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AIR INVESTOR 2023 REGIONALS

Aviation leasing to see more consolidation

Whatever the future brings for Standard Chartered Bank's aviation finance business, the year 2023 could see more activity in the industry.

As a new year commences, there is always speculation about the outlook for the next 12 months, on macro levels, and the micro effects on the industry of aviation finance.

This year is no different. As bankers, lawyers, lessors, consultants and traders flocked to Dublin in mid-January, the price of oil, the Russia-Ukraine war, the supply chain and labour were among the themes on the agenda.

But on everyone's lips was why would Standard Chartered put its aviation finance business up for sale, or at least is "exploring options"?

Sources were quick to say that the businesses could attract plenty of interest.

One leading lessor executive recalls the First Abu Dhabi Bank (FAB)-Standard Chartered episode in December. The largest bank in the UAE had previously been at the very early stages of evaluating a possible offer for London-listed Standard Chartered Bank as part of a plan to launch an emerging markets bank with more than one trillion dollars in assets. FAB stopped short of doing that on 5 January.

"I believe it was a wake-up call for them [Standard Chartered Bank]," he says.

Speculation in Dublin pointed quickly to the new platforms, established last year, as a means to grow its portfolio rapidly.

"There are some new players in the market that would bid for such a [leasing] portfolio as it has cash flow-related leases coming straight in," says one source.

Another source pointed out the diversification of lessees and exposure to the US market with Delta Air Lines and Southwest Airlines, which are among the top lessees in terms of number of aircraft.

The bank's owned and managed aircraft portfolio comprises 121 aircraft on lease to 33 airlines with a current market value of more than $3.7 billion, according to *Airfinance Journal*'s Fleet Tracker.

Two bank-backed lessors venture that Standard Chartered's aviation business is not for sale because of the state of the industry.

"If you look at any large financial institution that wants to sell its aviation business, it is not necessarily always related to aviation itself," commented BOC Aviation's chief financial officer, Steven Townend.

"You are right to point out RBS Aviation Capital," he said answering a question from the audience. "The RBS Aviation Capital sale was more related to RBS itself rather than the aviation business. From my perspective, it feels the same to me with Standard Chartered. That decision is a corporate-level decision, perhaps about a business that is non-core. They were not particularly unhappy with aviation or felt that this was the right time to sell."

Aisling Kenny, the chief financial officer of SMBC Aviation Capital, agrees on the non-core aspect. "A bank-owned entity focused on aircraft leasing being sold brings with it good credit intentions. We see that with Standard Chartered in terms of the quality of its portfolio risk assessment. It does bring a level of diligence and ultimately a risk management, and I think we can see that in the Standard Chartered portfolio."

The industry could continue to consolidate this year, as *Airfinance Journal* understands that more platforms, especially operating lessors, could consider a sale. SMBC Aviation Capital's chief executive officer (CEO), Peter Barrett, believes there will be consolidation.

"There has always been some consolidation, as our industry matures and gets more commoditised. It is not unique to our industry. That is the phase that aircraft leasing has advanced. It could have a smaller number of bigger lessors."

Avolon's CEO, Andy Cronin, believes it will be hard to shake up the top five lessors in the future because of their financial backing and superior access to capital.

"Access to investment-grade capital and access to long-term shareholders are a key difference in the sector," he says.

"The top five lessors may move around but it is hard to see a wholesale shake-up of that top five or even new entrants there in the future. This is because the scale of the investment appetite is probably greater than the actual opportunities that exist within shareholders themselves."

Cronin says Avolon is in a situation where it could take on a portfolio such as Standard Chartered.

"Absolutely, we have the capacity to do that. A debt-to-equity ratio of three to one is typically the target for investment-grade lessors, but we have been consistently and intentionally down at 2.2 or 2.3 to one. Bearing in mind, this is off $8 billion equity based for the business."

He says the liquidity position is strong. "We have cash on hand and undrawn revolvers at $6 billion. If we do that deal we would not need to raise any debt."

