency rules include the following key provisions:

- unless all defaults have been cured and the debtor has agreed to perform, the debtor must give possession of the aircraft object to the creditor no later than the earlier of: the end of the waiting period (60 days in the UK), and the date on which the creditor would be entitled to possession if Cape Town did not apply; and
- the anti-cram down provision, which provides that "no obligations of the debtor under the agreement may be modified without the consent of the creditor".

The rules apply only where a Contracting State that is the "primary insolvency jurisdiction" of the debtor has made a declaration to apply them. The UK did not make such a declaration but instead imported Alternative A into domestic insolvency law with the Aircraft Equipment (Cape Town Convention) Regulations 2015.

A key feature of Cape Town as an international treaty is that its special rules must override any conflicting provisions of domestic law.

CIGA includes express provisions to avoid conflict with Cape Town so that:

"CIGA is a complex piece of legislation passed in record time against the backdrop of the Covid-19 pandemic. There is a shift in focus to business recovery instead of formal insolvency."

Richard Sharman, partner with Bird & Bird

- the standalone moratorium does not affect the rights of a Cape Town creditor which will be able to repossess/enforce against the aircraft at the end of the 60 day waiting period irrespective of any extension of the moratorium; and
- the termination prohibition – which in principle could have applied to aircraft operating leases – does not affect the default termination remedy of a Cape Town creditor under an aircraft lease.

However, the cross-class cram down powers under a CIGA restructuring plan are not subject to any provision clarifying their relationship with the Cape Town anti-cram down provision. As a result, some legal analysis is required.

The starting point is that the Cape Town special insolvency rules (including the anti-cram down provision) apply after the commencement of an "insolvency-related event", defined in particular by reference to insolvency proceedings.

So the question is whether proposing a restructuring plan qualifies as an "insolvency proceeding" for such purpose. If it does, then the anti-cram down provision will apply in favour of Cape Town creditors.

The question is not expressly resolved by the provisions of Cape Town or its Official Commentary. Currently, there are differing views among lawyers and other commentators.

The Cape Town Academic Project has confirmed its view that forms of debtor reorganisation procedures would amount to insolvency-related events for the purposes of Cape Town "where they are (a) formulated in an insolvency context, or by reason of actual or anticipated financial difficulties of the debtor company, and (b) collective in that they are concluded on behalf of creditors generally or such classes of creditor as collectively represent a substantial part of the indebtedness".

This issue is not unique to the UK and may arise in other Cape Town jurisdictions where similar debtor reorganisation procedures are used – for example, the Irish schemes of arrangement in relation to Nordic Aviation Capital and Cityjet.

In relation to the Virgin Atlantic restructuring plan, the issue is unlikely to be clarified by the courts on the basis that the airline secured the support of all the creditor classes such that there are no dissenting Cape Town creditors.

Conclusion

CIGA is a complex piece of legislation passed in record time against the backdrop of the Covid-19 pandemic. There is a shift in focus to business recovery instead of formal insolvency, giving businesses in financial difficulty more breathing space and tools to survive. Its implications are wide ranging and will need to be analysed on specific facts.

The Virgin Atlantic restructuring plan will be closely observed as a test case. Given the "overwhelming" creditor support it seems likely that the court will sanction the plan. Notably, the plan will not need to invoke a cross-class cram down, but the prospect may have had some influence on creditor voting. CIGA may have already proven itself as a business recovery tool and improvement in UK insolvency law.

The issue of whether the Cape Town anti-cram down provision applies in the context of a CIGA restructuring plan is not yet resolved, although may be avoided by debtors obtaining unanimous consent of Cape Town creditors. Against this background, the Cape Town Compliance Index has placed the UK on its watchlist pending clarification of the issue.

While it is hoped that the greater flexibility introduced by CIGA will lead to more businesses surviving the impact of the pandemic, from the perspective of owners and financiers of high-value aircraft equipment, UK legislators will need to maintain a balance to ensure their interests remain adequately protected, thereby maintaining investor confidence in the sector.

Note: the commentary above in relation to Virgin Atlantic is based on publicly available information at the time of writing.

NAC remains optimistic in Latin America

The big three bankruptcies over the past 15 months and the Covid-19 crisis have seriously impacted travel in the region, writes **Olivier Bonnassies**.

Not long ago, LATAM and Avianca were the heavyweights of Latin America. Both had their aircraft in operation in almost every corner of the region, controlling a combined 60% of the domestic markets in Colombia, Chile and Peru.

Both entities have filed for Chapter 11 bankruptcy status, along with Aeromexico, while other airlines, admittedly smaller players, have ceased operating over the past few months.

In addition, Avianca and LATAM have pulled some markets.

Avianca pulled out of Peru in May, calling the domestic market unprofitable, surrendering to LATAM, which has dominated travel there since the 1990s.

In June, LATAM Airlines Argentina ceased its operations indefinitely because of current local industry conditions, exacerbated by the Covid-19 pandemic, which had left the sustainability of the operation unviable.

Avianca, in turn, departed Argentina in 2019 along with Norwegian Air Argentina, which was sold to Jetsmart Airlines last December.

The Covid-19 crisis has seriously impacted travel in Argentina, which has a ban on flying until September that could be extended until November.

Aerolineas Argentinas, Flybondi and Jetsmart Argentina are expected to operate again in this market. On source says Flybondi has reduced its fleet recently, returning some aircraft to some lessors and could start operations with only one or two aircraft.

In Chile, where LATAM has also filed for bankruptcy this year, the market has historically been shared between two carriers and one niche airline, Aerovias DAP, which operated mainly on smaller routes in the South. LAN and Ladeco were the incumbents until the mid-1990s, when LAN acquired Ladeco. Sky Airline has shared the market with LAN for almost 20 years, but the arrival of Jetsmart since 2017 has created more capacity in the market. One source says the three main carriers operate similar models on high-density routes.

In Brazil, Azul, Gol and LATAM Airlines have signed on to receive emergency funding from a group of lenders led by Brazil's National Bank for Economic and Social Development (BNDES).

The national development bank revealed in March it was working to line up emergency financing for the country's airlines. Under the plan, the bank will use convertible debentures with a five-year term. BNDES's equity investments division, BNDESPar, will buy the convertible debentures at a low rate. The carriers will use the proceeds to finance operations, rather than pay down debt. The much-awaited government relief package to airlines has been delayed to September.

In August, Azul reached agreements on new payment profiles with lessors providing working capital relief equivalent to R$3.2 billion ($595 million) from the beginning of the Covid-19 crisis until December 2021.

In the first half of this year, Gol reduced its fleet by nine Boeing 737-800s, and plans to return an additional seven aircraft in the second half. The carrier says it can reduce its fleet by another 30 units in 2021-22.

Airlines in Mexico have been hit by a 20% year-on-year depreciation of the Mexican peso against the US dollar, in addition to the Covid-19 crisis impact.

Aeromexico has made progress to restructure the business, secured debtor-in-possession financing and has rejected 10 737-700/800s as well as nine Embraer 170s.

Volaris expects to take delivery of all aircraft it has committed to receive this year but the carrier's plan is to freeze net fleet growth in 2021, 2022 and 2023.

Interjet, which has secured $150 million of investment from local businessmen, is pushing to expand again its fleet with the reintroduction of Airbus A320s and A321s. Previous *Airfinance Journal* analysis revealed that, by June, lessors had repossessed 60 out of the 65 A320- and A320neo-family aircraft Interjet operated at the beginning of this year.

Fleets

As of 28 August, *Airfinance Journal*'s Fleet Tracker shows the Latin American region accounted for 2,056 western-built aircraft in 30- to 410-seat passenger operations as well as freighters.

Airbus's fleet in Latin America accounts for 674 aircraft. The A320 models represent about two-thirds of the Airbus fleet, with 314 A320s and 136 A320neo aircraft.

The 737-800 accounts for 256 units, the data shows, or 40% of the Boeing fleet in service or stored in the region.

MHI-Bombardier has a presence with about 60 aircraft, including 35 CRJs.

ATR's presence is close to 170 aircraft in the region, with about 100 ATR-600 aircraft and 40 ATR-500s.

Embraer has more than 260 aircraft either in service or stored in Latin America, with the E190 models accounting for half of the fleet. The ERJ135/145 fleet totalled 60 units in the region.

In terms of airline direct orders with the original equipment manufacturers, Mexico comes first with 104 orders, followed by Brazil with 93. Colombia has 71 orders while Panama and Chile follow with 54 and 50, respectively.

The A320neo remains the most popular aircraft on order in Latin America with 140 units, while only 45 orders are for the A321neo models.

The Boeing Max family accounts for 185 orders, with the Max 8 model representing 116 units, the Max 9 for 42 and the Max 10 for 27 orders.

The Embraer E2-195 model has 91 aircraft on order with Azul, while nine ATR72-600s are still under order with Avianca.

Lessors accounted for about 1,051 or 51% of the in-service and stored at press time.

The top 10 lessors exposed to the market accounted for more than half the leased fleet.

Aercap had the largest number of aircraft leased in the region totalling 97. This is followed by GECAS with 83, SMBC Aviation Capital 67, Avolon 51, DAE Capital 49, Aircastle 41, Jackson Square Aviation 31 and Aviation Capital Group and ICBC Leasing with 28 each.

Lessors have 25 aircraft on direct order from Airbus and Boeing assigned to Latin American-based carriers, with SMBC Aviation Capital accounting for 15, GECAS and Jackson Square Aviation for 15 each, according to the data.

Nordic Aviation Capital is the third-largest regional lessor exposed to the Latin America region with an estimated 79 aircraft.

Jim Murphy, Nordic Aviation Capital's chief commercial officer, tells *Airfinance Journal* in an interview that his firm remains active in this market.

"Throughout this pandemic, we have worked closely with our clients in the region to help them wherever possible. We believe there are great airlines in Latin America run by highly professional management teams, and when we all emerge from this downturn, those airlines will return to healthy businesses overtime," he comments.

Murphy says the largest markets in the region remain heavily impacted by the pandemic, with Brazil having surpassed 3.6 million cases (second globally behind the USA) and Colombia still seeing heavy restrictions on traffic.

"This, coupled with difficult economic environments, many of which existed pre-Covid 19, will likely make any recovery a prolonged and challenging undertaking. Governments also have shown that their limited resources make it difficult for them to table adequate financial aid packages to help support their local airlines beyond deferrals of taxes and fees. Brazil is the only major government which is working on a plan to support its airlines via BNDES; however, the details still remain murky and the amounts in question have been reduced significantly since discussions began," he says.

Murphy says that the region's three-largest carriers, Aeromexico, Avianca and LATAM, will ultimately emerge from Chapter 11 as restructured, refocused and leaner enterprises.

"They will also, like most airlines in all regions, be smaller which may open the door for some alliances leading to closer cooperation between airlines. This has started with the recent example of Azul and LATAM aligning themselves in key Brazilian markets, which will help rationalise capacity and hopefully reduce costs. Although portrayed as temporary only, time will tell if it leads to stronger partnerships between yesterday's competitors."

Murphy expects there will be some markets in Latin America where low-cost carriers will become more dominant as they increase their market share. These entered the Covid-19 crisis with stronger cash positions than their larger competitors but also benefited from a model built on industry leading operating costs.

"Their ability to be flexible in their networks, as well as competitive in their fare structures, will undoubtedly help them capture travellers as they return to flying," he says.

The low-cost carrier model has been on the ascendancy in the region in the past few years with newcomers in Argentina, Chile and Peru notably, and Murphy agrees that low-cost carriers will take further market share from flag carriers.

"This is undoubtedly already happening, with a prime example being Volaris in Mexico. That said, there may be a limit as legacy carriers also serve long-haul markets that are fed through solid regional networks.

Mexico is a good example where low-cost carriers today account for three-quarters of the market but their challenge is how to serve point-to-point between small- and medium-sized cities that might not generate the volumes usually needed. Breaking from the traditional single fleet model will need to be considered if low-cost carriers wish to grow," he says.

Latin America has emerged as the main battleground in the global fight against Covid-19.

Despite the delayed arrival of the virus in the region, Brazil and Mexico have respectively the second- and third-highest numbers of total deaths, whereas Peru and Chile are among the worst performers in terms deaths per capita. In the meantime, the infection curves in most of these countries show no sign of coming under control.

Meanwhile, the region's bankruptcies could have an impact on the passenger behaviour.

Murphy says passenger perception varies widely throughout the region.

"In Mexico, a 'bankruptcy' label could be detrimental to the market perception and passenger willingness to buy tickets. There is still the spectre of the Mexicana bankruptcy that left many stranded passengers and others with purchased tickets never refunded. It has not hit Aeromexico in that way and we are confident that the market's view of Aeromexico as a strong and well-managed company will help it buck this trend.

"It is fair to say that we should expect everyone to be re-evaluating their entire business and this includes their alliances and how they could evolve."

Jim Murphy, chief commercial officer, Nordic Aviation Capital

"In Colombia, there is loyalty for Avianca but the impact of its Chapter 11 restructuring process on the market has not been tested yet as the market remains closed by the government," adds Murphy.

South American carriers traditionally have relied on alliance support and feed. Could this business model be threatened?

"It is fair to say that we should expect everyone to be re-evaluating their entire business and this includes their alliances and how they could evolve. It is unlikely to see them disappear; however, airlines will surely re-evaluate the benefit of simply feeding a partner instead of fully developing its own network for its own interest.

"Others will cooperate in unexpected ways – a case in point being Brazil with Azul and LATAM filling each other's aircraft and both benefiting. Will it last? Or will they go back to compete after the crisis subsides?" he comments.

"Alliances, if they can prove their worth, will continue at the right price," adds Murphy. "How else do you connect a European or Asian passenger to a small city in Latin America?"

ATR hopes for early recovery

Sales and deliveries of turboprops are struggling in the face of the Covid-19 crisis. **Geoff Hearn** looks at the prospects for the ATR72 and ATR42 as the manufacturer adapts to the pandemic.

In a sign of how the Covid-19 pandemic is impacting the aviation industry, ATR has announced plans to reduce its workforce in response to the crisis. The company cites a "phenomenal" loss of commercial aviation activity in recent months.

The aircraft manufacturer says that French government support has mitigated the situation. However, ATR believes the recovery will be slow, although it expects traffic to improve faster in the regional sector than in the wider air transport market.

A press statement says: "As with other major aircraft manufacturers, in order to survive and ensure the future of the business, ATR has had to consider, along with other measures such as cost containment and financial levers, adapting its workforce to this new and unexpected situation."

ATR says it will continue supporting the fleet worldwide, and pursue the development of products that can open new markets. The short-take-off and landing ATR42-600S and the ATR72-600F freighter are given special mention.

ATR has for some time considered China as a key market and the company has recently taken a significant step forward in the country by completing a certification flight test in cooperation with the European and Chinese regulatory authorities. Certification is expected in the coming months.

There has been limited activity in other markets, with deals involving used aircraft as prominent as new aircraft sales. The rare deals for new aircraft have had to be shared with lessors placing aircraft from their own backlogs.

The disruption to the market is highlighted by the rise in stored aircraft. According to *Airfinance Journal*'s Fleet Tracker, there were 45 stored ATR72-600s at the turn of the year. This represented about 10% of the fleet. As of mid-August, the equivalent figure is more than 280 aircraft, which exceeds the number of in-service aircraft.

Market views

The ATR programme has been supplying the bulk of newly built turboprops to the market. The competing De Haviland Dash 8 Q400 is still in production, but in smaller numbers than the ATR models.

The heightened demand in the late 2000s caused a rise in ATR42/72 values and lease rates

Olga Razzhivina, senior ISTAT appraiser, Oriel, says the high oil prices peaking in 2008 pushed airline interest in the regional sector from jets towards much more fuel-efficient turboprops. Concentration on seat-mile costs increased demand for the larger ATR72. In recent years, the smaller ATR42 has accounted only for a small portion of production.

The heightened demand in the late 2000s caused a significant rise in ATR42/72 values and lease rates, as the combined production rate approached 100 units a year. However, as oil prices fell so did the demand, and values and lease rates have followed.

Razzhivina believes the entrance of non-specialist lessors into the regional sector exacerbated the decline in values and lease rates. These new entrants did not count on the shorter planning horizons of regional operators compared with mainline aircraft operators, and therefore dropped their lease rate offers in order to place their

Oriel view of current market value ($m)

Build year	2012	2014	2016	2018	2020 (new)
ATR42-600	8.5	9.2	10.3	11.8	15.9
ATR72-600	9.7	10.4	11.5	13.3	17.8

Assumes half-life maintenance status, except for new aircraft.

Oriel view of indicative lease rates ($'000s/month)

Build year	2012	2014	2016	2018	2020 (new)
ATR42-600	70	80	90	105	130
ATR72-600	80	90	100	115	150

speculative orders. Although many such lessors subsequently sold their turboprops to regional specialists, the damage had been done.

"While regional specialists like Nordic Aviation Capital have done their best to control falls in lease rates, even resorting to storing whitetails for nearly a year, they have managed no more than to stabilise the situation," says Razzhivina.

The Covid-19 crisis poses particular difficulties for the regional air transport sector. The restrictions instituted at airports and during flights may encourage passengers travelling the relatively short distances served by turboprops to switch to trains or cars. In Europe, airline bailout packages have been linked to green measures, including culling short-haul flights.

"Perversely, this is likely to affect the most fuel-efficient and thus least-polluting aircraft – turboprops," says Razzhivina.

In India, where subsidised routes have created much-needed demand in recent years, the government is looking at ways of continuing to finance the scheme, particularly as demand is hit by Covid-19.

However, it can be argued that the routes served by turboprops will recover first. Many of them are essential for areas with little or no access by other means of transport. Turboprops are required at locations served by unpaved and short runways, where typically jets cannot land.

In the light of worldwide travel restrictions being put in place to counter Covid-19, domestic traffic is likely to recover ahead of international demand, and downsizing aircraft on domestic routes with diminished demand presents another opportunity for ATR aircraft.

Chris Beer, managing director, Skyworld Aviation, is among those who believe the regional market will recover more quickly than other sectors, and agrees that many airlines are looking to replace 150-seat aircraft with smaller types.

However, Beer cautions that even operators which might be in a position to fulfil this requirement could struggle to survive long enough to take advantage of the opportunities.

Another positive for ATR is its increased penetration of the freighter market with, for example, deliveries to Federal Express (Fedex) intended to start this year. E-commerce and its associated logistics are among the few sectors to benefit in the current crisis and the ATR freighter stands to benefit from this.

Razzhivina concludes: "Overall, after a dramatic drop caused by Covid-19, we can expect the turboprop sector, including the ATR42 and ATR72, to benefit from the green shoots of a recovery. Lease rates are likely to strengthen first, as airlines conserve cash, with values following later."

ATR family

The ATR42 is a turboprop, short-haul regional airliner developed and manufactured by ATR (Avions de transport regional), a joint venture owned by Airbus and Italian aviation conglomerate Leonardo. The original ATR42-300 entered service at the end of 1985.

The -500 series was a major upgrade with new more powerful engines, new propellers, increased design weights and an improved passenger cabin.