This year could be an interesting one in terms of mergers and acquisitions. As one conference attendee puts it: "Dublin never disappoints."

One less OEM

Mitsubishi Heavy Industries (MHI) officially announced in February the abandonment of more than a decade's work on developing a short-haul commercial aircraft, bringing to an end the Spacejet $10 billion project for the regional market.

The announcement is hardly a surprise. The Spacejet, previously known as the Mitsubishi Regional Jet (MRJ programme), had been paused since Covid. It featured the 90-seat M90 (previously known by the developmental designation of MRJ90) and the Spacejet 76-seat M100 aircraft. The Japanese conglomerate said it failed to confirm sufficient business viability for resuming its development on different fronts:

- technology – partial revisions were needed because of prolonged development. Decarbonisation solutions were also required;
- product – MHI said it was difficult to obtain understanding and necessary cooperation from global partners;
- customer – the programme made little progress on scope clauses relaxation, which resulted in M90s not meeting North American market needs. It also pointed out that recent pilot shortages added to uncertainty of the Spacejet business viability; and
- funding – MHI admitted that further extensive funding was required to continue the type certification acquisition process.

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Boeing Capital president retires

Tim Myers, president of Boeing Capital Corporation, is retiring from the wholly owned Boeing subsidiary after a 30-year career with the manufacturer.

Boeing's chief financial officer, Brian West, announced Myers' retirement in an internal memo issued on 16 February and reviewed by *Airfinance Journal* that also details a realignment of the financing unit.

"Following an exceptional career, Tim Myers has shared his plans to retire later this spring. Please join me in thanking Tim for his dedicated service to our company and in wishing him well in his next chapter," said West in the memo.


Tim Myers

Myers was appointed president in February 2015. He previously served as vice-president and general manager of aircraft financial services at Boeing Capital, beginning in December 2009.

In that role, Myers and his team of aircraft financing professionals supported the sale of Boeing commercial aircraft by working closely with airlines and financiers to ensure Boeing customers had the financing they needed to buy and take delivery of their Boeing products.

Previously, he served as the vice-president of aircraft financial services and senior managing director of structured finance, a position he held since joining Boeing in 2005. Myers also spent 12 years at McDonnell Douglas.

Following the departure of Myers in the spring, Boeing plans to "realign the Boeing Capital organisation to operate within Boeing Commercial Airplanes, while maintaining strong coordination with Boeing Treasury", according to the memo.

BCC's work is focused on the commercial business, so the alignment will help ensure the "consistency of support" to customers, the memo added.

Rob Martin, BCA's chief financial officer, and David Whitehouse, Boeing's treasurer, will lead the business transition. Richard Hammond, vice-president and global head of customer finance, is expected to take over from Myers, sources indicate.

The memo concluded: "And as we realign, we will look for ways to simplify the organisation and focus resources on our core work of supporting our customers and their financing needs. We'll share more information frequently as we move through this transition."

BCC is Boeing's financing subsidiary that arranges, structures and provides financing for commercial airplane, space and defence products. It was inherited in the 1997 merger with McDonnell Douglas Corp and served as a financier of last resort for weaker-credit customers, occasionally providing backstop financing for airlines.

BCC has a portfolio of 181 aircraft, according to *Airfinance Journal*'s Fleet Tracker and company reports.

Commenting on the changes, a Boeing spokesperson said: "With most of Boeing Capital's work focused on supporting our airline customers, this transition pairs the work with our commercial team. Working more closely together will help us provide customers with more consistent support while helping address the industry's financing needs."

High Ridge Aviation expands with SVP sales

Sleiman Fakhreddine has joined High Ridge Aviation as senior vice-president (SVP) sales and marketing.

Fakhreddine was previously a BOC Aviation where he acted as senior vice-president, airline leasing and sales.

Fakhreddine, who joined in the lessor's Singapore headquarters only in March 2022, was at GECAS since 2016, serving in different aircraft sales and marketing positions in the Dubai office. He was responsible for the sales and marketing activities in the Middle East, North Africa and Pakistan. This included originating deals and managing the overall GECAS portfolio and relationship in the region.

Falko names new CFO

Falko Regional Aircraft has announced a number of new appointments to develop and expand its team.

Ray Gorman has been appointed as chief financial officer (CFO), replacing Martin Brennan, who was named chief of staff. Brennan has been Falko's CFO and chief operating officer since its formation in 2011.

Gorman joined Chorus Aviation Capital in 2018 as vice-president accounting. He became vice-president accounting and finance in May 2022 when Chorus Aviation Capital merged with Falko Regional Aircraft. Previously, he spent more than eight years in DAE Capital and AWAS in financial controlling roles. Before that, he was with PwC Ireland Banking and its capital markets assurance team for nearly nine years.

Gorman will work closely with other senior management and external stakeholders to ensure the continued effectiveness and development of Falko's financial control processes, accounting systems and reporting routines to support the growth of the business. He will lead a team of 14 finance professionals across the Dublin (Ireland) and Hatfield (UK) offices.

Falko also named Christophe Michaud as head of marketing. Michaud has been with Falko in an origination role since 2016 and leads a team of eight marketing executives worldwide. Previously, he spent 14 years in various marketing roles with Embraer in Paris and Singapore.

"With the growth of the Falko business, particularly following the merger of the leasing businesses of Falko and Chorus, our fleet size creates the opportunity to further develop our airline marketing team," commented Mark Hughes, chief commercial officer at Falko.

BOC Aviation hires Chandler from TUI Group

Singapore-based BOC Aviation has appointed Thomas Chandler as deputy chief operating officer (COO).

In this newly created role, Chandler will oversee all legal and transaction management, technical and procurement departments of the company globally. He reports to David Walton, deputy managing director and COO.

Chandler has more than 25 years' experience in legal, banking and aviation sectors and joins from TUI Group, where he was managing director of fleet and asset management.

He has worked with diverse international teams in procurement, leasing, financing and trading, and has closed numerous high value aircraft transactions.

Between 2007 and 2009 Chandler was HBOS's director, aircraft finance. He joined the TUI group in 2009 as head of aviation finance and leasing responsible for the financing of aircraft and engines, managing the portfolio of operating leased aircraft (sourcing new and used aircraft from lessors and negotiating lease extensions, and aircraft and engine trading.

"We are delighted to announce Tom's appointment as deputy chief operating officer and look forward to leveraging his experience and capabilities," said Robert Martin, managing director and chief executive officer. "Our ability to attract such top rate external talent confirms BOC Aviation as an employer of choice within the aviation sector."


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And now for the **good news**

Industry executives are more positive about aviation's prospects than they have been for some time. **Laura Mueller** listens to their reasons for this optimism, and also their concerns over borrowing costs.

Airlines and lessors can expect further demand recovery in 2023 as both segments continue to adjust to a post-pandemic operating environment shaped by global monetary tightening policies, financing experts indicate.

Positive market sentiment, though, will be tempered by rising borrowing costs that will put a strain on certain airlines and lessors, says Paul Sheridan, head of the PwC aviation finance advisory services.

"It will be an interesting year ahead with just as many people predicting lower interest rates by year-end as higher interest rates. We've also seen so much happen in the last few years, so there is a certain amount of everything coming together and coming back into the next form of the leasing world and the airline world.

"On a market level, there is a huge amount of upside globally. But individual airlines and lessors will probably struggle with costs or with opportunities in the market."

At the same time, the M&A landscape will continue to evolve, indicates Betsy Snyder, a director in S&P Global Ratings Corporate Ratings group.

"There are many portfolios available now. Standard Chartered announced they're up for sale. Macquarie Aviation is acquiring part of ALAFCO. There is a lot more activity to come."

Míchelangelo Raimondi, managing director and co-head of ABS, securitised products capital markets at Morgan Stanley, agrees.

"There should be a lot more activity coming to the market," he says, while stressing the importance of "being nimble".