The -600 is the latest version, which in common with its larger and more widely sold stablemate the ATR72-600, incorporates further significant improvements in performance and available payload. A new cabin design and updated avionics are also part of the latest upgrade. The ATR72 is a stretched version ATR42, with capacity for 70-plus passengers. As well as a lengthened fuselage, the wingspan is increased and more powerful engines are fitted. The original ATR72-100 variant entered service in October 1989, but was soon superseded by the -200 model. The aircraft was developed with a series of upgrades to maximum take-off weight and engine power, culminating in the ATR72-212.

The ATR72-500 (certificated as the ATR72-212A) is a major development of the aircraft, which incorporates six-bladed propellers in place of the original four-bladed configuration.

The ATR72-600 model replaces the -500 and is the current production standard. It offers further performance improvements and includes a redesigned cabin. ATR says the -600 variants have reduced maintenance costs compared with their predecessors.

Aircraft characteristics

Seating/range

	ATR42-600	ATR72-600
Max seating	50	78
Typical seating	48	70
Maximum range (nautical miles)	800	825

Source: *Air Investor 2020*

Technical characteristics

	ATR42-600	ATR72-600
MTOW (tonnes)	18.6	22.8
OEW (tonnes)	11.5	14
MZFW (tonnes)	16.7	20.8
Fuel capacity (litres)	5,700	6,370
Engines	PW127M	PW127M
Thrust (shp)	2,160	2,475

Source: *Air Investor 2020*

Fuels and times

	ATR42-600	ATR72-600
Block fuel 200nm	560kg	610kg
Block fuel 500nm	1,210kg	1,310kg
Block time 200nm	55 minutes	58 minutes
Block time 500nm	122 minutes	125 minutes

Based on *Airfinance Journal* analysis of published data

Fleet data (-600 models only)

Entry into service	2012	2011
In service	34	262
Current operators	17	105
In storage	19	282
On order	6	173

Source: *Airfinance Journal Fleet Tracker*, 15 August 2020

New widebodies face competing in smaller market

A depressed widebody market is hitting even the newest Boeing and Airbus twin-aisle aircraft. **Geoff Hearn** looks at how this impacts the competition between the larger 787 models and the A350-900.

In January, *Airfinance Journal* looked at the prospects for the Airbus A350-900 and the Boeing 787-9 and concluded that there was little to choose between the economics of the respective models and that there was probably room for both families to succeed. The widebody market looks very different today.

In the last forecasts before the Covid-19 crisis, both Boeing and Airbus predicted a buoyant outlook for narrowbody and widebody orders. In its 2019 Commercial Market Outlook, Boeing forecast that, although smaller than the demand for single-aisle aircraft, the twin-aisle market would require 8,300 new aircraft by 2038. Airbus categorised the demand differently, but arrived at a requirement of 9,490 medium-sized and large aircraft over the same period.

However, the crisis has completely changed the forecast demand for aircraft, with most observers predicting that the widebody segment will be hit particularly hard. The International Air Transport Association has forecast that demand for international services will be harder hit and take longer to recover than regional and domestic travel. The association believes long-haul markets will not return to 2019 levels until 2024.

In response to the collapse in long-haul markets, airlines around the world have culled older widebody models, with British Airways' retirement of its remaining 747 fleet providing a high-profile example. As a result, market values for older models have come under significant pressure.

Orders for new models dry up

It has long been the case that widebody aircraft orders have been overshadowed by sales of single-aisle aircraft.

Before the Covid-19 crisis, orders for widebodies were, however, providing substantial revenues to Boeing and Airbus because the relatively small numbers of sales were offset by significantly higher values of individual aircraft.

In 2018/19, both the A330-900neo and the A350-900neo sold reasonably well – garnering close to 300 orders between them.

Airbus A350-900


Boeing 787-8

In the same period, Boeing's sales were heavily dependent on the 787-9 because orders for the 787-8 appeared to be tailing off, while sales for the newly in-service 787-10 had subsided after the initial flurry placed by launch customers.

However, 2020 has seen a dramatic drop off. As of the end of July, the two manufacturers had sold 50 widebodies between them. Given the low total, Boeing is unlikely to take much solace from its 58% market share of the year-to-date

Key data of A330/A350 and 787 families

Model	787-9	A330-900	A350-900	787-10	A350-1000
Maximum seats	408	440	440	440	440
Typical seats two class	296	260-300	300-350	336	350-410
Typical range (nm)	7,530	7,200	8,100	6,345	8,700
Entry into service	2014	2018	2014	2018	2018
Delivered	541	46	320	56	41
Orders backlog	337	277	447	157	129
Orders in 2018/19	198	118	176	22	10
Orders in 2020	11	None	21	18	None

Source: *Airfinance Journal* Fleet Tracker 22 April, 2020.

orders, but it will hope that the advantage is a reflection of the relative merits of the respective product lines.

There are some trends that might encourage the manufacturers. Despite the grim forecasts, order cancellations for widebody aircraft are currently lower than they were in 2019.

According to research from IBA, last year saw a total of 237 widebody cancellations, but there have been only 32 in the first half of 2020. This suggests that aircraft such as the 787 and A350 still figure in the plans of airlines, despite the fact that half of the world's widebody fleet remains parked and many older models are likely to exit the global fleet altogether.

Recent financing transactions also suggest there is a degree of confidence in the longer-term role and value of the latest widebodies.

Singapore Airlines (SIA) has raised an additional S$750 million ($542 million) in financing secured against its A350-900 and 787-10 aircraft. The number of aircraft involved is not confirmed, but *Airfinance Journal*'s Fleet Tracker shows that SIA Group owns 48 A350-900s, with an average market value of $120 million, and 15 787-10s valued at an average of $128 million.

Head to head

Assuming some normality returns to the widebody market, the relative efficiencies of the new families of Airbus and Boeing widebodies will again come under scrutiny. Although currently low fuel prices have eroded the advantage of latest-technology aircraft over older models, there is no doubt that the economics of long-haul operations will ensure that there is a replacement market for fuel-efficient aircraft.

Whether previously anticipated levels of growth are likely to return is another question, and so the relative competitiveness of the Boeing and Airbus ranges will be critical in determining which company benefits most from an eventual recovery. The variety of models on offer can be broadly referred to as 300 to 400 seaters with ranges of between about 6,000 and 8,000 nautical miles.

However, as is usually the case for widebody competitors, the models do not exactly match up in terms of capacity and range. Airline decisions will therefore be based on how well particular models meet their specific requirements. Lessors and financiers are wary of widebody aircraft in any case, but will be more mindful of the flexibility of a model to meet a wide variety of operational requirements.

Operating cost

Analysis carried out by *Airfinance Journal* prior to the Covid-19 crisis suggested that both the 787-9 and -10 have a modest advantage over the A350-900 in terms of trip cost and cost per seat. The caveat for these figures is that the A350-900 is a more capable aircraft in terms of capacity and range, and this is reflected in higher leading weights – which, in turn, lead to higher operating costs.

Apart from the obvious impact of collapsing demand, the Coronavirus crisis has had a dramatic impact on fuel prices, which are almost one-third of their pre-Covid-19 levels. Fuel price is an even more important cost factor for long-haul flights than is the case for shorter sector operations.

However, the impact of lower fuel prices on the relative operating costs of the various new widebody models is much less significant than its effect on the cost advantage of latest-generation models over older technology equipment.

Increases in fuel price will clearly improve the competitiveness of the most fuel-efficient models but, for aircraft with similar technology levels, changes in relative operating cost are small. *Airfinance Journal*'s analysis indicates that the 787 models lose some of their advantage at lower fuel prices, but the differences are marginal.

Relative operating costs can be equally sensitive to changes in capital cost, resulting from either pricing changes or interest rate fluctuations.

Tough times

In more prosperous periods, despite often-acrimonious sales campaigns, Airbus and Boeing have both had their successes, with many contested markets split roughly 50/50. An equal share of a market has often allowed both companies to turn a profit.

The 787 and A350 models have been a case in point, but in an era of reduced sales, the stakes may be higher and the competition may well get fiercer, with pricing a key factor.

Indicative relative cash operating costs (COC) at pre-Covid-19 fuel price (180 cents per US gallon)

	787-9	A330-900	A350-900	787-10	A350-1000
Relative trip cost	90%	96%	Base	93%	109%
Relative seat cost	99%	111%	Base	90%	93%

Indicative relative cash operating costs (COC) at post-Covid-19 fuel price (69 cents per US gallon)

	787-9	A330-900	A350-900	787-10	A350-1000
Relative trip cost	91%	96%	Base	92%	106%
Relative seat cost	100%	111%	Base	89%	90%

Assumptions: 4,000-nautical mile sector; fuel consumption, speed, maintenance costs and typical seating layouts are as Air Investor 2020.

Airbus agrees changes to A350 loans

Launch investment for the A350 has been the subject of complaints to the World Trade Organization (WTO).

Airbus, France, Spain and Germany have agreed to make changes to the Airbus A350 repayable launch investment (RLI) aid scheme in the hope it will end a 16-year trade dispute with the USA.

The EU says the action "removes any grounds for the USA to maintain its countermeasures on EU exports and makes a strong case for a rapid settlement of the long-running dispute".

The USA imposed tariffs worth $7.5 billion on EU goods in October 2019 after the WTO ruled that the European bloc had not fully complied with its previous rulings with regard to RLI for the A350 and A380 programmes.

Airbus says the move represents the "final step to stop the long-standing dispute", which has dragged on between the European original equipment manufacturer and Boeing for many years, and "removes any justification for US tariffs".

The EU and USA have been locked in a worsening trade dispute, in part centred on subsidies provided to Airbus and Boeing over many years.

Earlier this year, the USA increased tariffs on aircraft imported from the bloc to 15% from 10%. The WTO is expected to approve reciprocal tariffs to be imposed by the EU on the USA over subsidies to Boeing.

The European manufacturer made amendments to the RLI in connection with the A350 and A380 in October 2018, but this failed to diffuse the trade dispute.

Rating agency unsecured ratings

Airlines

	Fitch	Moody's	S&P
Aeroflot	BB-(neg)	-	-
Air Canada	BB-(neg)	Ba2(neg)	BB-(watch neg)
Air New Zealand	-	Baa2(stable)	-
Alaska Air Group	BB+(neg)	-	BB-(neg)
Allegiant Travel Company	-	Ba3(neg)	B(neg)
American Airlines Group	B(watch neg)	B2(neg)	B-(neg)
Avianca Holdings	D	-	D(NM)
British Airways	BB+(neg)	Ba1(neg)	BB(neg)
Delta Air Lines	BB+(neg)	Baa3(neg)	BB(neg)
Easyjet	-	Baa3(neg)	BBB-(watch neg)
Etihad Airways	A(stable)	-	-
Grupo Aeromexico	-	-	D(NM)
GOL	CCC-	Caa1(neg)	CCC-(watch neg)
Hawaiian Holdings	B+(neg)	B1(neg)	CCC+(neg)
International Consolidated Airlines Group	-	-	BB(neg)
Jetblue	BB(neg)	Ba2(neg)	B+(neg)
LATAM Airlines Group	D	-	-
Lufthansa Group	-	Ba2(neg)	BB(neg)
Qantas Airways	-	Baa2(neg)	-
Ryanair	BBB(neg)	-	BBB(watch neg)
SAS	-	Caa2(neg)	CC(neg)
Southwest Airlines	BBB+(neg)	Baa1(neg)	BBB(neg)
Spirit Airlines	BB-(neg)	-	B(neg)
TAP Portugal (Transportes Aereos Portugueses, S.A.)	-	Caa2(neg)	B-(watch neg)
Turkish Airlines	-	B3(neg)	B(neg)
United Airlines Holdings	BB-(neg)	Ba2(neg)	B+(neg)
Virgin Australia	D	Ca(developing)	D(NM)
Westjet	B+(neg)	B3(neg)	B-(watch neg)
Wizz Air	BBB-(neg)	Baa3(neg)	-

Source: Ratings Agencies - 20/08/20

Lessors

	Fitch	Moody's	S&P	Kroll Bond Ratings
Aercap	BBB-(neg)	Baa3(neg)	BBB(neg)	-
Air Lease Corp	BBB(neg)	-	BBB(neg)	A-(neg)
Aircastle	BBB(stable)	Baa3(neg)	BBB-(stable)	-
Avation PLC	B(watch neg)	-	CCC(watch neg)	-
Aviation Capital Group	BBB-(neg)	Baa2(neg)	BBB-(neg)	A-(neg)
Avolon Holdings Limited	BBB-(neg)	Baa3(neg)	BBB-(neg)	BBB+(neg)
AWAS Aviation Capital Limited	-	Baa3(neg)	BB+(stable)	-
BOC Aviation	A-(stable)	-	A-(neg)	-
CDB Aviation Lease & Finance	A+(stable)	A1(neg)	A(stable)	-
Dubai Aerospace Enterprise	BBB-(neg)	-	BB+(stable)	BBB+(neg)
Fly Leasing	-	Ba3(neg)	BB(neg)	BBB(neg)
ILFC (Part of Aercap)	BBB-(neg)	Baa3(neg)	-	-
Park Aerospace Holdings	BBB-(neg)	Baa3(neg)	-	-
SMBC Aviation Capital	A-(neg)	-	A-(neg)	-
Voyager Aviation	BB-(watch neg)	B1(neg)	CCC+(watch dev)	BB-(neg)

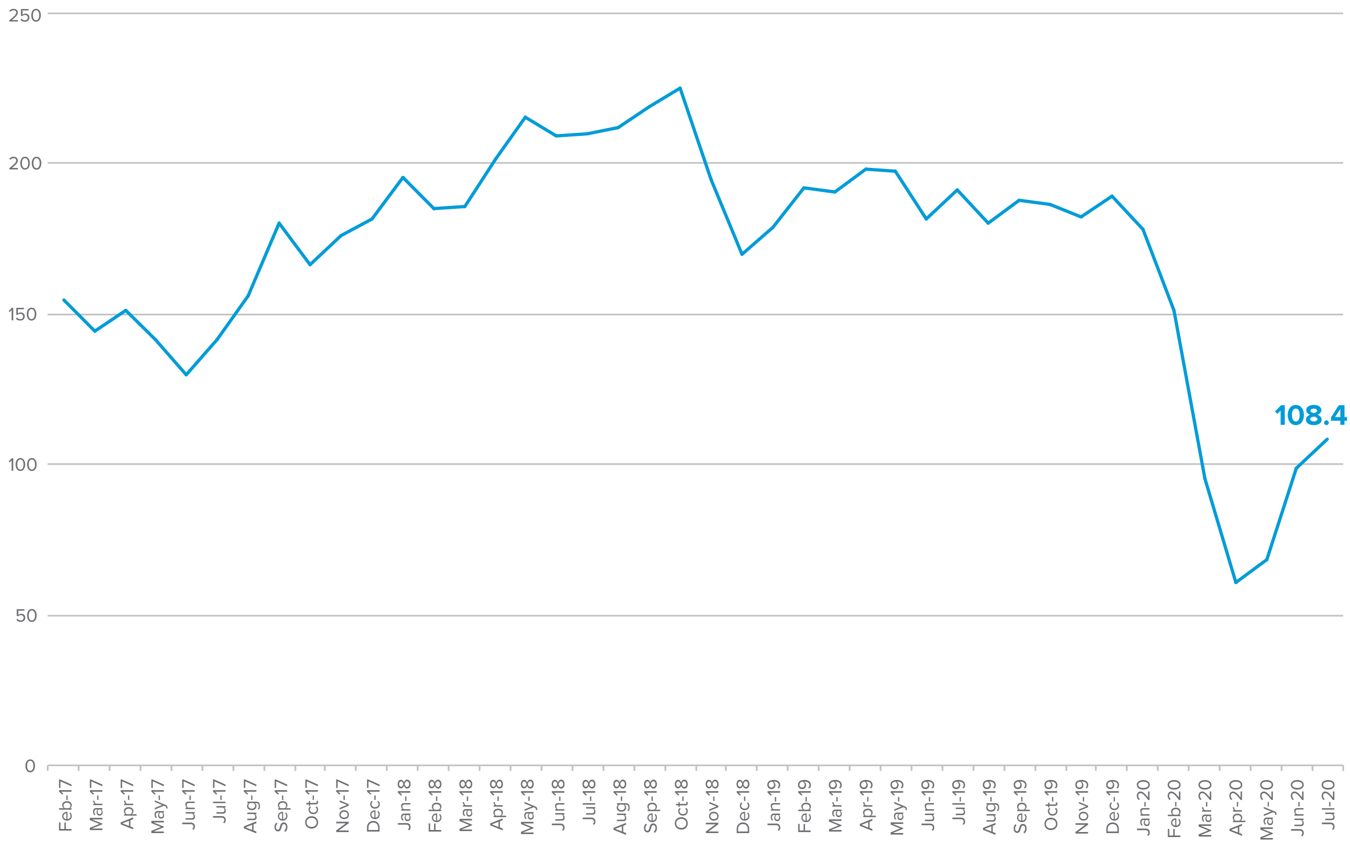
Source: Ratings Agencies - 20/08/20

Manufacturers

	Fitch	Moody's	S&P
Airbus Group	A-(neg)	A2(neg)	A(neg)
Boeing	BBB(neg)	Baa2(neg)	BBB-(neg)
Bombardier	CCC	Caa2(neg)	CCC+(neg)
Embraer	BB+(neg)	Ba2(neg)	BB+(neg)
Rolls-Royce plc	BB+(neg)	Ba2(neg)	BB(neg)
Raytheon Technologies Corp	-	Baa1(stable)	A-(neg)

Source: Ratings Agencies - 20/08/20

US Gulf Coast kerosene-type jet fuel (cents per US gallon)



Source: *US Energy Information Administration*

Recent commercial aircraft orders (July-August 2020)

Customer	Country	Quantity/Type
Enter Air	Poland	2 737 Max 8s

Based on *Airfinance Journal* research up to 21/08/2020

Commercial aircraft orders by manufacturer

	Gross orders 2020	Cancellations 2020	Net orders 2020	Net orders 2019
Airbus (31 July)	369	67	302	768
Boeing (31 July)	59	425	-366	54
Bombardier - Mitsubishi Heavy Industries	0	0	0	15
De Havilland of Canada	0	0	0	10
Embraer	20	0	20	55
ATR	5	0	5	43

Based on *Airfinance Journal* research and manufacturer announcements until 21/08/2020

New aircraft values ($ million)

Model	Values of new production aircraft*
Airbus	
A220-100	33.2
A220-300	37.8
A319	34.3
A319neo	37.2
A320	43.7
A320neo	49.3
A321	51.8
A321neo	57.1
A330-200	85.9
A330-200 Freighter	94.4
A330-300	98.2
A330-900 (neo)	110.4
A350-900	149.4
A350-1000	169
A380	219.2
Boeing	
737-800	46.3
737-900ER	48.6
737 Max 8	51.3
737 Max 9	52.5
747-8I	155.6
747-8F	183
777-300ER	153.9
787-8	118.5
787-9	143.6
787-10	150.5
ATR	
ATR42-600	16.2
ATR72-600	20.2
MHI-Bombardier	
CRJ700	24.1
CRJ900	26.2
CRJ1000	28.2
De Havilland Aircraft of Canada	
Dash8-400	20.7
Embraer	
E175	28.5
E190	32.1
E190-E2	34.5
E195	33.9
Sukhoi	
SSJ100	23.3

*Based on ISTAT appraiser inputs for Air Investor 2020

New aircraft lease rates ($'000 per month)

Model	Low	High	Average
Airbus			
A220-100	204	262	233
A220-300	276	303	289.5
A319	230	283	256.5
A319neo	266	293	279.5
A320	295	353	324
A320neo	340	383	361.5
A321	350	424	387
A321neo	380	444	412
A330-200	640	745	692.5
A330-200 Freighter	657	715	686
A330-300	690	833	761.5
A330-900 (neo)	801	872	836.5
A350-900	1,050	1,195	1,122.5
A350-1000	1,233	1,342	1,287.5
A380	1,503	1,950	1,726.5
Boeing			
737-800	310	364	337
737-900ER	330	394	362
737 Max 8	350	394	372
737 Max 9	368	404	386
747-8I	990	1,264	1,127
747-8F	1,178	1,570	1,374
777-300ER	1,050	1,300	1,175
787-8	815	931	873
787-9	950	1,200	1,075
787-10	1,053	1,146	1,099.5
ATR			
ATR42-600	117	153	135
ATR72-600	144	185	164.5
MHI-Bombardier			
CRJ700	153	220	186.5
CRJ900	170	235	202.5
CRJ1000	182	255	218.5
De Havilland Aircraft of Canada			
Dash8-400	140	200	170
Embraer			
E175	205	240	222.5
E190	230	275	252.5
E190-E2	239	263	251
E195	211	280	245.5
Sukhoi			
SSJ100	153	205	179

Are we about to enter the era of **deglobalisation**?