He adds: "Given where financing is, you must be ready to take advantage of windows and activity."

Building back

Global airline traffic recovered to 68.5% of pre-pandemic levels in 2022 and jumped 64.4% from 2021, according to recent figures from the International Air Transport Association. China's decision to drop its zero-Covid policy should benefit these figures further.

As recovery continues, when will lessors' return-on-equity (ROE) ratios start to match pre-Covid levels?

"When they start trading again in volume," says Sheridan.

"The trading volumes are the thing that we always look at. The underlying ROE can be strong as long as your financing costs are in order, but the trading is usually the thing that adds those extra few points. When we see good trading volumes coming out of whatever the next form of distribution is, then we'll see the ROEs clipping back up again."

He adds: "The profitability of some of the trades has slowed in the last year because of restructured deals, to get off the books, to clean up a bit, and make sure they can sell one at a loss for every one of profit. So it's not contributing as a profit centre to the same extent that it used to be."

"I agree regarding trading volumes," says Raimondi. "I also think the asset yields need to move right… the financing costs might come down on rates a bit, but they're here to stay."

Is it possible that certain lessors will not return to pre-Covid ROE levels?

"I think it goes back to the discussion around scale and size. If you don't end up becoming accretive, there'll be an opportunity for somebody who has a more efficient capital structure to come in and leverage that infrastructure. I think it will just lead to more consolidation," says Raimondi.

Lessor upgrades?

Lessors manage 53% of the global passenger fleet by value as their role increased during the pandemic because of the flexibility and financial support they offered airlines.

Their role is expected to increase further, but only until airline balance sheets recover, say financiers.

"There is a natural ceiling over time, whether that's 60%, 65 or something else, there will be a ceiling because airlines like to own their aircraft," says Sheridan. "If an airline… is riding an upswing and is profitable for a number of years, they'll be able to build up their balance sheets with owning their assets."

S&P's Snyder agrees: "There is some opportunity for growth, maybe it's about 60%, but some airlines are always going to want to own. They get big benefits from buying. Every airline does a cost-benefit analysis, so that's not going to change.

"The lessor will still benefit from having the less creditworthy airlines… They won't have any alternative and will need to lease aircraft."

Raimondi notes Covid brought about a "liquidity switch" through the sale and leaseback market.

"It was a relatively quick tool to gain access to much-needed cash during a time of stress, so I think the airlines will want to continue to have that flexibility. The flip side is also Covid has shown that they didn't need as many aircraft on their books, and having that flexibility and leaving it with a lessor was beneficial."

He anticipates a 60% share and agrees that "airlines will want to own the asset".

During the same week of *Airfinance Journal*'s Dublin event, Avolon issued a white paper and predicted that two investment-grade lessors would be upgraded this year.

Asked specifically whether Avolon would be upgraded since it made the prediction and its CEO said the lessor deserves the uplift, S&P's Snyder answers: "Not until the ownership is resolved."

Still, the lessor does not believe its shareholding structure will stand in the way of an anticipated rating upgrade.

Avolon's chief executive officer Andy Cronin told *Airfinance Journal* during a fireside chat: "I think all of the agencies have drawn the line at the Avolon Holdings level. There may be qualitative concerns around this, but that's mainly about what's next.

"But I think if we can provide clarity around the path, I think the agencies are all fairly consistent that Avolon is completely delinked from a rating perspective from its shareholders, on a fundamentals basis, and on a metrics basis in their methodology."

Power in pricing

Further economic weakening could impact the airline sector and pricing power, but Jonathan Root, the Moody's Investors Service senior vice-president, expects the recovery to continue after years of sclerotic growth.

"In November, we refreshed our outlook for the industry, and we stopped with positive. We feel the Covid recovery is not done, and we still are expecting a recovery in long-haul international travel and also corporate travel," he says, adding that the review of 25 airlines did not take into account China's reopening.

The revised outlook includes an "impactful Covid recovery… with meaningful growth in 2023 versus 2022 and with oil at $95", he says.

S&P is monitoring post-pandemic balance sheets.

Air France-KLM eyes bond return

Chief financial officer Steven Zaat talks to **Olivier Bonnassies** about the success of Air France-KLM January dual-tranche bond issuance and a possible rating next.

Air France-KLM is considering a return to the bond market following the success of its sustainability-linked (SSL) dual-tranche bond issuance in January.

Its chief financial officer, Steven Zaat, says he did not expect its recent issuance to attract so much appetite from investors.

"It is an attractive market and the fact that we put those goals was attractive for investors," he says of the transaction.

The bonds are linked to the company's target to reduce its well-to-wake scope 1 and 3 jet fuel greenhouse gas (GHG) emissions per revenue tonne kilometre (RTK) by 10% by 2025, compared with a 2019 baseline, as part of its 2030 science based targets initiative (SBTi) approved objective.

"They wanted to see a commitment from our side," he explains.

Upsized transaction

Air France-KLM upsized its two-tranche bond offering by €400 million ($429 million) to a nominal amount of €1 billion as a result.

The airline group recorded an orderbook of €2.6 billion over the two tranches, which covered about 2.6 times the size of the bonds on 9 January.

It placed its sustainability-linked bonds on the market. The offering comprises two tranches: €500 million with a 3.3-year maturity to May 2026 and a coupon of 7.25%; and €500 million with a 5.3-year maturity to May 2028 and a coupon of 8.125%.

The May 2026 tranche had a €1.4 billion book size. The initial price talk was in the 7.75% area with a guidance for about 7.5% for a €400 million to €500 million maximum size, according to early data from Finsight. The bond launched at 7.375% with a €500 million volume and sold at 99.68% of the face amount. The final coupon was 7.25%, representing a 506.2 basis points (bps) spread.

Orders reached €1.15 billion on the second tranche. The spread was 604.6bps over German treasury on the second tranche.

The May 2028 unsecured notes sold at 99.55% of the face amount. The initial price talk was in the 8.5% area with guidance in the region of 8.375% for a €400 million to €500 million issuance. The bond launched at 8.25% with a €500 million volume and the final coupon was 8.125%.

> *"Nobody expected to get this amount. We are not rated but there was good appetite for the bonds, especially for a five-year term issuance."*
>
> **Steven Zaat**, CFO, Air France-KLM

Natixis acted as sole sustainability structuring adviser and Deutsche Bank, HSBC, Natixis, Societe Generale acted as global coordinators and joint bookrunners, and Credit Agricole-CIB acted as joint bookrunner of the transaction.

Zaat tells *Airfinance Journal* that initial appetite, during the roadshow, leant towards the three-year tranche. But at launch, appetite increased on the five-year tranche.

He says the motivation behind the dual-tranche issuance was to repay a French state loan guarantee.

"We paid back €500 million through a bond issuance and another €1 billion cash repayment last November. We have now closed this transaction and we also have a lot of cash to use for the repayment of our state-guaranteed loan.

"Nobody expected to get this amount. We are not rated but there was good appetite for the bonds, especially for a five-year term issuance."

Zaat says Air France-KLM could return to a similar transaction in the future as it continues with its plan to repay debt, although it will not use such means for fleet financing.

"We will do more but not to finance aircraft, as we will continue to do sale and leasebacks and finance lease products on new deliveries," he adds.

Fleet

Air France is in the middle of its Airbus A220-300 and A350-900 programmes and has used the finance lease and sale and leaseback market mainly for financing new assets.

"We would prefer financing new deliveries ourselves but we also want to get some flexibility with the operating leases," says Zaat.

He points out that margins on operating leases are satisfying.

"Both are in strong demand and we will continue to use those markets," he says.

The French carrier has also used the Japanese operating lease with call option (Jolco) market for A350-900 financing and is considering financing some of its A220-300 deliveries in the Jolco market, according to Zaat.