It could be a permanent shift or a temporary setback, even so, aviation will suffer, writes Adam Pilarski, senior vice-president at Avitas. *(With the assistance of Joshua Pilarski.)*

For quite some time we have experienced an era of globalisation, which is the Holy Grail (Nirvana) for economists. Economics deals, by definition, with the optimal allocation of scarce resources, moving production to locations where they can be produced in the most efficient way. Moving resources (including people) to places where they are most efficient is, of course, a boon to aviation.

The tradeoffs between producing everything at home while providing work for locals and buying from abroad entails transportation costs but also provides cheaper products. This has been discussed for centuries among economists. The work by David Ricardo in 1817 postulated that free trade is beneficial to the whole world because of the principle of comparative advantage which lets countries specialise in what they know best.

Expansion of free trade brought continuous growth of the world economy and trade. These trends were also beneficial to aviation, both passenger and cargo. Interestingly, we also experienced much lower inflation because we imported cheap products from abroad, especially in the past couple of decades. But despite its benefits, free trade has been vilified by its detractors.

Producers were always in favour of open markets as long as it was beneficial to them by expanding their markets. What they were less happy with was the right of foreign firms to compete in their own markets, which could lead to job losses.

The realisation that, from a global point of view, this was an efficient arrangement and allowed the world to maximise the total (global) output from the limited resources of our planet did not sit well with people who for decades had been in an industry which now was disappearing.

Opposition to such a world order has been voiced for a long time, being advocated by various populist and nationalist leaders. For example, Ross Perot championed the cause during his 1992 US presidential campaign which garnered about one-fifth of all votes.

During a debate he proclaimed that if the USA were to adopt the North American Free Trade Agreement (Nafta) deal there would be a giant sucking sound as many jobs would disappear to Mexico. Nafta did happen, the giant sucking sound did not. The populists in the USA had to wait another couple of decades to raise that issue again.

Our author at the *Airfinance Journal* Dublin 2020 conference.

"Expansion of free trade brought continuous growth of the world economy and trade. These trends were also beneficial to aviation, both passenger and cargo."

While the theoretical benefits of globalisation are clear (world's output will rise), the distribution of these gains between countries and within countries among the various groups is not clear and can easily lead to conflicts. In addition to the distribution of those gains, there is also the issue of control.

Aviation has the perfect illustration of this issue in the case of the Boeing 787 production. The aircraft was designed to be heavily outsourced, assuring the planners of low cost but also necessitating giving up some control.

Things did not go as planned and the aircraft was delayed by three years and also experienced a grounding of the fleet for three months in 2013. In the end, this resulted in tremendous expense to Boeing, which was forced to bring big parts of the supply chain of production in-house. These kinds of developments have been experienced in other industries which tried to balance cost savings versus control.

The current coronavirus crisis adds complexity to the existing situation. Most world economies are in an induced coma, trade and international, or even domestic, travel are in a worse shape than most other segments of the economy. The pushback against globalisation has a number of sources.

Some are political, as exemplified by the rise in nationalism pitting the interest of one's own population against the rest of the world ("us" versus "them") or supporting some part of the population against another ("elites" versus "common folk").

This trend is further reinforced by attempts to gain more control over the manufacturing process and reduce the risk of supply chain disruptions. Ironically, part of this can be accomplished by a push towards more automation, which can thrive despite the pandemic.

All this can move us from the practice of JIT (Just In Time, getting parts at exactly the correct time from around the world) to a new concept – ie, JIC (Just In Case or overordering parts to be prepared for screw ups in the supply chain, thus reducing uncertainty). Of course, this can only be achieved at a higher cost, and society is now moving slowly in the direction of less risk but also less benefit of a diversified supply chain.

So where does it leave aviation in the long term? The move away from globalisation is accelerating for the time being. Current events make these trends more pronounced. Only time will tell us whether this will be a permanent shift or a temporary setback. Aviation, overall, will be negatively affected by these developments.

AIRFINANCE
JOURNAL

An *Airfinance Journal*
special supplement

Airline top 100 2020

Top 100 **airlines**[1]

Basic information				TAA Financial Rating					TAA Financial Rating Scores - LTM					Overall Rating Scores	
Rank	Airline	Most recent 12 month "Latest Twelve Months" (LTM)	LTM revenues [USDm]	Average age of fleet (years) *Source: AeroTransport Data Bank*	Ebitdar (Earnings before interest, tax, depreciation, amortisation and rents)/ Total Revenues (%)	Fixed charge cover: Ebitdar/Net Interest plus Rent (x)	Liquidity as % of revenue	Adjusted net debt/Ebitdar (x)	Average age of fleet score	Ebitdar margin score	Fixed charge cover score	Liquidity score	Leverage score	Score for most recent 12 month (LTM) period	Movement in latest 12 months
1	Air Arabia	31-Mar-20	$1,275	4.8	32.3%	33.8	69.2%	0.6	7	6	8	8	8	7.5	0.5
2	Ryanair	30-Jun-20	$7,490	6.9	21.9%	7.7	61.9%	1.0	6	4	8	8	8	6.9	0.0
3	Frontier Airlines	31-Dec-19	$2,508	4.5	28.8%	2.1	30.6%	3.4	7	5	4	7	8	6.1	0.5
4	Copa Holdings	30-Jun-20	$2,000	8.2	24.8%	3.5	52.4%	2.2	6	4	6	8	6	6.0	0.0
5	Allegiant Travel Company	30-Jun-20	$1,440	15.9	19.8%	4.9	46.0%	3.1	3	3	8	8	5	5.8	-0.7
6	Easyjet	31-Mar-20	$8,458	7.7	16.7%	7.2	24.4%	1.7	6	3	8	5	7	5.8	0.7
7	Republic Airlines	31-Mar-20	$1,381	8.0	29.8%	4.4	20.4%	3.3	6	5	8	5	5	5.8	0.3
8	Luxair Group	31-Dec-19	$742	6.3	2.6%	4.9	29.7%	-4.9	6	1	8	6	8	5.8	-0.4
9	British Airways	31-Dec-19	$16,892	13.6	22.8%	7.5	19.5%	1.3	4	4	8	4	7	5.6	0.0
10	Spring Airlines	31-Dec-19	$2,135	4.6	21.2%	2.8	52.1%	3.4	7	4	5	8	5	5.6	0.4
11	Japan Airlines	30-Jun-20	$10,744	9.8	9.7%	6.5	34.8%	2.1	5	1	8	7	6	5.5	-1.1
12	Skywest, Inc.	30-Jun-20	$2,584	11.9	28.2%	3.2	29.5%	3.8	5	5	6	6	5	5.5	-0.2
13	Air Greenland	31-Dec-19	$213	22.2	18.5%	19.6	18.8%	0.2	1	3	8	4	8	5.4	-0.2
14	Southwest Airlines	30-Jun-20	$16,611	10.8	3.6%	2.2	87.0%	-5.7	5	1	4	8	8	5.2	-0.5
15	Qantas Airways	31-Dec-19	$11,588	11.0	19.2%	8.8	10.6%	1.6	5	3	8	3	7	5.2	0.2
16	Air New Zealand	31-Dec-19	$3,596	8.4	19.6%	4.5	18.0%	3.1	6	3	8	4	5	5.1	-0.7
17	Alaska Air Group	30-Jun-20	$6,674	8.0	10.4%	2.1	42.0%	3.3	6	2	4	8	5	4.9	-0.6
18	Chorus Aviation Inc.	30-Jun-20	$932	15.6	28.6%	4.3	12.5%	5.5	3	5	8	3	4	4.8	0.4
19	Hawaiian Airlines	30-Jun-20	$2,082	10.9	13.6%	2.4	36.5%	3.7	5	2	4	8	5	4.8	-0.9
20	Pegasus Airlines	30-Jun-20	$1,173	5.4	27.0%	1.3	48.4%	6.8	7	5	2	8	3	4.7	-0.7
21	Wizz Air	30-Jun-20	$2,566	5.0	22.2%	1.2	75.6%	6.0	7	4	2	8	4	4.7	-0.7
22	Atlantic Airways	31-Dec-19	$92	5.9	15.3%	2.7	28.4%	4.2	7	3	5	6	4	4.7	-0.9
23	EVA Airways	30-Jun-20	$4,862	5.3	22.5%	1.3	36.1%	7.8	7	4	2	8	3	4.5	-0.2
24	Grupo VivaAerobus	30-Jun-20	$491	4.5	25.7%	0.8	40.1%	7.3	7	5	1	8	3	4.5	-0.4
25	Emirates	31-Mar-20	$24,937	5.7	28.0%	1.6	22.1%	4.9	7	5	3	5	4	4.5	0.5
26	China Airlines	30-Jun-20	$4,909	8.3	23.2%	2.1	24.9%	5.6	6	4	4	5	4	4.4	0.0
27	Delta Air Lines	30-Jun-20	$34,059	15.4	6.9%	2.9	46.0%	5.1	3	1	5	8	4	4.4	-0.2
28	Jazeera Airways	30-Jun-20	$272	6.4	30.1%	1.0	35.0%	6.3	6	6	1	7	3	4.4	-0.2
29	Turkish Airlines	30-Jun-20	$10,887	7.7	18.4%	3.3	22.7%	7.1	6	3	6	5	3	4.4	-0.5
30	SIA Group	31-Mar-20	$11,679	6.7	15.1%	3.5	19.6%	4.5	6	3	6	4	4	4.4	-0.9
31	Vueling Airlines	31-Dec-19	$2,694	7.4	16.9%	1.5	32.7%	5.1	6	3	3	7	4	4.4	0.2
32	International Airlines Group	30-Jun-20	$22,332	11.5	13.2%	1.7	35.5%	4.8	5	2	3	8	4	4.3	-2.1
33	Aegean Airlines	31-Mar-20	$1,549	10.0	19.0%	1.4	44.5%	4.8	5	3	2	8	4	4.3	0.0
34	KLM - Royal Dutch Airlines	31-Dec-19	$12,128	9.9	17.5%	3.3	7.3%	2.6	5	3	6	2	6	4.3	0.0
35	Volaris	30-Jun-20	$1,292	4.4	28.1%	0.7	34.7%	6.6	7	5	1	7	3	4.2	0.4
36	Indigo	31-Dec-19	$4,667	5.8	19.8%	1.1	26.8%	5.2	7	3	2	6	4	4.0	0.9
37	Lucky Air	31-Dec-19	$1,071	5.9	23.0%	1.1	30.0%	7.6	7	4	2	6	3	4.0	-0.9
38	Air Astana	31-Dec-19	$893	8.3	18.9%	1.8	19.7%	4.0	6	3	3	4	5	3.9	0.2
39	Air China	31-Dec-19	$19,282	6.7	24.3%	2.9	6.6%	4.2	6	4	5	2	4	3.9	0.0
40	Iberia Opco	31-Dec-19	$6,431	10.5	15.1%	2.4	10.4%	3.6	5	3	4	3	5	3.9	-0.4
41	Spirit Airlines	30-Jun-20	$2,871	5.6	10.6%	1.2	43.0%	9.6	7	2	2	8	2	3.8	-2.5
42	Hainan Airlines	31-Mar-20	$8,747	5.3	20.1%	0.7	50.5%	16.2	7	4	1	8	1	3.8	-0.2
43	Mesa Air Group, Inc.	30-Jun-20	$625	8.6	28.2%	1.8	11.0%	6.8	6	5	3	3	3	3.7	-1.2
44	ANA Holdings	30-Jun-20	$15,050	9.7	12.5%	1.5	36.2%	9.2	5	2	2	8	2	3.6	-1.2
45	Cebu Pacific	30-Jun-20	$1,179	4.9	18.5%	1.2	31.6%	10.1	7	3	2	7	1	3.6	-2.5
46	Finnair	30-Jun-20	$2,759	9.8	8.8%	0.7	41.0%	5.6	5	1	1	8	4	3.6	-2.1
47	Jetblue	30-Jun-20	$5,920	9.8	4.5%	1.7	49.0%	9.2	5	1	3	8	2	3.6	-1.6
48	China Eastern Airlines	31-Dec-19	$17,003	5.8	20.6%	2.7	1.1%	6.5	7	4	5	1	3	3.6	0.3
49	Juneyao Airlines	31-Dec-19	$2,416	5.2	22.3%	2.1	7.8%	6.3	7	4	4	2	3	3.6	0.0
50	Air Canada	30-Jun-20	$10,717	14.5	9.7%	1.1	61.0%	6.5	4	1	2	8	3	3.5	-1.7

Notable airlines that did not make the Top 100 are Pakistan International Airlines, Norwegian Air Shuttle, Nok Air, ExpressJet Airlines Inc, Asiana Airlines and EastarJet

Source: *Airfinance Journal's* The Airline Analyst

[1] As rated by *AFJ Financial Ratings* on 22 August 2020 based on data from *The Airline Analyst*

Basic information				TAA Financial Rating					TAA Financial Rating Scores - LTM					Overall Rating Scores	
Rank	Airline	Most recent 12 month "Latest Twelve Months" (LTM)	LTM revenues [USDm]	Average age of fleet (years) Source: AeroTransport Data Bank	Ebitdar (Earnings before interest, tax, depreciation, amortisation and rents)/ Total Revenues (%)	Fixed charge cover: Ebitdar/Net Interest plus Rent (x)	Liquidity as % of revenue	Adjusted net debt/Ebitdar (x)	Average age of fleet score	Ebitdar margin score	Fixed charge cover score	Liquidity score	Leverage score	Score for most recent 12 month (LTM) period	Movement in latest 12 months
51	Gojet Airlines	31-Mar-20	$264	12.8	25.6%	1.7	6.4%	5.6	4	5	3	2	4	3.5	0.2
52	Air France	31-Dec-19	$19,694	12.0	12.9%	2.6	5.7%	3.6	4	2	5	2	5	3.5	0.2
53	China Southern Airlines	31-Dec-19	$21,688	6.5	21.2%	2.2	1.2%	5.9	6	4	4	1	4	3.5	0.3
54	Evelop Airlines	31-Dec-19	$252	8.3	28.1%	1.7	0.8%	5.1	6	5	3	1	4	3.5	-0.2
55	TAM Airlines	31-Dec-19	$3,515	14.3	16.5%	1.9	12.8%	3.2	4	3	3	3	5	3.5	1.6
56	Sun Country Airlines	31-Mar-20	$685	14.3	18.8%	2.1	10.2%	6.3	4	3	4	3	3	3.3	-0.5
57	AirAsia	31-Dec-19	$2,952	5.2	19.0%	0.8	20.7%	6.7	7	3	1	5	3	3.3	-0.9
58	Korean Air	30-Jun-20	$8,935	9.3	19.4%	2.0	17.8%	8.8	5	3	3	4	2	3.2	-0.4
59	LATAM Airlines Group	30-Jun-20	$8,460	8.3	17.5%	1.3	15.8%	6.9	6	3	2	4	3	3.2	-1.0
60	Austrian Airlines	31-Dec-19	$2,542	11.6	3.6%	2.5	0.3%	2.9	5	1	4	1	6	3.2	-0.2
61	Vietjet Air	31-Dec-19	$1,665	2.9	18.5%	1.1	16.9%	8.2	8	3	2	4	2	3.2	-1.4
62	Virgin Australia	31-Dec-19	$3,857	10.6	14.0%	1.3	22.7%	7.0	5	2	2	5	3	3.2	-0.4
63	Shenzhen Airlines	31-Dec-19	$4,480	6.8	21.0%	1.8	3.2%	8.0	6	4	3	1	3	3.0	-0.2
64	Air France-KLM	30-Jun-20	$24,250	11.0	8.0%	1.2	23.7%	7.3	5	1	2	5	3	2.9	-1.6
65	Bangkok Airways	30-Jun-20	$610	10.1	-0.7%	0.0	48.7%	-247.6	5	1	1	8	1	2.9	0.2
66	Starflyer	30-Jun-20	$320	5.0	7.4%	0.6	32.5%	14.5	7	1	1	7	1	2.9	-0.9
67	SAS	30-Apr-20	$4,834	10.2	14.7%	1.1	20.6%	8.9	5	2	2	5	2	2.9	-1.0
68	T'way Airlines	31-Dec-19	$684	10.3	15.8%	0.7	22.5%	8.9	5	3	1	5	2	2.9	-1.9
69	Widerøe	31-Dec-19	$490	18.3	4.7%	2.9	0.2%	3.3	2	1	5	1	5	2.9	0.4
70	Air Caledonie International	31-Dec-19	$210	15.5	-0.4%	-0.9	49.0%	114.4	3	1	1	8	1	2.8	-3.2
71	GOL	30-Jun-20	$1,995	9.5	16.6%	0.7	23.7%	11.9	5	3	1	5	1	2.7	-0.5
72	Lufthansa Group	30-Jun-20	$33,268	11.6	3.6%	1.9	13.1%	7.1	5	1	3	3	3	2.7	-2.1
73	PSA Airlines	31-Mar-20	$825	9.6	28.2%	0.9	0.4%	7.5	5	5	1	1	3	2.7	-0.5
74	Jin Air	31-Dec-19	$768	11.6	7.5%	0.5	32.7%	11.0	5	1	1	7	1	2.7	-1.4
75	Aeroflot	31-Mar-20	$9,673	7.9	21.5%	0.8	7.2%	8.3	6	4	1	2	2	2.6	-0.4
76	Avianca Holdings	31-Dec-19	$4,615	6.8	14.6%	1.3	8.6%	7.8	6	2	2	2	3	2.6	-0.4
77	Croatia Airlines	31-Dec-19	$270	13.8	11.5%	1.7	2.2%	4.7	4	2	3	1	4	2.6	0.9
78	Kenya Airways	31-Dec-19	$1,179	7.0	19.3%	1.2	2.5%	6.3	6	3	2	1	3	2.6	-0.2
79	American Airlines Group	30-Jun-20	$33,361	10.4	0.6%	0.1	29.4%	155.3	5	1	1	6	1	2.5	-1.6
80	Envoy Air	31-Mar-20	$1,413	11.4	19.1%	1.1	0.0%	7.0	5	3	2	1	3	2.5	0.3
81	United Airlines Holdings	30-Jun-20	$31,722	14.8	6.0%	1.3	23.5%	10.2	4	1	2	5	1	2.4	-2.5
82	Air Seoul, Inc.	31-Dec-19	$189	5.4	14.9%	0.8	6.9%	7.5	7	2	1	2	3	2.4	-0.5
83	TAP Group	31-Dec-19	$3,602	13.2	15.8%	0.8	13.0%	9.7	4	3	1	3	2	2.4	0.2
84	Xiamen Airlines	31-Dec-19	$4,583	5.3	19.5%	1.1	1.4%	8.6	7	3	2	1	2	2.4	-0.5
85	Azul	30-Jun-20	$1,722	6.0	11.6%	0.3	18.0%	20.2	6	2	1	4	1	2.3	-1.6
86	Garuda Indonesia	30-Jun-20	$3,297	6.1	20.5%	0.5	9.1%	18.0	6	4	1	2	1	2.3	-0.9
87	Royal Jordanian Airlines	30-Jun-20	$679	8.9	14.3%	0.6	16.5%	12.4	6	2	1	4	1	2.3	-1.4
88	Comair Limited	31-Dec-19	$412	16.4	13.6%	1.4	7.3%	6.8	3	2	2	2	3	2.3	-1.2
89	Icelandair	30-Jun-20	$1,121	20.6	4.5%	0.5	21.0%	8.9	2	1	1	5	2	2.2	-0.7
90	AirAsia X	31-Dec-19	$1,027	5.7	18.4%	0.6	7.0%	11.5	7	3	1	2	1	2.2	-0.9
91	EL AL Israel Airlines	31-Dec-19	$2,178	12.7	11.3%	1.0	11.0%	9.5	4	2	1	3	2	2.2	-0.2
92	Sichuan Airlines	31-Dec-19	$3,655	5.4	15.1%	1.1	3.0%	12.0	7	3	2	1	1	2.2	0.3
93	Thai Airways	30-Jun-20	$4,242	8.8	8.5%	0.5	16.4%	20.1	6	1	1	4	1	2.1	0.0
94	Cathay Pacific	30-Jun-20	$10,380	9.8	9.6%	1.0	18.3%	14.7	5	1	1	4	1	2.0	-1.9
95	PT AirAsia Indonesia	31-Dec-19	$455	9.4	16.1%	1.0	4.6%	8.1	5	3	1	1	2	2.0	0.7
96	Grupo Aeromexico	30-Jun-20	$2,358	8.4	9.7%	0.4	13.4%	20.5	6	1	1	3	1	1.9	-1.1
97	PAL Holdings	30-Jun-20	$2,251	4.2	8.2%	0.3	13.8%	29.8	7	1	1	3	1	1.9	0.0
98	Thai AirAsia	30-Jun-20	$882	5.7	3.1%	0.1	14.2%	83.8	7	1	1	3	1	1.9	-0.3
99	Vietnam Airlines	30-Jun-20	$3,166	6.1	14.0%	0.9	8.9%	11.1	6	2	1	2	1	1.9	-1.6
100	Jeju Air	31-Dec-19	$1,168	11.4	11.6%	0.8	2.8%	9.0	5	2	1	1	2	1.8	-2.5

Notable airlines that did not make the Top 100 are Pakistan International Airlines, Norwegian Air Shuttle, Nok Air, ExpressJet Airlines Inc, Asiana Airlines and EastarJet

Source: *Airfinance Journal's* The Airline Analyst

[1]As rated by *AFJ Financial Ratings* on 22 August 2020 based on data from *The Airline Analyst*

Commentary on **top 100**

The top 100 ranking of airlines is based entirely on Last Twelve Months (LTM) data and restricted to LTM figures no older than 31 December 2019. This ensures that our evaluation can be as up to date as possible. Our data sources are *The Airline Analyst* and *The Airline Analyst* Financial Ratings.

Shown in the table are the airlines' values and scores for the five parameters evaluated by *The Airline Analyst* for the LTM periods displayed. The rating is determined based on a weighted score of the five values by which the airlines are ranked.

In addition to the current rating, we show the change from the ratings of 12 months ago. As would be expected, the number of decliners significantly outweighs the number of improvers. This trend is most evident in the full-Covid-19-effect airlines, which have reported second-quarter 2020 financial data.

The top 100 list includes a number of airlines, which are in the process of restructuring, including Hainan Airlines, Virgin Australia, Icelandair, Avianca, LATAM, Grupo Aeromexico and SAS.

One observation is that many of the airlines, which have reported as of 30 June 2020 show significantly higher liquidity than normal because of abnormal levels of fundraising in the second quarter but also troubling increases in the amount of debt and leverage they carry. This trend is evident to a lesser degree in the 31 March 2020 financials but is obviously absent from the 31 December 2019 and earlier numbers.

> *One observation is that many of the airlines which have reported as of 30 June 2020 show significantly higher liquidity than normal.*

At the top of the ranking is Air Arabia, closely followed by Ryanair, Frontier (based on US DOT Form 41 values), Copa Airlines and Allegiant Air. Other low-cost carriers (LCCs) also fare well, including Easyjet in sixth position, Spring Airlines 10th, Southwest Airlines 14th, Wizz Air 21st and Grupo VivaAerobus 24th.

The major full-service carriers fare less well. While British Airways made the top 10, this is based on 31 December 2019 values. Parent IAG comes in at number 32 based on 30 June 2020 financials. Delta Air Lines ranks 27th but all of American Airlines, United Airlines, Air France-KLM and Lufthansa Group appear well down the second page (albeit all based on 30 June 2020 values).

Among the Latin American carriers, the ranking of Copa stands out, especially compared with the devastation around it. That said, LATAM still ranks 59th despite its Chapter-11 filing, Avianca Holdings is 76th while Grupo Aeromexico just makes the list in 96th place.

Covid-19 has brought humility to some formerly high-flying Asia-Pacific airlines, although those with large cargo operations have been able to offset some of the passenger losses. This includes Taiwan's two major carriers, Eva Airways and China Airlines, at positions 23 and 26, respectively. SIA Group is ranked 30th but this is based on 31 March data. Korean Air performed well, buoyed by its cargo business, and came in at 58th.

Perhaps the biggest fall is that of Cathay Pacific, which is placed at number 94 with its score two full grades lower than last year.

Low-cost carriers (LCC) fare well in the top 100, including Easyjet in sixth position

Top airlines by **size of current fleet**

		Fleet size			%	Fleet value ($m)		
Rank	Airline	Leased	Owned	Total	Leased	Leased	Owned	Total
1	Southwest Airlines	113	646	759	15%	1,447	11,992	13,439
2	China Southern	212	421	633	33%	6,993	14,428	21,421
3	China Eastern	101	483	584	17%	2,885	15,128	18,013
4	Skywest Airlines	116	423	539	22%	1,145	3,813	4,958
5	Air China	114	331	445	26%	3,761	11,196	14,957
6	Fedex	19	404	423	4%	305	12,896	13,201
7	Turkish Airlines	59	268	327	18%	1,956	10,581	12,537
8	Easyjet	99	215	314	32%	1,643	5,932	7,575
9	Lufthansa	24	283	307	8%	360	8,485	8,845
10	Ryanair	36	259	295	12%	985	5,291	6,276
11	British Airways	86	197	283	30%	2,733	5,980	8,713
12	Indigo	227	53	280	81%	6,711	1,791	8,502
13	Emirates	135	136	271	50%	9,965	10,401	20,366
14	UPS	3	264	267	1%	63	7,271	7,334
15	Jetblue	50	215	265	19%	569	4,735	5,304
16	Hainan Airlines	129	118	247	52%	5,922	4,216	10,138
17	Aeroflot	244	0	244	100%	7,603	0	7,603
18	Alaska Airlines	74	169	243	30%	1,526	4,075	5,601
19	All Nippon Airways	34	207	241	14%	1,906	9,456	11,362
20	Qatar Airways	115	122	237	49%	6,948	11,447	18,395
21	Air France	110	121	231	48%	2,931	3,706	6,637
22	Republic Airlines	54	156	210	26%	556	1,607	2,163
22=	Air Canada	110	100	210	52%	1,614	5,247	6,861
24	Endeavor Air	189	9	198	95%	1,428	16	1,444
25	Saudia	78	116	194	40%	1,942	6,463	8,405
26	Shenzhen Airlines	35	157	192	18%	726	4,233	4,959
27	Japan Airlines	20	154	174	11%	448	6,685	7,133
28	Xiamen Airlines	74	99	173	43%	2,342	3,057	5,399
29	Korean Air	24	147	171	14%	1,827	6,811	8,638
30	Sichuan Airlines	81	83	164	49%	2,871	2,122	4,993
31	Azul Linhas Aereas	148	15	163	91%	3,404	199	3,603
32	Cathay Pacific Airways	31	126	157	20%	1,741	8,132	9,873
32=	Latam Brasil	114	43	157	73%	3,604	887	4,491
34	SAS	105	50	155	68%	2,528	1,339	3,867
35	Garuda Indonesia	135	18	153	88%	3,593	122	3,715
36	PSA Airlines	151	1	152	99%	1,669	5	1,674
37	Spirit Airlines	59	92	151	39%	1,679	2,788	4,467
38	Expressjet	57	90	147	39%	128	98	226
39	Air India	91	55	146	62%	3,132	1,682	4,814
40	Mesa	56	89	145	39%	768	823	1,591
41	Envoy Air	142	1	143	99%	1,544	1	1,545
42	Singapore Airlines	18	122	140	13%	670	10,348	11,018
43	Latam Chile	55	83	138	40%	2,496	2,268	4,764
43=	Qantas	30	108	138	22%	881	3,187	4,068
45	Gol Transportes Aereos	130	5	135	96%	2,775	125	2,900
46	Etihad Airways	40	88	128	31%	2,577	6,213	8,790
46=	Westjet	41	87	128	32%	974	2,093	3,067
46=	Shandong Airlines	75	53	128	59%	2,174	1,433	3,607
46=	Vueling Airlines	100	28	128	78%	2,434	1,126	3,560
50	Lion Air	115	12	127	91%	3,277	238	3,515

Source: *Airfinance Journal's* Fleet Tracker

Top airlines by **size of current fleet and engine manufacturer**

		Manufacturer									
Rank	Airline	Allison	BMW RR	CFM International	Engine Alliance	GE	IAE	P&W	Rolls-Royce	Other	Total
1	American Airlines			508		106	239	36	100		989
2	Delta Air Lines		91	436		70	27	252	26		902
3	United Airlines	4		347		115	183	108	62		819
4	Southwest Airlines			759							759
5	China Southern			337		66	146	51	33		633
6	China Eastern	1		395		23	105		60		584
7	Skywest Airlines					528		11			539
8	Air China			233		36	52	42	82		445
9	Fedex					264		93	66		423
10	Turkish Airlines			96		83	89	30	29		327
11	Easyjet			313				1			314
12	Lufthansa			112		35	61	29	70		307
13	Ryanair			295							295
14	British Airways			25		38	121		99		283
15	Indigo			12			114	154			280
16	Emirates				89	155			27		271
17	UPS					114		113	40		267
18	Jetblue					59	196	10			265
19	Hainan Airlines			160		36		7	44		247
20	Aeroflot			155		18			18	53	244
21	Alaska Airlines			236		7					243
22	All Nippon Airways			53		64		49	75		241
23	Qatar Airways			6	10	134	29		58		237
24	Air France			119	9	96			6	1	231
25	Republic Airlines	1				209					210
25=	Air Canada			88		97		9	15	1	210
27	Endeavor Air					198					198
28	Saudia			63		81	1	5	44		194
29	Shenzhen Airlines			133			41	12	6		192
30	Japan Airlines			49		104		15	6		174
31	Xiamen Airlines			156		12			5		173
32	Korean Air			33	10	66		62			171
33	Sichuan Airlines			34			85	25	20		164
34	Azul Linhas Aereas			44		62		45	12		163
35	Cathay Pacific Airways					66		6	85		157
35=	Latam Brasil			66		24	53	6	8		157
37	SAS			91		21	23	7	13		155
38	Garuda Indonesia			78		32		16	27		153
39	PSA Airlines			1		151					152
40	Spirit Airlines						122	29			151
41	Expressjet	124				23					147
42	Air India			78		45	15	8			146
43	Mesa					145					145
44	Envoy Air	69				74					143
45	Singapore Airlines				1	27		7	105		140
46	Latam Chile			56		16	30	7	29		138
46=	Qantas		4	75		46		1	12		138
48	Gol Transportes Aereos			135							135
49	Etihad Airways				10	63	29		26		128
49=	Westjet			118		10					128
49=	Shandong Airlines			127		1					128
49=	Vueling Airlines			50			54	24			128
53	Lion Air			116				1	10		127

Source: *Airfinance Journal's* Fleet Tracker

Top airlines by **firm order backlog**

		Manufacturer							
Rank	**Airline**	**Airbus**	**ATR**	**Boeing**	**Bombardier**	**Embraer**	**Mitsubishi**	**Comac**	**Total**
1	**Indigo**	600	25	0	0	0	0	0	625
2	**Lion Air**	177	0	237	0	0	0	0	414
3	**AirAsia**	363	0	0	0	0	0	0	363
4	**Vietjetair**	124	0	200	0	0	0	0	324
5	**United Airlines**	95	0	181	0	20	0	0	296
6	**Wizz Air**	263	0	0	0	0	0	0	263
7	**Southwest Airlines**	0	0	250	0	0	0	0	250
8	**Delta Air Lines**	233	0	0	4	0	0	0	237
9	**Flydubai**	0	0	236	0	0	0	0	236
10	**American Airlines**	99	0	99	0	12	0	0	210
11	**Emirates**	58	0	145	0	0	0	0	203
12	**Norwegian**	88	0	96	0	0	0	0	184
13	**Turkish Airlines**	97	0	76	0	0	0	0	173
14	**Lufthansa**	126	0	40	0	0	0	0	166
15	**Qatar Airways**	77	0	87	0	0	0	0	164
16	**Frontier Airlines**	158	0	0	0	0	0	0	158
17	**Spicejet**	0	0	141	15	0	0	0	156
18	**Jetblue**	144	0	0	0	0	0	0	144
19	**Jet Airways**	1	0	135	0	0	0	0	136
20	**Ryanair**	0	0	135	0	0	0	0	135
21	**Spirit Airlines**	129	0	0	0	0	0	0	129
22	**Skywest Airlines**	0	0	0	0	25	100	0	125
23	**Air Arabia**	120	0	0	0	0	0	0	120
24	**AirAsia X**	118	0	0	0	0	0	0	118
25	**Qantas**	109	0	4	0	0	0	0	113
26	**Easyjet**	108	0	0	0	0	0	0	108
27	**Iran Air**	97	7	0	0	0	0	0	104
28	**Republic Airlines**	0	0	0	0	100	0	0	100
28=	**Volaris**	100	0	0	0	0	0	0	100
30	**Etihad Airways**	41	0	58	0	0	0	0	99
31	**Goair**	98	0	0	0	0	0	0	98
32	**Air France**	92	0	0	0	0	0	0	92
33	**All Nippon Airways**	30	0	41	0	0	15	0	86
34	**Gol Transportes Aereos**	0	0	82	0	0	0	0	82
35	**Korean Air**	30	0	51	0	0	0	0	81
36	**Fedex**	0	30	50	0	0	0	0	80
37	**Flynas**	80	0	0	0	0	0	0	80
38	**Jetsmart Airlines**	77	0	0	0	0	0	0	77
39	**Avianca**	74	0	2	0	0	0	0	76
40	**Aeroflot**	21	0	3	0	0	50	0	74
41	**Singapore Airlines**	19	0	50	0	0	0	0	69
42	**Hainan Airlines**	0	0	46	0	0	0	20	66
43	**Cathay Pacific Airways**	44	0	21	0	0	0	0	65
43=	**Saudia**	65	0	0	0	0	0	0	65
45	**Pegasus Airlines**	64	0	0	0	0	0	0	64
46	**Air Canada**	37	0	26	0	0	0	0	63
47	**Alaska Airlines**	30	0	32	0	0	0	0	62
48	**Garuda Indonesia**	9	3	49	0	0	0	0	61
49	**Moxy Airlines**	60	0	0	0	0	0	0	60
49=	**China Southern**	21	0	34	0	0	0	5	60
49=	**Cebu Pacific**	57	3	0	0	0	0	0	60

Source: *Airfinance Journal's* Fleet Tracker

* The order was cancelled in July 2019.

Industry **overview**

Covid-19 has given this year's survey a vastly different look, writes **Michael Duff**, managing director, *The Airline Analyst*.

Normally in this publication we celebrate the best of the world's top 50 airlines in respect of financial and operational performance, using the most recent available full-year data. If we repeated this approach for 2020, we would have a very nice time capsule of the state of the airlines pre-Covid-19 that, while interesting and nostalgic, does not help the reader understand the state of the airlines today.

We have, therefore, decided to use the most recent Latest Twelve Months (LTM) data for all airlines, drawn from *The Airline Analyst*. But even this requires careful interpretation.

Our data set includes airlines whose most recent LTM financials are as of 30 June 2020 (full-Covid effect) or 31 March 2020 (half-Covid effect), or full-year results as of 31 December 2019 (no-Covid effect). Care has to be taken in comparing those airlines whose numbers incorporate five months of Covid-19, two months of Covid-19 or none.

This year we have expanded the report's coverage to the top 100 airlines or airline groups for which LTM financials are available for the periods ending from 31 December 2019 to 30 June 2020. We think it is not very meaningful to look at older financials at this time. We present the data for the entire top 100 by overall financial rating. This enables the reader to see not just the top 50 but also where so many fallen angels lie in the ranking. Please see the list of all included airlines in "The data set".