Air France recently approached the market with a request for proposal (RFP) to finance two A350-900 deliveries scheduled this year. The aircraft, which are equipped with Rolls-Royce Trent XWB-84 engines, are due for delivery in May and July, say sources.

Air France-KLM could contemplate a rating next.

"We have not been very active in the bond market but with the amount of refinancing coming up, we are contemplating a rating," he says.

Zaat is not worried about a recession, so long as it does not drive up unemployment.

"The bookings are still very strong," he says, "and the impact is relatively limited. We don't see an impact yet and there is a lot of capacity reduction from competitors."

Itasca Re targets $1bn capacity

Olivier Bonnassies talks to chief executive officer Kostya Zolotusky about the pipeline of transactions and the banking appetite for the new insurance product.

Bermuda-licenced reinsurer Itasca Re closed its inaugural transaction in February, a refinancing of two Boeing 737 Max 8s for Icelandair.

The firm aims to innovate and expand the financing solutions it can offer, as it attempts to enable competitive financing rates for aircraft asset buyers by transferring the non-payment risk traditionally held by financiers to third parties through an insurance policy.

Registered in Bermuda and regulated by the Bermuda Monetary Authority, Itasca is fronted by aviation insurance giant CV Starr, a strong name but not necessarily well-known in the credit arena.

Itasca Re's chief executive officer, Kostya Zolotusky, notes that insurance-covered aircraft financing for an airline has two components: the insurance coverage and the funding.

"The capital markets and the debt markets are the ones that care about the rating and the quality of the policy because the insured party is the lending party," he says.

"The airline needs to see both pieces but they won't dive into the difference between Fitch Ratings, Kroll, AM Best or Standard & Poor's [S&P].

"The funding party does, and has a quite varied sales approach. The majority of the banks that participate in this market do not rely on S&P or AM Best or any other rating agencies. They take an input from the agencies but do their own internal analysis and allocate a designated rating for that entity based on the rating and the analysis to determine the pricing offered with that kind of cover," he says.

"Everybody we have worked with on the banking side has either completed or is in the process of completing an internal rating. That has not been an issue with the majority of banks."

However, he acknowledges that some banks, especially in Japan, do like to see an S&P rating. "But some have been exceptions, some like to stick with it," he adds.

Zolotusky says Itasca Re is not different, in terms of rating, from other insurance products in the commercial aircraft space. "We do have a similar rating to AFIC or Balthazar insurers."

Bank appetite

Itasca Re is in talks with a group of 20 lenders, but realistically there are seven to 10 active banks at the moment, according to Zolotusky.

"Our aspirational target is somewhere in the neighbourhood of $1 billion in terms of covered capacity. It can be much more or less, because we are establishing ourselves in a volatile environment. There is a disruption in the ABS [asset-backed securities] market, quite significant movements in the cost of capital and the bank market due to base rates escalation," he says.

The uniqueness of the offering is the breadth of deals Itasca Re can structure.

"Not only can we do a pool of aircraft, but we can finance used and new aircraft of any manufacturers as well as engines. We are involved in some conversations on portfolio transactions which are quite large. Other conversations include one or two aircraft for airlines," he adds.

"The important reason why we wanted to create this capability is to have the flexibility and what is the most value-add for the business. Sometimes the market is inefficient for participants for new aircraft financing but is attractive for used aircraft, or vice-versa. Right now, the new market for single-aisle aircraft is crowded. The new market for widebody aircraft is somewhat inefficient and so it is attractive."

Itasca Re can offer different tenors on transactions depending on the aircraft type, new or used.

"We can do anything between one and 12 years. We are doing one-year term deals on a bilateral basis that you won't see in the market because they are done with individual institutions without disclosure. They are more common with the broader insurance industry. At the other end, Itasca Re can do 12-year deals that will look like the economics are 15 years because they have balloons.

"Used aircraft tend to be shorter tenors, but portfolios can be five- to eight-year tenors. New aircraft will be 12 years or more."

Can Itasca Re do pre-delivery payments (PDPs)?