The 100 airlines are from the following geographic and market segments:

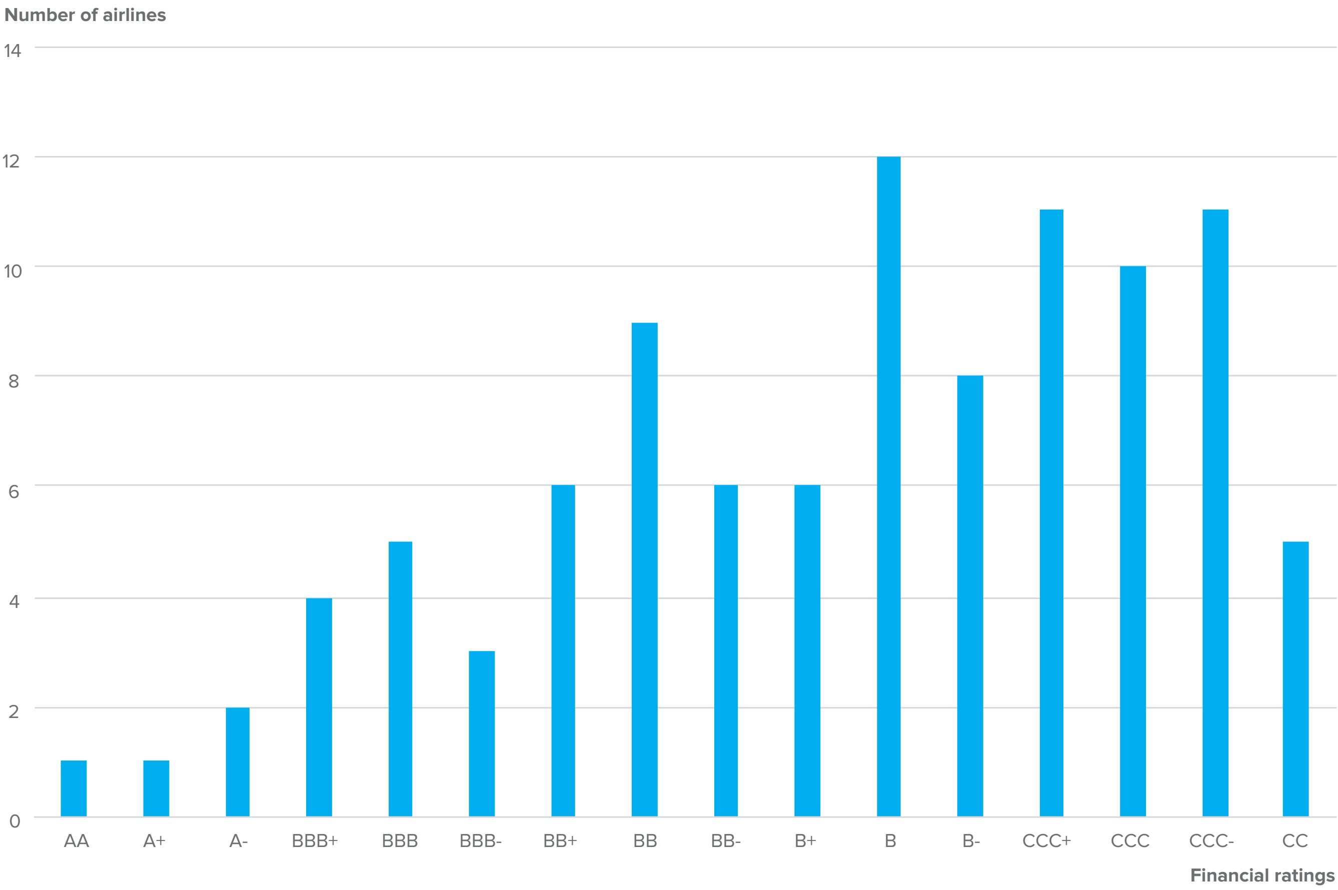
Airline Top 100 -— regions and business model

Row Labels	FSC	LCC	Leisure	Regional	Grand Total
Africa	1	0	0	1	2
China	9	2	0	0	11
Europe	16	6	0	5	27
Latin America	5	4	0	0	9
Middle East	3	2	0	0	5
North America	7	3	2	7	19
Northeast Asia	5	4	0	1	10
Oceania	3	0	0	0	3
South Asia	1	1	0	0	2
Southeast Asia	5	6	0	1	12
Grand Total	55	28	2	15	100

Source: *Airfinance Journal's* The Airline Analyst

Note: FSC = Full Service Carrier; LCC = Low Cost Carrier

AFJ Financial Ratings Distribution as of 21 August 2020



Source: *Airfinance Journal's* The Airline Analyst

The rankings are based on the criteria we use in *The Airline Analyst* Financial Ratings. These evaluate one operational and four financial criteria in coming up with a ranking for each airline or airline group. The airlines are scored out of eight; eight being the number of major grades in the ratings scale from AAA to CC.

The operational criterion is average fleet age and the four financial criteria are the earnings before interest, taxes, depreciation, amortisation and restructuring or rent costs (Ebitdar) margin, fixed-charge cover, liquidity and leverage.

The distribution of the rankings is shown in the chart. Of the 100, 45 are full-Covid effect, 13 are half-Covid effect and 42 are pre-Covid.

As can be seen, 37 of the 100 airlines are rated CCC+ or below. The median rating is B. A total of 16 are rated BBB- or better.

The following table shows the number of improved and worsened financial ratings by LTM period. A total of 66 ratings worsened compared with a year ago. While 37 incorporate the full-Covid-19 effect, it is notable that 23 had already deteriorated as of their 31 December 2019 numbers. Only nine have improved their ratings since the onset of Covid-19.

Improved/Worsened Financial Rating by LTM Period

LTM period	Worsened	No change	Improved	Total
30-Jun-20	37	5	3	45
31-Mar-20	6	1	6	13
31-Dec-19	23	4	15	42
Total	66	10	24	100

Source: *Airfinance Journal's* The Airline Analyst

The **data** set

Airlines included in the survey

Rank	Airline	Country Region	Most recent "Latest Twelve Months" (LTM)
1	**Aegean Airlines**	Greece	31-Mar-20
2	**Aeroflot**	Russia	31-Mar-20
3	**Air Arabia**	UAE-Sharjah	31-Mar-20
4	**Air Astana**	Kazakhstan	31-Dec-19
5	**Air Caledonie International**	France	31-Dec-19
6	**Air Canada**	Canada	30-Jun-20
7	**Air China**	China	31-Dec-19
8	**Air France**	France	31-Dec-19
9	**Air France-KLM**	France	30-Jun-20
10	**Air Greenland**	Denmark	31-Dec-19
11	**Air New Zealand**	New Zealand	31-Dec-19
12	**Air Seoul, Inc.**	South Korea	31-Dec-19
13	**AirAsia**	Malaysia	31-Dec-19
14	**AirAsia X**	Malaysia	31-Dec-19
15	**Alaska Air Group**	USA	30-Jun-20
16	**Allegiant Travel Company**	USA	30-Jun-20
17	**American Airlines Group**	USA	30-Jun-20
18	**ANA Holdings**	Japan	30-Jun-20
19	**Atlantic Airways**	Denmark	31-Dec-19
20	**Austrian Airlines**	Austria	31-Dec-19
21	**Avianca Holdings**	Panama	31-Dec-19
22	**Azul**	Brazil	30-Jun-20
23	**Bangkok Airways**	Thailand	30-Jun-20
24	**British Airways**	UK	31-Dec-19
25	**Cathay Pacific**	Hong Kong	30-Jun-20
26	**Cebu Pacific**	Philippines	30-Jun-20
27	**China Airlines**	Taiwan, Territory of	30-Jun-20
28	**China Eastern Airlines**	China	31-Dec-19
29	**China Southern Airlines**	China	31-Dec-19
30	**Chorus Aviation Inc.**	Canada	30-Jun-20
31	**Comair Limited**	South Africa	31-Dec-19
32	**Copa Holdings**	Panama	30-Jun-20
33	**Croatia Airlines**	Croatia	31-Dec-19
34	**Delta Air Lines**	USA	30-Jun-20
35	**Easyjet**	UK	31-Mar-20
36	**EL AL Israel Airlines**	Israel	31-Dec-19
37	**Emirates**	UAE-Dubai	31-Mar-20
38	**Envoy Air**	USA	31-Mar-20
39	**EVA Airways**	Taiwan, Territory of	30-Jun-20
40	**Evelop Airlines**	Spain	31-Dec-19
41	**Finnair**	Finland	30-Jun-20
42	**Frontier Airlines**	USA	31-Dec-19
43	**Garuda Indonesia**	Indonesia	30-Jun-20
44	**GoJet Airlines**	USA	31-Mar-20
45	**GOL**	Brazil	30-Jun-20
46	**Grupo Aeromexico**	Mexico	30-Jun-20
47	**Grupo VivaAerobus**	Mexico	30-Jun-20
48	**Hainan Airlines**	China	31-Mar-20
49	**Hawaiian Airlines**	USA	30-Jun-20
50	**Iberia Opco**	Spain	31-Dec-19

Rank	Airline	Country Region	Most recent "Latest Twelve Months" (LTM)
51	**Icelandair**	Iceland	30-Jun-20
52	**Indigo**	India	31-Dec-19
53	**International Airlines Group**	Spain	30-Jun-20
54	**Japan Airlines**	Japan	30-Jun-20
55	**Jazeera Airways**	Kuwait	30-Jun-20
56	**Jeju Air**	South Korea	31-Dec-19
57	**Jetblue**	USA	30-Jun-20
58	**Jin Air**	South Korea	31-Dec-19
59	**Juneyao Airlines**	China	31-Dec-19
60	**Kenya Airways**	Kenya	31-Dec-19
61	**KLM - Royal Dutch Airlines**	Netherlands	31-Dec-19
62	**Korean Air**	South Korea	30-Jun-20
63	**LATAM Airlines Group**	Chile	30-Jun-20
64	**Lucky Air**	China	31-Dec-19
65	**Lufthansa Group**	Germany	30-Jun-20
66	**Luxair Group**	Luxembourg	31-Dec-19
67	**Mesa Air Group, Inc.**	USA	30-Jun-20
68	**PAL Holdings**	Philippines	30-Jun-20
69	**Pegasus Airlines**	Turkey	30-Jun-20
70	**PSA Airlines**	USA	31-Mar-20
71	**PT AirAsia Indonesia**	Indonesia	31-Dec-19
72	**Qantas Airways**	Australia	31-Dec-19
73	**Republic Airlines**	USA	31-Mar-20
74	**Royal Jordanian Airlines**	Jordan	30-Jun-20
75	**Ryanair**	Ireland	30-Jun-20
76	**SAS**	Sweden	30-Apr-20
77	**Shenzhen Airlines**	China	31-Dec-19
78	**SIA Group**	Singapore	31-Mar-20
79	**Sichuan Airlines**	China	31-Dec-19
80	**SkyWest, Inc.**	USA	30-Jun-20
81	**Southwest Airlines**	USA	30-Jun-20
82	**Spirit Airlines**	USA	30-Jun-20
83	**Spring Airlines**	China	31-Dec-19
84	**StarFlyer**	Japan	30-Jun-20
85	**Sun Country Airlines**	USA	31-Mar-20
86	**TAM Airlines**	Brazil	31-Dec-19
87	**TAP Group**	Portugal	31-Dec-19
88	**Thai AirAsia**	Thailand	30-Jun-20
89	**Thai Airways**	Thailand	30-Jun-20
90	**Turkish Airlines**	Turkey	30-Jun-20
91	**T'way Airlines**	South Korea	31-Dec-19
92	**United Airlines Holdings**	USA	30-Jun-20
93	**VietJet Air**	Vietnam	31-Dec-19
94	**Vietnam Airlines**	Vietnam	30-Jun-20
95	**Virgin Australia**	Australia	31-Dec-19
96	**Volaris**	Mexico	30-Jun-20
97	**Vueling Airlines**	Spain	31-Dec-19
98	**Widerøe**	Norway	31-Dec-19
99	**Wizz Air**	UK	30-Jun-20
100	**Xiamen Airlines**	China	31-Dec-19

Source: *Airfinance Journal's* The Airline Analyst

Airline funding 2020

Based on data from *Airfinance Journal*'s Deal Tracker, we estimate the world's airlines have raised a total of $176 billion of liquidity funding so far in 2020. A breakdown of the funding into commercial loans, government loans and guarantees, equity, sale and leaseback and other sources is shown in Figure 1.

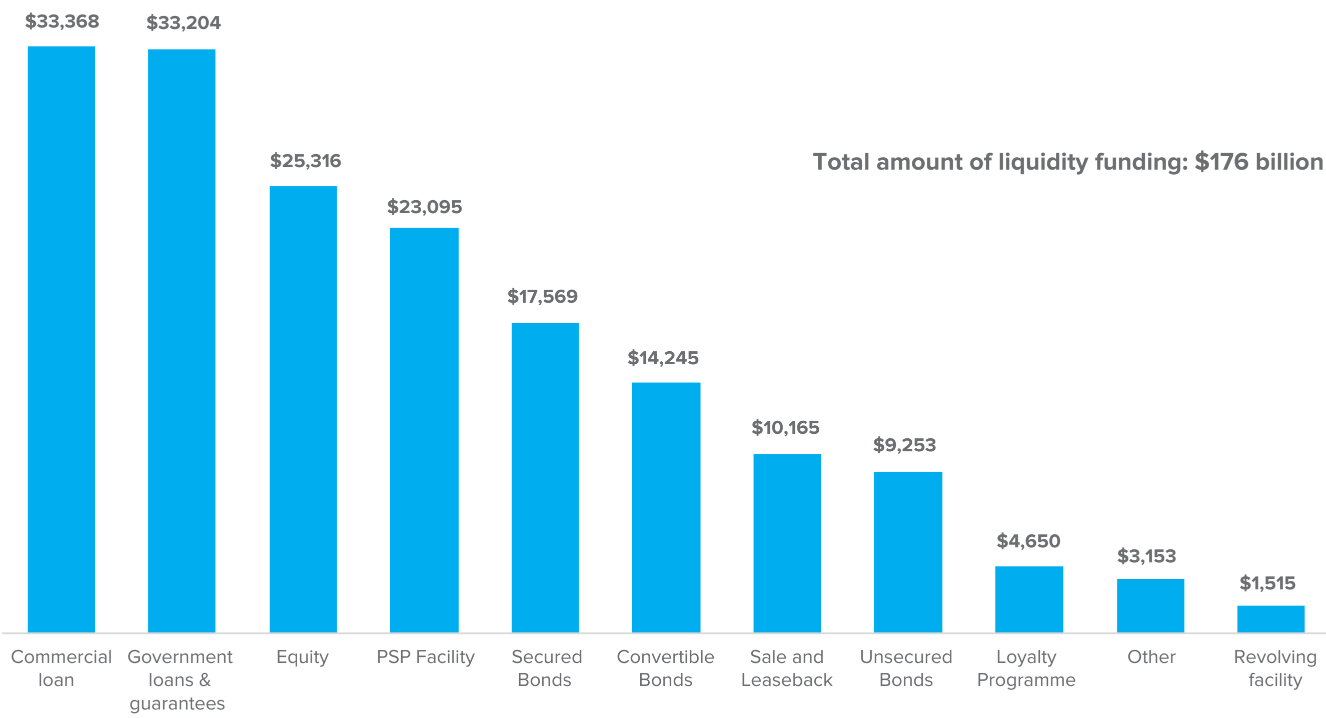
The two largest sources were commercial loans and government loans and guarantees at just over $33 billion each. In addition, in the government provided bucket is the $23 billion of the US Payroll Support Program grants and loans making for a total of $56 billion from governments.

A total of $25 billion has been raised in equity plus $14 billion in convertible bonds, reflecting airlines' needs for liquidity, albeit at the expense of equity dilution.

The bond market also proved a meaningful source across unsecured and secured, including enhanced equipment trust certificates. Some innovative financings were concluded, including a United Airlines financing secured by its Mileage Plus loyalty programme. Lastly, we estimate that more than $10 billion of sale and leasebacks have been closed.

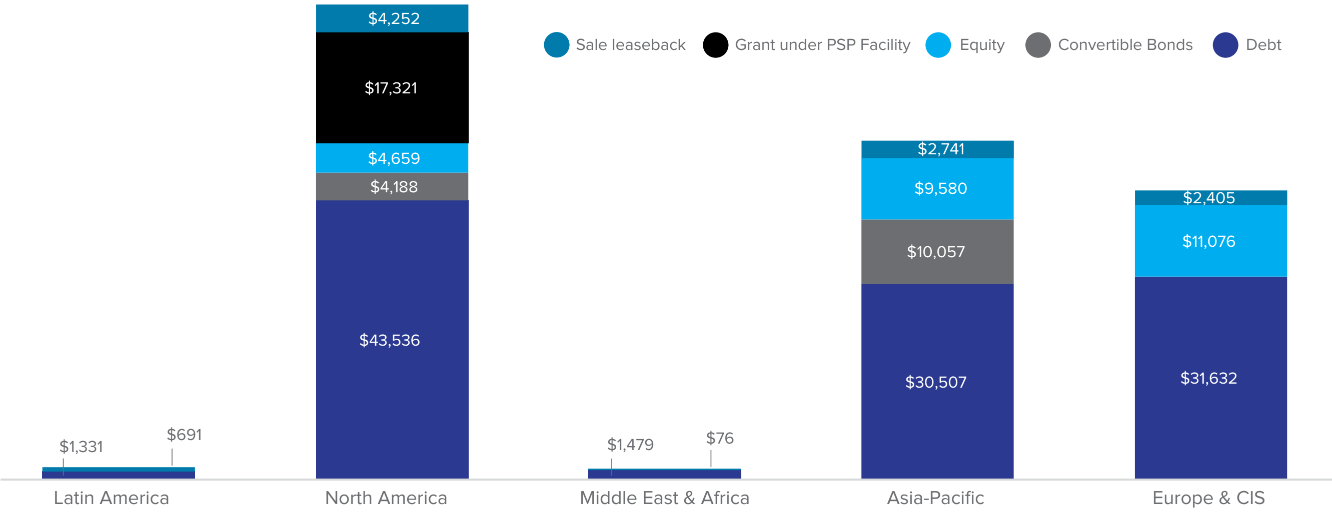
United raised $3 billion in June through a private offering of senior secured notes via its Mileage Plus loyalty programme

Figure 1: Distribution of liquidity funding, 2020 YTD ($m)



Source: *Airfinance Journal's* Deal Tracker

Figure 2: Airline liquidity funding by region and category YTD 2020 ($m)



Source: *Airfinance Journal's* Deal Tracker

Figure 2 shows liquidity funding by geographic region and by whether it has to be serviced (debt and sale and leaseback) or not (grants and equity).

The geographic distribution shows starkly the dearth of fundraising in Latin America and the Middle East and Africa. The consequence of lack of government support in Latin America is three Chapter 11 airlines. Copa Airlines, in its independent style, successfully raised funds in the commercial market. The story in the Middle East and Africa is slightly different. The Middle East has some hugely successful airlines such as Air Arabia which can forge their own path. Others are government owned and some of the funding sources a little opaque. Africa has been starved of government financial support except for a few cases where modest funds have been advanced.

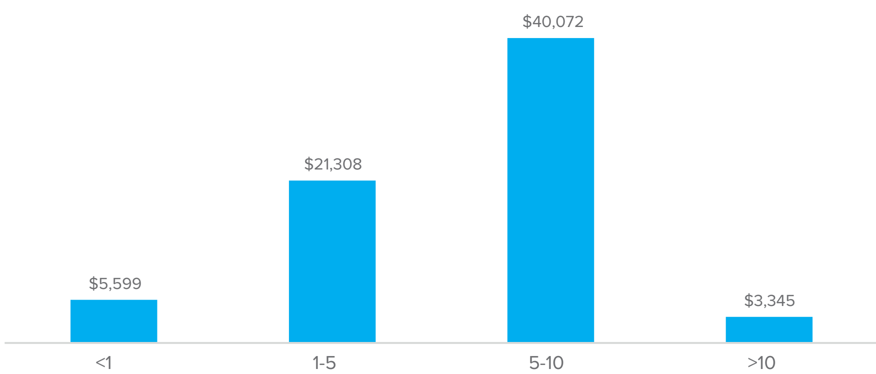
The chart shows that a total of just over $100 billion comprises debt instruments that will need to be repaid. To put this in context, the aggregate interest-bearing debt on the balance sheets of our group of 100 airlines (excluding double-counting parents and subsidiaries) was just over $300 billion pre-Covid-19. So we are talking a material increase in leverage.

The next question is: when will it need to be repaid? A couple of airlines made a false start in March by arranging 364-day financing when the pandemic was anticipated to be over within a year. One airline refinanced its recently arranged 364-day facility when realisation set in that the pandemic was set to impact airlines far more severely than first thought.

The chart in Figure 3 shows the debt maturities that are known publicly. Comfortingly, only $6 billion is due within one year and $21 billion in years one to five. As much as $43 billion has maturities in excess of five years, which is testament to the comfort that investors take in aircraft and other valuable assets such as routes, slots and gates and loyalty programmes as long-term investments.

"One airline refinanced its recently arranged 364-day facility when realisation set in that the pandemic was set to impact airlines far more severely than first thought."

Figure 3: Tenor of airline debt for liquidity funding, YTD2020*



Source: *Airfinance Journal's* Deal Tracker

*includes facilities for which tenor has been disclosed

The Middle East has some hugely successful airlines such as Air Arabia

Top 100 by **revenues**

The industry is dominated by three majors in each of the US, Europe and China, plus Emirates Airline from the UAE.

Delta leads the industry by revenues, totalling $34.1 billion, closely followed by American Airlines Group at $33.4 billion. The third US major, United Airlines, comes in at fourth spot.

The three European majors, Lufthansa Group, Air France-KLM and International Airlines Group, come in at numbers three, six and seven, respectively. Emirates is in fifth position with $24.9 billion. These are then followed by the three Chinese majors, China Southern Airlines, Air China and China Eastern Airlines.

Rank	Airline	LTM Revenues [USDm]
1	**Delta Air Lines**	$34,059
2	**American Airlines Group**	$33,361
3	**Lufthansa Group**	$33,268
4	**United Airlines Holdings**	$31,722
5	**Emirates**	$24,937
6	**Air France-KLM**	$24,250
7	**International Airlines Group**	$22,332
8	**China Southern Airlines**	$21,688
9	**Air France**	$19,694
10	**Air China**	$19,282
11	**China Eastern Airlines**	$17,003
12	**British Airways**	$16,892
13	**Southwest Airlines**	$16,611
14	**ANA Holdings**	$15,050
15	**KLM - Royal Dutch Airlines**	$12,128
16	**SIA Group**	$11,679
17	**Qantas Airways**	$11,588
18	**Turkish Airlines**	$10,887
19	**Japan Airlines**	$10,744
20	**Air Canada**	$10,717
21	**Cathay Pacific**	$10,380
22	**Aeroflot**	$9,673
23	**Korean Air**	$8,935
24	**Hainan Airlines**	$8,747
25	**LATAM Airlines Group**	$8,460
26	**Easyjet**	$8,458
27	**Ryanair**	$7,490
28	**Alaska Air Group**	$6,674
29	**Iberia Opco**	$6,431
30	**Jetblue**	$5,920
31	**China Airlines**	$4,909
32	**EVA Airways**	$4,862
33	**SAS**	$4,834
34	**Indigo**	$4,667
35	**Avianca Holdings**	$4,615
36	**Xiamen Airlines**	$4,583
37	**Shenzhen Airlines**	$4,480
38	**Thai Airways**	$4,242
39	**Virgin Australia**	$3,857
40	**Sichuan Airlines**	$3,655
41	**TAP Group**	$3,602
42	**Air New Zealand**	$3,596
43	**TAM Airlines**	$3,515
44	**Garuda Indonesia**	$3,297
45	**Vietnam Airlines**	$3,166
46	**AirAsia**	$2,952
47	**Spirit Airlines**	$2,871
48	**Finnair**	$2,759
49	**Vueling Airlines**	$2,694
50	**SkyWest, Inc.**	$2,584
51	**Wizz Air**	$2,566
52	**Austrian Airlines**	$2,542
53	**Frontier Airlines**	$2,508
54	**Juneyao Airlines**	$2,416
55	**Grupo Aeromexico**	$2,358
56	**PAL Holdings**	$2,251
57	**EL AL Israel Airlines**	$2,178
58	**Spring Airlines**	$2,135
59	**Hawaiian Airlines**	$2,082
60	**Copa Holdings**	$2,000
61	**GOL**	$1,995
62	**Azul**	$1,722
63	**VietJet Air**	$1,665
64	**Aegean Airlines**	$1,549
65	**Allegiant Travel Company**	$1,440
66	**Envoy Air**	$1,413
67	**Republic Airlines**	$1,381
68	**Volaris**	$1,292
69	**Air Arabia**	$1,275
70	**Kenya Airways**	$1,179
71	**Cebu Pacific**	$1,179
72	**Pegasus Airlines**	$1,173
73	**Jeju Air**	$1,168
74	**Icelandair**	$1,121
75	**Lucky Air**	$1,071
76	**AirAsia X**	$1,027
77	**Chorus Aviation Inc.**	$932
78	**Air Astana**	$893
79	**Thai AirAsia**	$882
80	**PSA Airlines**	$825
81	**Jin Air**	$768
82	**Luxair Group**	$742
83	**Sun Country Airlines**	$685
84	**T'way Airlines**	$684
85	**Royal Jordanian Airlines**	$679
86	**Mesa Air Group, Inc.**	$625
87	**Bangkok Airways**	$610
88	**Grupo VivaAerobus**	$491
89	**Widerøe**	$490
90	**PT AirAsia Indonesia**	$455
91	**Comair Limited**	$412
92	**StarFlyer**	$320
93	**Jazeera Airways**	$272
94	**Croatia Airlines**	$270
95	**GoJet Airlines**	$264
96	**Evelop Airlines**	$252
97	**Air Greenland**	$213
98	**Air Caledonie International**	$210
99	**Air Seoul, Inc.**	$189
100	**Atlantic Airways**	$92

Source: *Airfinance Journal's* The Airline Analyst
LTM = Latest Twelve Months

Top airlines ranked by **RPKs**

Emirates comes out first in the revenue passenger kilometres (RPKs) ranking for the first time, just pipping China Southern and American to the post.

As expected, in addition to Emirates, the top 10 is dominated by the nine Chinese, US and European majors. Among the LCCs, Southwest, Easyjet and Norwegian Air Shuttle and Indigo make the top 30.

SIA is the largest of the non-Chinese Asian carriers, closely followed by Qantas and Hainan Airlines.

LATAM is the largest Latin American carrier in 22nd spot followed by Avianca in 41st, Gol at 49th and Grupo Aeromexico at 50th. Copa, the most consistently profitable Latin American carrier, is at number 59.

Rank	Airline	RPKs (m) (LTM)
1	**Emirates**	288,148
2	**China Southern Airlines**	284,921
3	**American Airlines Group**	283,557
4	**Delta Air Lines**	272,903
5	**United Airlines Holdings**	272,721
6	**Air China**	233,176
7	**China Eastern Airlines**	221,779
8	**Air France-KLM**	210,184
9	**Lufthansa Group**	204,854
10	**International Airlines Group**	202,839
11	**Air France**	176,121
12	**British Airways**	155,580
13	**Southwest Airlines**	153,953
14	**Aeroflot**	151,741
15	**SIA Group**	140,999
16	**Qantas Airways**	127,492
17	**Hainan Airlines**	119,407
18	**Turkish Airlines**	112,865
19	**KLM - Royal Dutch Airlines**	109,476
20	**Air Canada**	108,867
21	**Easyjet**	105,570
22	**LATAM Airlines Group**	93,412
23	**Cathay Pacific**	84,987
24	**Norwegian Air Shuttle**	79,626
25	**Iberia**	68,024
26	**ANA Holdings**	66,421
27	**Alaska Air Group**	66,406
28	**Virgin Australia**	63,300
29	**Indigo**	63,154
30	**Jetblue**	61,652
31	**AirAsia**	58,860
32	**Korean Air**	58,217
33	**Shenzhen Airlines**	57,877
34	**Thai Airways**	51,367
35	**Japan Airlines**	50,831
36	**Wizz Air**	49,949
37	**Spirit Airlines**	43,128
38	**Asiana Airlines**	42,564
39	**PAL Holdings**	42,309
40	**TAP Group**	42,065
41	**Avianca Holdings**	41,713
42	**Frontier Airlines**	38,884
43	**Air New Zealand**	38,573
44	**Vietnam Airlines**	37,600

Rank	Airline	RPKs (m) (LTM)
45	**SAS**	34,830
46	**Juneyao Airlines**	34,770
47	**EVA Airways**	34,278
48	**Vueling Airlines**	33,410
49	**GOL**	32,643
50	**Grupo Aeromexico**	30,939
51	**Spring Airlines**	30,329
52	**Garuda Indonesia**	29,775
53	**China Airlines**	29,290
54	**Volaris**	27,717
55	**Finnair**	27,167
56	**AirAsia X**	26,338
57	**Pegasus Airlines**	26,149
58	**Azul S.A.**	24,833
59	**Copa Holdings**	24,457
60	**Austrian Airlines**	23,050
61	**EL AL Israel Airlines**	22,596
62	**Hawaiian Airlines**	20,951
63	**SkyWest, Inc.**	18,821
64	**Republic Airlines**	17,944
65	**Cebu Pacific**	17,217
66	**Aegean Airlines**	15,374
67	**Thai AirAsia**	15,035
68	**Pakistan International Airlines**	14,938
69	**Jeju Air**	14,844
70	**Kenya Airways**	12,881
71	**Envoy Air**	12,083
72	**Mesa Air Group, Inc.**	11,930
73	**Grupo VivaAerobus**	11,179
74	**Air Astana**	10,400
75	**PSA Airlines**	9,684
76	**Icelandair**	9,135
77	**Sun Country Airlines**	8,338
78	**PT AirAsia Indonesia**	8,005
79	**Nok Air**	5,286
80	**ExpressJet Airlines, Inc.**	4,621
81	**GoJet Airlines**	3,173
82	**Bangkok Airways**	3,078
83	**Luxair Group**	2,420
84	**Croatia Airlines**	1,676
85	**StarFlyer**	1,385
86	**Air Greenland**	580
87	**Atlantic Airways**	437

Source: *Airfinance Journal's* The Airline Analyst
LTM = Latest Twelve Months

Top airlines ranked by **passenger load factor**

As expected, LCCs take up the first three places on this list, all having a passenger load factor of more than 90%. The tour operators' captive airlines used to top this ranking but Monarch and Thomas Cook are no longer with us and Tui Airways' 2019 financial statements have not yet been published.

The LCCs are followed, creditably, by three legacy carriers, KLM, Air France and Iberia, and then several more LCCs.

The top 50 all achieved load factors of more than 80%, which may be a record.

At the lower end of the scale, three carriers, two of them Japanese, propped up the table with load factors below 70%. Japan Airlines was just a little bit ahead but, like ANA, had the full impact of Covid-19 suppressing its LTM numbers ending on 30 June 2020.

Perhaps surprising was the weak performance by Southwest at 72.1% but again the US carrier incorporates the full-Covid-19 effect.

Rank	Airline	Load factor (LTM)
1	**Easyjet**	93.1%
2	**Wizz Air**	92.4%
3	**Spring Airlines**	90.4%
4	**KLM - Royal Dutch Airlines**	89.4%
5	**Air France**	87.1%
6	**Iberia**	87.0%
7	**Vueling Airlines**	86.9%
8	**Pegasus Airlines**	86.8%
9	**Norwegian Air Shuttle**	86.7%
10	**Grupo VivaAerobus**	86.4%
11	**Volaris**	85.4%
12	**Juneyao Airlines**	85.2%
13	**Nok Air**	84.8%
14	**Air France-KLM**	84.7%
15	**Qantas Airways**	84.2%
16	**Copa Holdings**	84.2%
17	**Indigo**	84.1%
18	**PT AirAsia Indonesia**	84.0%
19	**Air New Zealand**	83.8%
20	**Aegean Airlines**	83.8%
21	**British Airways**	83.6%
22	**Cebu Pacific**	83.2%
23	**Frontier Airlines**	83.2%
24	**China Southern Airlines**	82.8%
25	**AirAsia**	82.6%
26	**International Airlines Group**	82.5%
27	**Azul S.A.**	82.5%
28	**SIA Group**	82.4%
29	**EL AL Israel Airlines**	82.1%
30	**China Eastern Airlines**	82.1%
31	**LATAM Airlines Group**	82.0%
32	**Thai AirAsia**	82.0%
33	**Shenzhen Airlines**	81.9%
34	**SkyWest, Inc.**	81.7%
35	**Hawaiian Airlines**	81.5%
36	**Jeju Air**	81.5%
37	**GOL**	81.4%
38	**Pakistan International Airlines**	81.3%
39	**Hainan Airlines**	81.2%
40	**Air China**	81.0%
41	**Air Greenland**	80.9%
42	**Vietnam Airlines**	80.9%
43	**Lufthansa Group**	80.8%
44	**Austrian Airlines**	80.8%
45	**Turkish Airlines**	80.6%
46	**Delta Air Lines**	80.5%
47	**GoJet Airlines**	80.4%
48	**Aeroflot**	80.4%
49	**Avianca Holdings**	80.3%
50	**TAP Group**	80.1%
51	**Air Canada**	79.9%
52	**AirAsia X**	79.7%
53	**Finnair**	79.4%
54	**Spirit Airlines**	79.0%
55	**Korean Air**	78.6%
56	**Icelandair**	78.5%
57	**Emirates**	78.5%
58	**United Airlines Holdings**	78.4%
59	**ExpressJet Airlines, Inc.**	78.4%
60	**American Airlines Group**	78.2%
61	**Asiana Airlines**	78.2%
62	**Sun Country Airlines**	77.7%
63	**Virgin Australia**	77.5%
64	**Grupo Aeromexico**	77.2%
65	**Jetblue**	77.1%
66	**Cathay Pacific**	77.1%
67	**Kenya Airways**	77.0%
68	**China Airlines**	76.9%
69	**Thai Airways**	76.9%
70	**Alaska Air Group**	76.7%
71	**Envoy Air**	76.6%
72	**PAL Holdings**	76.5%
73	**PSA Airlines**	75.9%
74	**Mesa Air Group, Inc.**	75.9%
75	**EVA Airways**	74.6%
76	**SAS**	74.2%
77	**Republic Airlines**	74.1%
78	**Croatia Airlines**	73.6%
79	**Luxair Group**	73.0%
80	**Southwest Airlines**	72.1%
81	**Air Astana**	71.0%
82	**Atlantic Airways**	70.8%
83	**Japan Airlines**	70.6%
84	**Garuda Indonesia**	70.2%
85	**StarFlyer**	68.4%
86	**ANA Holdings**	66.7%
87	**Bangkok Airways**	64.6%

Source: *Airfinance Journal's* The Airline Analyst
LTM = Latest Twelve Months

Top airlines ranked by **revenue per passenger**

Topping this list at $388 per passenger is Air Caledonie International, reflecting its long-haul focus between France and New Caledonia. Another niche airline, Air Greenland, is second at $376 arising from its narrow focus on Greenland routes with limited competition.

There is no surprise to see Emirates in third place but perhaps a surprise to see Delta in fourth and so far ahead of the other US majors. This must be a reflection of their larger international presence, especially to the Pacific. Three airlines with no domestic operations and long average stage lengths make the top 10 – El Al, Cathay Pacific and SIA.

At the other extreme are several LCCs headed by Grupo VivaAerobus at $29, Wizz Air at $42 and Ryanair at $43. These figures are for ticket prices only and do not include ancillary revenues. Just ahead of them are AirAsia, Vietjet, Pegasus, AirAsia Indonesia, Cebu Pacific, Skywest and Volaris.

Rank	Airline	Revenue per passenger ($) (LTM)
1	**Air Caledonie International**	388
2	**Air Greenland**	376
3	**Emirates**	366
4	**Delta Air Lines**	338
5	**EL AL Israel Airlines**	324
6	**British Airways**	320
7	**Cathay Pacific**	286
8	**KLM - Royal Dutch Airlines**	282
9	**SIA Group**	274
10	**EVA Airways**	269
11	**Air Canada**	251
12	**China Airlines**	248
13	**United Airlines Holdings**	242
14	**Icelandair**	238
15	**ANA Holdings**	234
16	**Air France-KLM**	231
17	**Hawaiian Airlines**	220
18	**Japan Airlines**	216
19	**International Airlines Group**	215
20	**Lufthansa Group**	200
21	**Kenya Airways**	199
22	**Thai Airways**	198
23	**Qantas Airways**	196
24	**Finnair**	189
25	**TAP Group**	189
26	**American Airlines Group**	188
27	**Jetblue**	186
28	**Air New Zealand**	185
29	**Alaska Air Group**	175
30	**Pakistan International Airlines**	170
31	**Korean Air**	166
32	**Royal Jordanian Airlines**	160
33	**Turkish Airlines**	156
34	**Copa Holdings**	156
35	**Southwest Airlines**	154
36	**Grupo Aeromexico**	153
37	**Air China**	152
38	**Aeroflot**	150
39	**Austrian Airlines**	149
40	**Sun Country Airlines**	148
41	**SAS**	145

Rank	Airline	Revenue per passenger ($) (LTM)
42	**Widerøe**	135
43	**Avianca Holdings**	129
44	**Air Astana**	129
45	**China Southern Airlines**	128
46	**LATAM Airlines Group**	121
47	**AirAsia X**	119
48	**China Eastern Airlines**	119
49	**Garuda Indonesia**	114
50	**Norwegian Air Shuttle**	113
51	**Virgin Australia**	111
52	**Allegiant Travel Company**	110
53	**PAL Holdings**	108
54	**Spirit Airlines**	107
55	**Croatia Airlines**	106
56	**Juneyao Airlines**	104
57	**Bangkok Airways**	103
58	**Jazeera Airways**	99
59	**Luxair Group**	99
60	**Shenzhen Airlines**	97
61	**Envoy Air**	96
62	**Azul S.A.**	91
63	**Aegean Airlines**	88
64	**GOL**	82
65	**Jeju Air**	80
66	**Republic Airlines**	74
67	**Easyjet**	69
68	**ExpressJet Airlines, Inc.**	68
69	**GoJet Airlines**	65
70	**Nok Air**	61
71	**Frontier Airlines**	58
72	**PSA Airlines**	56
73	**Volaris**	52
74	**SkyWest, Inc.**	51
75	**Cebu Pacific**	50
76	**PT AirAsia Indonesia**	50
77	**Pegasus Airlines**	45
78	**VietJet Air**	44
79	**AirAsia**	44
80	**Ryanair**	43
81	**Wizz Air**	42
82	**Grupo VivaAerobus**	29

Source: *Airfinance Journal's* The Airline Analyst
LTM = Latest Twelve Months

Top airlines ranked by **passenger yield**

Air Greenland comes out top on this ranking at 28.37 US cents per revenue passenger kilometre followed by a surprise in second place, Bangkok Airways, at 14.07 cents, reflecting its short average trip length at only 755 kilometres. There are no surprises in third and fifth places – Japan Airlines and ANA Holdings, respectively.

The three US majors are tightly grouped between 10.33 cents and 10.96 cents with Southwest not far behind at 9.80 cents. Air China is the leading mainland Chinese carrier at 7.50 cents. British Airways performs best of the European majors, closely followed by Lufthansa.

Emirates is in about the median position at 7.14 cents alongside Cathay Pacific, Finnair and Turkish Airlines.

While Qantas, China Airlines and Air New Zealand perform quite well, there is a clutch of Asia-Pacific carriers from positions 52 to 57, which do not quite make the seven cents level.

The numbers at the bottom of the list will attract attention, with three LCCs having yields lower than three cents and several more just above them. Perhaps it is a surprise to see a legacy full-service carrier such as Philippine Airlines (PAL Holdings) so far down the list at 4.29 cents and Aeroflot just above it.

Rank	Airline	Passenger yield (US cents per RPK) (LTM)
1	**Air Greenland**	28.37
2	**Bangkok Airways**	14.07
3	**Japan Airlines**	13.75
4	**Croatia Airlines**	13.74
5	**ANA Holdings**	13.61
6	**Envoy Air**	11.69
7	**Delta Air Lines**	10.96
8	**SAS**	10.94
9	**American Airlines Group**	10.63
10	**United Airlines Holdings**	10.33
11	**British Airways**	9.81
12	**Southwest Airlines**	9.80
13	**Lufthansa Group**	9.73
14	**Austrian Airlines**	9.49
15	**Jetblue**	9.14
16	**Alaska Air Group**	9.12
17	**KLM - Royal Dutch Airlines**	9.03
18	**Hawaiian Airlines**	8.96
19	**Garuda Indonesia**	8.95
20	**SkyWest, Inc.**	8.94
21	**Avianca Holdings**	8.90
22	**Nok Air**	8.82
23	**International Airlines Group**	8.77
24	**Luxair Group**	8.77
25	**Qantas Airways**	8.59
26	**China Airlines**	8.56
27	**Air Canada**	8.56
28	**Icelandair**	8.56
29	**Air New Zealand**	8.52
30	**PSA Airlines**	8.52
31	**ExpressJet Airlines, Inc.**	8.50
32	**Aegean Airlines**	8.35
33	**GoJet Airlines**	8.34
34	**Azul S.A.**	8.13
35	**Air France-KLM**	8.02
36	**Kenya Airways**	7.95
37	**EL AL Israel Airlines**	7.90
38	**Copa Holdings**	7.89

Rank	Airline	Passenger yield (US cents per RPK) (LTM)
39	**Korean Air**	7.78
40	**TAP Group**	7.66
41	**Republic Airlines**	7.57
42	**Air China**	7.50
43	**LATAM Airlines Group**	7.45
44	**Grupo Aeromexico**	7.45
45	**Turkish Airlines**	7.36
46	**Finnair**	7.20
47	**Cathay Pacific**	7.18
48	**Emirates**	7.14
49	**GOL**	7.12
50	**Sun Country Airlines**	7.09
51	**Virgin Australia**	7.06
52	**China Eastern Airlines**	6.99
53	**SIA Group**	6.97
54	**China Southern Airlines**	6.83
55	**EVA Airways**	6.81
56	**Thai Airways**	6.57
57	**Juneyao Airlines**	6.57
58	**Spirit Airlines**	6.51
59	**Air Astana**	6.33
60	**Shenzhen Airlines**	6.31
61	**Iberia**	6.29
62	**Easyjet**	6.05
63	**Pakistan International Airlines**	6.04
64	**Aeroflot**	5.86
65	**Jeju Air**	5.12
66	**PT AirAsia Indonesia**	4.95
67	**Norwegian Air Shuttle**	4.73
68	**Cebu Pacific**	4.55
69	**PAL Holdings**	4.29
70	**Pegasus Airlines**	3.90
71	**AirAsia**	3.62
72	**Frontier Airlines**	3.42
73	**Volaris**	3.32
74	**Grupo VivaAerobus**	2.61
75	**AirAsia X**	2.58
76	**Wizz Air**	2.57

Source: *Airfinance Journal's* The Airline Analyst
LTM = Latest Twelve Months

Top airlines ranked by **cargo revenues**

The air cargo business has proved a handy offset to almost non-existent passenger revenues for a large number of airlines during the pandemic.

Among the passenger carriers, Cathay Pacific came top of the ranking with $3.2 billion of cargo revenues, a heady 31% of total revenues.

Second was Emirates at $3 billion and 12% followed by Lufthansa, Korean Air and Air France-KLM. Turkish, not often talked about in the same terms as the others as a cargo carrier, generated $2.1 billion of cargo revenues.

Three major Asian carriers took up positions seven to nine followed by IAG at number 10.

Rank	Airline	Cargo revenues ($m) (LTM)	Cargo revenues as % of total revenues (LTM)
1	**Cathay Pacific**	3,208	31%
2	**Emirates**	3,051	12%
3	**Lufthansa Group**	2,710	9%
4	**Korean Air**	2,647	30%
5	**Air France-KLM**	2,335	10%
6	**Turkish Airlines**	2,102	19%
7	**China Airlines**	1,884	40%
8	**SIA Group**	1,422	12%
9	**China Southern Airlines**	1,350	6%
10	**International Airlines Group**	1,305	6%
11	**KLM - Royal Dutch Airlines**	1,295	11%
12	**United Airlines Holdings**	1,264	4%
13	**ANA Holdings**	1,221	8%
14	**EVA Airways**	1,118	24%
15	**LATAM Airlines Group**	1,103	13%
16	**British Airways**	912	5%
17	**Japan Airlines**	884	8%
18	**Air China**	805	4%
19	**American Airlines Group**	701	2%
20	**Qantas Airways**	678	5%
21	**Delta Air Lines**	636	2%
22	**Air Canada**	583	6%
23	**China Eastern Airlines**	537	3%
24	**Thai Airways**	446	10%
25	**Iberia**	324	5%
26	**Aeroflot**	304	3%
27	**Garuda Indonesia**	280	8%
28	**Air New Zealand**	258	7%
29	**TAM Linhas Aéreas S.A.**	230	5%
30	**Grupo Aeromexico**	222	9%
31	**Finnair**	218	8%
32	**PAL Holdings**	179	8%
33	**Alaska Air Group**	170	3%
34	**Southwest Airlines**	162	1%
35	**TAP Group**	152	4%
36	**SAS**	140	3%
37	**AirAsia**	127	5%
38	**Cebu Pacific**	101	9%
39	**Kenya Airways**	86	7%
40	**Royal Jordanian Airlines**	60	9%
41	**Icelandair**	58	5%
42	**Austrian Airlines**	56	2%
43	**AirAsia X**	45	5%
44	**Copa Holdings**	44	2%
45	**Juneyao Airlines**	42	2%
46	**EL AL Israel Airlines**	37	2%
47	**Virgin Australia**	35	1%
48	**Pakistan International Airlines**	34	3%
49	**Air Astana**	21	2%
50	**Air Greenland**	16	8%
51	**Volaris**	10	1%
52	**Air Caledonie International**	9	5%
53	**PT AirAsia Indonesia**	6	1%
54	**Jeju Air**	5	1%
55	**Bangkok Airways**	5	1%
56	**Sun Country Airlines**	4	1%
57	**Jazeera Airways**	3	1%
58	**Jin Air**	2	1%
59	**Croatia Airlines**	2	1%

Source: *Airfinance Journal's* The Airline Analyst
LTM = Latest Twelve Months

Top airlines ranked by **lowest employee costs**

There is a huge range on this measure, from 9.4% of revenues to 75.1%. Coming in the number one place is LCC Wizz Air, which also had one of the lowest passenger yields. This will help explain why it can afford them. Evelop Airlines came a close second followed by long-haul specialist AirAsia X at 10.7%.

Clearly, this is a ratio that is likely to increase significantly as a result of the pandemic because revenues disappeared overnight, while employee costs tend to be fixed in the short term.

Some airlines have benefitted from employment support measures such as the US Payroll Support Program, which have been booked as an offset to employment costs.

When seeing the three US majors at 34%, 35.5% and 41.3% we start to understand the plans some have announced to reduce staffing levels very materially from 1 October 2020.

Rank	Airline	Employee costs as % of revenue (LTM)
1	Wizz Air	9.4%
2	Evelop Airlines	9.8%
3	AirAsia X	10.7%
4	Aegean Airlines	11.0%
5	PT AirAsia Indonesia	11.4%
6	Vueling Airlines	11.6%
7	Air Astana	11.6%
8	Volaris	12.1%
9	PAL Holdings	12.3%
10	Air Seoul, Inc.	12.8%
11	Emirates	13.2%
12	VietJet Air	13.3%
13	Kenya Airways	13.5%
14	Aeroflot	13.7%
15	Ryanair	13.9%
16	Grupo VivaAerobus	14.6%
17	Easyjet	14.7%
18	Pegasus Airlines	14.8%
19	Turkish Airlines	15.1%
20	Avianca Holdings	15.4%
21	TAM Linhas Aereas S.A.	15.5%
22	SIA Group	16.0%
23	Jazeera Airways	16.1%
24	Norwegian Air Shuttle	16.2%
25	Garuda Indonesia	16.4%
26	AirAsia	16.5%
27	Indigo	16.8%
28	Asiana Airlines	16.9%
29	Croatia Airlines	16.9%
30	LATAM Airlines Group	17.3%
31	Azul S.A.	17.7%
32	China Southern Airlines	17.9%
33	China Airlines	18.0%
34	GOL	18.3%
35	Juneyao Airlines	18.6%
36	Air China	18.7%
37	Copa Holdings	18.8%
38	Iberia	18.9%
39	British Airways	19.0%
40	International Airlines Group	19.1%
41	Finnair	19.5%
42	China Eastern Airlines	20.0%
43	EastarJet	20.2%
44	Air Canada	20.2%

Rank	Airline	Employee costs as % of revenue (LTM)
45	TAP Group	20.6%
46	Thai Airways	20.8%
47	Thai AirAsia	21.5%
48	Korean Air	21.8%
49	Atlantic Airways	22.0%
50	Pakistan International Airlines	22.1%
51	SAS	22.5%
52	Tway Airlines	23.0%
53	Cathay Pacific	23.1%
54	Virgin Australia	23.2%
55	Sun Country Airlines	23.3%
56	Air New Zealand	23.4%
57	Grupo Aeromexico	23.4%
58	Air Caledonie International	23.7%
59	Qantas Airways	23.8%
60	Austrian Airlines	24.2%
61	Frontier Airlines	24.7%
62	Japan Airlines	25.0%
63	Widerøe	25.4%
64	Jeju Air	25.9%
65	KLM - Royal Dutch Airlines	26.8%
66	Hawaiian Airlines	28.2%
67	Allegiant Travel Company	29.5%
68	Air France	29.6%
69	Spirit Airlines	31.3%
70	Luxair Group	32.0%
71	Air Greenland	33.1%
72	GoJet Airlines	33.5%
73	Lufthansa Group	33.6%
74	Jin Air	33.7%
75	Chorus Aviation Inc.	34.0%
76	Delta Air Lines	34.0%
77	Air France-KLM	34.5%
78	United Airlines Holdings	35.5%
79	SkyWest, Inc.	35.6%
80	Icelandair	36.2%
81	Alaska Air Group	36.5%
82	Jetblue	38.0%
83	Republic Airlines	40.2%
84	American Airlines Group	41.3%
85	PSA Airlines	46.3%
86	Southwest Airlines	47.1%
87	Envoy Air	60.4%
88	ExpressJet Airlines, Inc.	75.1%

Source: *Airfinance Journal's* The Airline Analyst
LTM = Latest Twelve Months

Top 100 by **Ebitdar margin**

Unlike some other measures, the earnings before interest, taxes, depreciation, amortisation and restructuring or rent costs (Ebitdar) margin is neutral to the means of aircraft financing (owned or leased) and degree of financial leverage of an airline. While a high Ebitdar margin will not alone make a financially successful airline, it is a very appealing measure of the management's success in running the airline and the viability of the airline's core business, independent of the financing strategies chosen.

It is a particularly helpful measure when comparing airlines reporting under the new lease accounting standard, IFRS 16, airlines reporting under the not quite equivalent US standard, ASC 842, and airlines, which do not yet or will not report under IFRS 16 or a local equivalent. Evaluation at the Ebitda level would not be comparable.

There is a vast range in Ebitdar margin from best to worst in the most recent LTM periods. At the top is Air Arabia with a stellar 32.3% achievement, followed by Jazeera Airways and then six US and Canadian regional carriers. Their position needs to be interpreted with care, however, because some of their flying for the majors transfers responsibility for fuel expense to the latter.

There then follow impressive performances by two Mexican carriers, Volaris and Grupo VivaAerobus, and by Evelop, Emirates and Pegasus. Copa follows at a creditable 24.8% and then some of the Asian majors such as China Airlines, Eva, Air China and Korean Air, which have the benefit of large cargo businesses to bolster weakened passenger traffic.

There are many fallen angels whose numbers reflect the full impact of Covid-19, as demonstrated by Ebitdar margins well below 10%.

Rank	Airline	LTM EBITDAR Margin
1	Air Arabia	32.3%
2	Jazeera Airways	30.1%
3	Republic Airlines	29.8%
4	Frontier Airlines	28.8%
5	Chorus Aviation Inc.	28.6%
6	SkyWest, Inc.	28.2%
7	PSA Airlines	28.2%
8	Mesa Air Group, Inc.	28.2%
9	Volaris	28.1%
10	Evelop Airlines	28.1%
11	Emirates	28.0%
12	Pegasus Airlines	27.0%
13	Grupo VivaAerobus	25.7%
14	GoJet Airlines	25.6%
15	Copa Holdings	24.8%
16	Air China	24.3%
17	China Airlines	23.2%
18	Lucky Air	23.0%
19	British Airways	22.8%
20	EVA Airways	22.5%
21	Juneyao Airlines	22.3%
22	Wizz Air	22.2%
23	Ryanair	21.9%
24	Aeroflot	21.5%
25	China Southern Airlines	21.2%
26	Spring Airlines	21.2%
27	Shenzhen Airlines	21.0%
28	China Eastern Airlines	20.6%
29	Garuda Indonesia	20.5%
30	Hainan Airlines	20.1%
31	Indigo	19.8%
32	Allegiant Travel Company	19.8%
33	Air New Zealand	19.6%
34	Xiamen Airlines	19.5%
35	Korean Air	19.4%
36	Kenya Airways	19.3%
37	Qantas Airways	19.2%
38	Envoy Air	19.1%
39	AirAsia	19.0%
40	Aegean Airlines	19.0%
41	Air Astana	18.9%
42	Sun Country Airlines	18.8%
43	VietJet Air	18.5%
44	Cebu Pacific	18.5%
45	Air Greenland	18.5%
46	Turkish Airlines	18.4%
47	AirAsia X	18.4%
48	KLM - Royal Dutch Airlines	17.5%
49	LATAM Airlines Group	17.5%
50	Vueling Airlines	16.9%

Rank	Airline	LTM EBITDAR Margin
51	Easyjet	16.7%
52	GOL	16.6%
53	TAM Airlines	16.5%
54	PT AirAsia Indonesia	16.1%
55	TAP Group	15.8%
56	T'way Airlines	15.8%
57	Atlantic Airways	15.3%
58	SIA Group	15.1%
59	Iberia Opco	15.1%
60	Sichuan Airlines	15.1%
61	Air Seoul, Inc.	14.9%
62	SAS	14.7%
63	Avianca Holdings	14.6%
64	Royal Jordanian Airlines	14.3%
65	Virgin Australia	14.0%
66	Vietnam Airlines	14.0%
67	Hawaiian Airlines	13.6%
68	Comair Limited	13.6%
69	International Airlines Group	13.2%
70	Air France	12.9%
71	ANA Holdings	12.5%
72	Azul	11.6%
73	Jeju Air	11.6%
74	Croatia Airlines	11.5%
75	EL AL Israel Airlines	11.3%
76	Spirit Airlines	10.6%
77	Alaska Air Group	10.4%
78	Japan Airlines	9.7%
79	Air Canada	9.7%
80	Grupo Aeromexico	9.7%
81	Cathay Pacific	9.6%
82	Finnair	8.8%
83	Thai Airways	8.5%
84	PAL Holdings	8.2%
85	Air France-KLM	8.0%
86	Jin Air	7.5%
87	StarFlyer	7.4%
88	Delta Air Lines	6.9%
89	United Airlines Holdings	6.0%
90	Widerøe	4.7%
91	Jetblue	4.5%
92	Icelandair	4.5%
93	Lufthansa Group	3.6%
94	Southwest Airlines	3.6%
95	Austrian Airlines	3.6%
96	Thai AirAsia	3.1%
97	Luxair Group	2.6%
98	American Airlines Group	0.6%
99	Air Caledonie International	-0.4%
100	Bangkok Airways	-0.7%

Source: *Airfinance Journal's* The Airline Analyst
LTM = Latest Twelve Months

Top 100 by **liquidity**

Thirty-seven airlines had liquidity of more than three months of revenues, by virtue of the significant Covid-19-inspired fundraising, as well as efforts to defer capital expenditure and reduce dividends.

The top five airlines for liquidity, measured as unrestricted cash as a percentage of total revenues, were Southwest, Wizz Air, Air Arabia, Ryanair and Air Canada. Even the 50th-ranked airline had a ratio of more than 20%.

Even so, liquidity alone does not provide protection against a need for restructuring. Keeping company with some of these lower-rated airlines are the likes of American, United and Emirates.

The two US carriers raised additional liquidity in July. American plans to raise an additional $4.7 billion through the US government's secured loan programme.

Rank	Airline	LTM Liquidity as % of Revenue
1	**Southwest Airlines**	87.0%
2	**Wizz Air**	75.6%
3	**Air Arabia**	69.2%
4	**Ryanair**	61.9%
5	**Air Canada**	61.0%
6	**Copa Holdings**	52.4%
7	**Spring Airlines**	52.1%
8	**Hainan Airlines**	50.5%
9	**Air Caledonie International**	49.0%
10	**Jetblue**	49.0%
11	**Bangkok Airways**	48.7%
12	**Pegasus Airlines**	48.4%
13	**Allegiant Travel Company**	46.0%
14	**Delta Air Lines**	46.0%
15	**Aegean Airlines**	44.5%
16	**Spirit Airlines**	43.0%
17	**Alaska Air Group**	42.0%
18	**Finnair**	41.0%
19	**Grupo VivaAerobus**	40.1%
20	**Hawaiian Airlines**	36.5%
21	**ANA Holdings**	36.2%
22	**EVA Airways**	36.1%
23	**International Airlines Group**	35.5%
24	**Jazeera Airways**	35.0%
25	**Japan Airlines**	34.8%
26	**Volaris**	34.7%
27	**Jin Air**	32.7%
28	**Vueling Airlines**	32.7%
29	**StarFlyer**	32.5%
30	**Cebu Pacific**	31.6%
31	**Frontier Airlines**	30.6%
32	**Lucky Air**	30.0%
33	**Luxair Group**	29.7%
34	**SkyWest, Inc.**	29.5%
35	**American Airlines Group**	29.4%
36	**Atlantic Airways**	28.4%
37	**Indigo**	26.8%
38	**China Airlines**	24.9%
39	**Easyjet**	24.4%
40	**Air France-KLM**	23.7%
41	**GOL**	23.7%
42	**United Airlines Holdings**	23.5%
43	**Turkish Airlines**	22.7%
44	**Virgin Australia**	22.7%
45	**T'way Airlines**	22.5%
46	**Emirates**	22.1%
47	**Icelandair**	21.0%
48	**AirAsia**	20.7%
49	**SAS**	20.6%
50	**Republic Airlines**	20.4%

Rank	Airline	LTM Liquidity as % of Revenue
51	**Air Astana**	19.7%
52	**SIA Group**	19.6%
53	**British Airways**	19.5%
54	**Air Greenland**	18.8%
55	**Cathay Pacific**	18.3%
56	**Air New Zealand**	18.0%
57	**Azul**	18.0%
58	**Korean Air**	17.8%
59	**VietJet Air**	16.9%
60	**Royal Jordanian Airlines**	16.5%
61	**Thai Airways**	16.4%
62	**LATAM Airlines Group**	15.8%
63	**Thai AirAsia**	14.2%
64	**PAL Holdings**	13.8%
65	**Grupo Aeromexico**	13.4%
66	**Lufthansa Group**	13.1%
67	**TAP Group**	13.0%
68	**TAM Airlines**	12.8%
69	**Chorus Aviation Inc.**	12.5%
70	**Mesa Air Group, Inc.**	11.0%
71	**EL AL Israel Airlines**	11.0%
72	**Qantas Airways**	10.6%
73	**Iberia Opco**	10.4%
74	**Sun Country Airlines**	10.2%
75	**Garuda Indonesia**	9.1%
76	**Vietnam Airlines**	8.9%
77	**Avianca Holdings**	8.6%
78	**Juneyao Airlines**	7.8%
79	**KLM - Royal Dutch Airlines**	7.3%
80	**Comair Limited**	7.3%
81	**Aeroflot**	7.2%
82	**AirAsia X**	7.0%
83	**Air Seoul, Inc.**	6.9%
84	**Air China**	6.6%
85	**GoJet Airlines**	6.4%
86	**Air France**	5.7%
87	**PT AirAsia Indonesia**	4.6%
88	**Shenzhen Airlines**	3.2%
89	**Sichuan Airlines**	3.0%
90	**Jeju Air**	2.8%
91	**Kenya Airways**	2.5%
92	**Croatia Airlines**	2.2%
93	**Xiamen Airlines**	1.4%
94	**China Southern Airlines**	1.2%
95	**China Eastern Airlines**	1.1%
96	**Evelop Airlines**	0.8%
97	**PSA Airlines**	0.4%
98	**Austrian Airlines**	0.3%
99	**Widerøe**	0.2%
100	**Envoy Air**	0.0%

Source: *Airfinance Journal's* The Airline Analyst
Unrestricted cash a percentage of total revenues
LTM = Latest Twelve Months

Top 100 by **leverage**

A leverage measure has more value in our opinion if it is related to ability to service debt from continuing operations rather than some balance sheet equity figures that may not reflect current values of assets. The leverage measure takes into account the effect of aircraft operating leases, by capitalising the rental in leverage. For those airlines that have already adopted the new lease accounting standards, IFRS 16 or ASC 842, we use estimated rent for calculation of the ratio.

There are only eight airlines with leverage better than 2x which would typically correspond to a possible investment-grade rating. The two top-rated airlines by lowest leverage, Southwest and Luxair Group, have the distinction of having negative adjusted net debt. They are followed by Air Greenland, Air Arabia, Ryanair, British Airways, Qantas and Easyjet, though it should be noted that the numbers of Air Greenland, British Airways and Qantas pre-date Covid-19 at 31 December 2019 and Easyjet's are only up to 31 March 2020.

The increases in liquidity are in many cases associated with significant increases in debt, including operating lease commitments resulting from sale and leasebacks. Some leverage indicators have reached unheard of levels for carriers. These include SIA Group at 4.5x, Emirates at 4.9x, Lufthansa Group at 7.1x, Air France-KLM at 7.3x, Cathay Pacific at 14.7x and American Airlines Group (because of the severely depressed Ebitdar) at 155.3x.

Rank	Airline	LTM Adjusted Net Debt/ EBITDAR (x)
1	**Southwest Airlines**	N/A
2	**Luxair Group**	N/A
3	**Air Greenland**	0.2
4	**Air Arabia**	0.6
5	**Ryanair**	1.0
6	**British Airways**	1.3
7	**Qantas Airways**	1.6
8	**Easyjet**	1.7
9	**Japan Airlines**	2.1
10	**Copa Holdings**	2.2
11	**KLM - Royal Dutch Airlines**	2.6
12	**Austrian Airlines**	2.9
13	**Allegiant Travel Company**	3.1
14	**Air New Zealand**	3.1
15	**TAM Airlines**	3.2
16	**Alaska Air Group**	3.3
17	**Republic Airlines**	3.3
18	**Widerøe**	3.3
19	**Spring Airlines**	3.4
20	**Frontier Airlines**	3.4
21	**Iberia Opco**	3.6
22	**Air France**	3.6
23	**Hawaiian Airlines**	3.7
24	**SkyWest, Inc.**	3.8
25	**Air Astana**	4.0
26	**Atlantic Airways**	4.2
27	**Air China**	4.2
28	**SIA Group**	4.5
29	**Croatia Airlines**	4.7
30	**Aegean Airlines**	4.8
31	**International Airlines Group**	4.8
32	**Emirates**	4.9
33	**Delta Air Lines**	5.1
34	**Vueling Airlines**	5.1
35	**Evelop Airlines**	5.1
36	**Indigo**	5.2
37	**Chorus Aviation Inc.**	5.5
38	**Finnair**	5.6
39	**China Airlines**	5.6
40	**GoJet Airlines**	5.6
41	**China Southern Airlines**	5.9
42	**Wizz Air**	6.0
43	**Jazeera Airways**	6.3
44	**Sun Country Airlines**	6.3
45	**Juneyao Airlines**	6.3
46	**Kenya Airways**	6.3
47	**Air Canada**	6.5
48	**China Eastern Airlines**	6.5
49	**Volaris**	6.6
50	**AirAsia**	6.7

Rank	Airline	LTM Adjusted Net Debt/ EBITDAR (x)
51	**Pegasus Airlines**	6.8
52	**Mesa Air Group, Inc.**	6.8
53	**Comair Limited**	6.8
54	**LATAM Airlines Group**	6.9
55	**Virgin Australia**	7.0
56	**Envoy Air**	7.0
57	**Turkish Airlines**	7.1
58	**Lufthansa Group**	7.1
59	**Grupo VivaAerobus**	7.3
60	**Air France-KLM**	7.3
61	**Air Seoul, Inc.**	7.5
62	**PSA Airlines**	7.5
63	**Lucky Air**	7.6
64	**EVA Airways**	7.8
65	**Avianca Holdings**	7.8
66	**Shenzhen Airlines**	8.0
67	**PT AirAsia Indonesia**	8.1
68	**VietJet Air**	8.2
69	**Aeroflot**	8.3
70	**Xiamen Airlines**	8.6
71	**Korean Air**	8.8
72	**T'way Airlines**	8.9
73	**Icelandair**	8.9
74	**SAS**	8.9
75	**Jeju Air**	9.0
76	**Jetblue**	9.2
77	**ANA Holdings**	9.2
78	**EL AL Israel Airlines**	9.5
79	**Spirit Airlines**	9.6
80	**TAP Group**	9.7
81	**Cebu Pacific**	10.1
82	**United Airlines Holdings**	10.2
83	**Jin Air**	11.0
84	**Vietnam Airlines**	11.1
85	**AirAsia X**	11.5
86	**GOL**	11.9
87	**Sichuan Airlines**	12.0
88	**Royal Jordanian Airlines**	12.4
89	**StarFlyer**	14.5
90	**Cathay Pacific**	14.7
91	**Hainan Airlines**	16.2
92	**Garuda Indonesia**	18.0
93	**Thai Airways**	20.1
94	**Azul**	20.2
95	**Grupo Aeromexico**	20.5
96	**PAL Holdings**	29.8
97	**Thai AirAsia**	83.8
98	**Air Caledonie International**	114.4
99	**American Airlines Group**	155.3
100	**Bangkok Airways**	N/A

Source: *Airfinance Journal's* The Airline Analyst

Note: For IFRS 16 reporters, "Rent" is derived from depreciation on right of use assets plus interest on lease liabilities. If these are not available, rent is estimated. Leverage is calculated by adding 8 x rent to balance sheet interest bearing debt and dividing by EBITDAR
LTM = Latest Twelve Months

Top 100 by **fixed charge cover**

This indicator brings some confirmation of the fact that, at least in more normal times, airlines can service quite high levels of debt from cash flow.

This is demonstrated by the large number of airlines, which had fixed-charge cover ratios of more than 2x, which might again be a prerequisite for an investment-grade rating.

However, at the other end of the scale, there are a number of airlines with ratios close to or below 1x, which is a clear sign of distress. Below 1x indicates insufficient cash flow to pay interest and rents other than by selling assets or raising equity or hybrid capital – or requesting rent deferral from lessors.

This reality has clearly been the trigger behind the slew of rent deferral requests to the world's leasing companies.

Rank	Airline	LTM Fixed Charge Cover: EBITDAR/Net Interest plus Rent (x)
1	Air Arabia	33.8
2	Air Greenland	19.6
3	Qantas Airways	8.8
4	Ryanair	7.7
5	British Airways	7.5
6	Easyjet	7.2
7	Japan Airlines	6.5
8	Allegiant Travel Company	4.9
9	Luxair Group	4.9
10	Air New Zealand	4.5
11	Republic Airlines	4.4
12	Chorus Aviation Inc.	4.3
13	Copa Holdings	3.5
14	SIA Group	3.5
15	Turkish Airlines	3.3
16	KLM - Royal Dutch Airlines	3.3
17	SkyWest, Inc.	3.2
18	Air China	2.9
19	Delta Air Lines	2.9
20	Widerøe	2.9
21	Spring Airlines	2.8
22	China Eastern Airlines	2.7
23	Atlantic Airways	2.7
24	Air France	2.6
25	Austrian Airlines	2.5
26	Iberia Opco	2.4
27	Hawaiian Airlines	2.4
28	China Southern Airlines	2.2
29	Southwest Airlines	2.2
30	Frontier Airlines	2.1
31	China Airlines	2.1
32	Juneyao Airlines	2.1
33	Sun Country Airlines	2.1
34	Alaska Air Group	2.1
35	Korean Air	2.0
36	TAM Airlines	1.9
37	Lufthansa Group	1.9
38	Mesa Air Group, Inc.	1.8
39	Shenzhen Airlines	1.8
40	Air Astana	1.8
41	Evelop Airlines	1.7
42	GoJet Airlines	1.7
43	International Airlines Group	1.7
44	Croatia Airlines	1.7
45	Jetblue	1.7
46	Emirates	1.6
47	Vueling Airlines	1.5
48	ANA Holdings	1.5
49	Aegean Airlines	1.4
50	Comair Limited	1.4

Rank	Airline	LTM Fixed Charge Cover: EBITDAR/Net Interest plus Rent (x)
51	Pegasus Airlines	1.3
52	LATAM Airlines Group	1.3
53	Virgin Australia	1.3
54	EVA Airways	1.3
55	Avianca Holdings	1.3
56	United Airlines Holdings	1.3
57	Wizz Air	1.2
58	Kenya Airways	1.2
59	Air France-KLM	1.2
60	Spirit Airlines	1.2
61	Cebu Pacific	1.2
62	Indigo	1.1
63	Air Canada	1.1
64	Envoy Air	1.1
65	Lucky Air	1.1
66	VietJet Air	1.1
67	Xiamen Airlines	1.1
68	SAS	1.1
69	Sichuan Airlines	1.1
70	Jazeera Airways	1.0
71	PT AirAsia Indonesia	1.0
72	EL AL Israel Airlines	1.0
73	Cathay Pacific	1.0
74	PSA Airlines	0.9
75	Vietnam Airlines	0.9
76	AirAsia	0.8
77	Grupo VivaAerobus	0.8
78	Air Seoul, Inc.	0.8
79	Aeroflot	0.8
80	Jeju Air	0.8
81	TAP Group	0.8
82	Finnair	0.7
83	Volaris	0.7
84	T'way Airlines	0.7
85	GOL	0.7
86	Hainan Airlines	0.7
87	AirAsia X	0.6
88	Royal Jordanian Airlines	0.6
89	StarFlyer	0.6
90	Icelandair	0.5
91	Jin Air	0.5
92	Garuda Indonesia	0.5
93	Thai Airways	0.5
94	Grupo Aeromexico	0.4
95	Azul	0.3
96	PAL Holdings	0.3
97	Thai AirAsia	0.1
98	American Airlines Group	0.1
99	Bangkok Airways	0.0
100	Air Caledonie International	-0.9

Source: *Airfinance Journal's* The Airline Analyst
Note: For IFRS 16 reporters, "Rent" is derived from depreciation on right of use assets plus interest on lease liabilities. If these are not available, rent is estimated based on previous years or estimated rent on leased fleet
LTM = Latest Twelve Months

Top listed airlines by **market capitalisation**

The table adjacent shows the 84 listed airlines by market capitalisation as of 21 August 2020. The aggregate value is $228 billion, down from $335 billion last year and $438 billion in 2018. This is despite the $25 billion of new equity issuances in 2020 year-to-date. Southwest Airlines has replaced Delta Air Lines in the number one position, though Delta retains second spot, albeit almost 50% below last year's value.

The Chinese airlines are relatively flat to last year's valuations; China Eastern is even up 6% at $10.2 billion. The European majors have been hit hard. One European airline that has defied the market sentiment is Wizz Air, up from $2.8 billion to $4 billion.

Some airlines with substantial cargo operations have also bucked the trend. For example, Korean Air has held its value at $2.6 billion, buoyed by its huge cargo operation. Air Transport Services Group is up 14% at $1.5 billion. Cargojet is robust at $2.2 billion.

That said, there are some airlines with continuing equity value that seems to defy their financial condition and ability to generate future shareholder value. These include Nok Air at $92 million, AirAsia X at $70 million, Asiana Airlines at $769 million and Hainan Airlines at $4.1 billion. The jury is out on Norwegian Air Shuttle's ability to justify its current market capitalisation of $509 million. The survivability of the slew of Korean LCCs that still have positive equity market capitalisation is also in question. And, for some reason, even Jet Airways is still showing a positive value. The future of Icelandair, Comair Limited and Air Mauritius is also in doubt as all are in administration or restructuring.

In Latin America, it will be interesting to follow the market capitalisation of the three airlines that are under Chapter 11 bankruptcy protection. And to follow Copa Airlines, GOL and Azul who are all under significant market pressure.

We look forward to recording the outcomes in Airline Top 100 in 2021.

Rank	Airline name	Market Cap (USDm)
1	Southwest Airlines	20,463
2	Delta Air Lines	17,394
3	Ryanair	14,696
4	Air China	13,641
5	China Southern Airlines	11,522
6	China Eastern Airlines	10,258
7	United Airlines Holdings	9,596
8	SIA Group	7,870
9	ANA Holdings	7,789
10	Japan Airlines	6,546
11	American Airlines Group	6,184
12	Indigo	6,067
13	Lufthansa Group	6,042
14	Spring Airlines	5,834
15	Qantas Airways	5,274
16	International Airlines Group	5,051
17	Cathay Pacific	4,611
18	Alaska Air Group	4,381
19	Hainan Airlines	4,104
20	Wizz Air	4,036
21	Air Canada	3,588
22	Easyjet	3,426
23	Juneyao Airlines	3,132
24	Jetblue	2,877
25	Korean Air - Consol.	2,623
26	Cargojet Airways	2,160
27	Turkish Airlines	2,078
28	Copa Holdings	2,046
29	Air France-KLM	1,886
30	Allegiant Travel Company	1,878
31	EVA Airways	1,847
32	China Express	1,811
33	Air Transport Services Group	1,539
34	China Airlines	1,517
35	Atlas Air Worldwide	1,509
36	Spirit Airlines	1,506
37	SkyWest, Inc.	1,504
38	Air Arabia	1,499
39	Azul S.A.	1,476
40	PAL Holdings	1,433
41	Aeroflot	1,237
42	GOL	1,186

Rank	Airline name	Market Cap (USDm)
43	Air New Zealand	1,004
44	LATAM Airlines Group	946
45	Volaris	790
46	Asiana Airlines	769
47	Finnair	732
48	Pegasus Airlines	638
49	Hawaiian Airlines	575
50	AirAsia	536
51	Norwegian Air Shuttle	509
52	Cebu Pacific	482
53	Garuda Indonesia	449
54	SpiceJet	436
55	Jazeera Airways	381
56	Utair	355
57	Bangkok Airways	353
58	EL AL Israel Airlines	351
59	Jeju Air	319
60	Shandong Airlines	309
61	Aegean Airlines	307
62	Chorus Aviation Inc.	295
63	SAS	266
64	Jin Air	227
65	Thai Airways	222
66	Kenya Airways	206
67	Grupo Aeromexico	175
68	Air Busan	154
69	Pakistan International Airlines	149
70	Transat A.T.	147
71	Croatia Airlines	131
72	Mesa Air Group, Inc.	127
73	Tway Airlines	104
74	Enter Air	103
75	Nok Air	92
76	Regional Express Holdings	86
77	Royal Jordanian Airlines	83
78	StarFlyer	73
79	AirAsia X	70
80	Icelandair	54
81	Avianca Holdings	46
82	Jet Airways	45
83	Comair Limited	28
84	Air Mauritius	15

Source: Bloomberg and *Airfinance Journal's* The Airline Analyst
Values as of close on 21 August, 2020