"We are looking at pre-delivery payments. We can never say 'no' but it is harder. I worked on lots of pre-delivery payments at Boeing, and manufacturers have a lot of interesting restrictions on who and what assignment terms they offer. Under some circumstances the answer is 'yes', but the circumstances have to be right."

PDPs have two elements of risk: the take-out and the price acquisition in case of a hiccup.

"We are happy to take the take-out and are comfortable with the horizon of 18-24 months in predelivery payments. The main issue is the assignment price and how that is managed. There is an enormous amount of variability related to this. That's the part that, depending on the circumstances, sometimes it works and many times it doesn't," says Zolotusky.

He expects airlines to use their balance sheets more this year for acquiring aircraft.

"The legacy of government debt is driving airlines to recognise a need to heal the balance sheets. One way to strengthen the balance sheet is to put some aircraft on it. Aircraft tend to be quite liquid, so instead of having an entirely leased fleet, you will see some historically strong leasing airlines shifting into buying aircraft. We are seeing that trend as airlines, having gone through Covid, recognise that they need to have some balance sheet capacity," he adds.

Zolotusky observes that lessors are also not playing catch-up in terms of lease rates because of the cost of funding. This would create movements in the leasing space.

Lessor opportunities

Over the past year, lessors increasingly have used the banking market as alternative to the capital markets. The move is seen as an opportunity for Itasca Re, which is targeting airlines and lessor platforms.

Castlelake intends acting as asset manager on airline deals but the financier recognises arm's length may be desirable for lessor transactions. With regard to the way it handles such situations, Castlelake states: "We have appropriate internal procedures to protect confidential information.

"We have our own infrastructure that analyses and prices that risk and structures a deal for a lessor. We then talk to banks to create the funding associated with that coverage."

Capital markets and warehouse facilities are targets for the financier.

"Those are an important segment of the market for lessors. Warehouse facilities are bank products on a bilateral basis. Most are two-year availability period plus three years for permanent financing take-out tenors. Some lessors and their warehouse providers are starting to get nervous. The exit may not be as self-evident as it was before. So there is a lot of appetite for them to be taken off risk."

Sustainability suddenly all the rave

Chinese lessors and financiers are beginning to take environmental and social governance concerns seriously, reports **Elsie Guan**.

The pace of progress in addressing environmental, social and governance (ESG) factors in the Chinese aviation industry may be impacted by differences in awareness and prioritisation compared with Europe and the USA.

China has set a target for the aviation industry to use 10% of biofuels by 2030 and is investing in the development of alternative fuels to help reduce the carbon emissions of the aviation industry.

In October 2022, Shanghai-based Bocomm Financial Leasing delivered an Airbus A320neo to China Eastern Airlines in what appears to be the first lessor delivery in China powered by sustainable aviation fuel (SAF).

Air China and China Southern Airlines also received a new A350-900 each last October via deliveries powered by SAF. Air China's unit was financed by AVIC International Leasing, while China Southern's unit was financed by its leasing arm, China Southern Air Leasing.

"There are still challenges to be addressed in the Chinese aviation industry in terms of improving ESG performance, as is the case in many other regions. Some of these challenges may include issues related to air quality and noise pollution, as well as the need to raise awareness and prioritise ESG factors in the aviation industry," a Chinese airline executive who wants to remain anonymous told *Airfinance Journal*.

Asia is still catching up ESG progress both in terms of reporting and implementation, according to David Yu, chairman of Asia Aviation Valuation Advisors Group.

"I feel like it's kind of building momentum now in China and the government is trying to do it on a broader scale. Europe at this moment is really leading the way and they are very much ahead of the game. I think in Asia, we are still lagging compared to Europe and the US," comments Yu.

At a media roundtable put together by the organisers of the Singapore air show in February, Anand Stanley, president of Asia-Pacific at Airbus, told delegates that the European manufacturer was looking at multiple vectors in the ESG movements.

"One of them is fleet renewal. Only 20% of the aircraft today are flying our brand-new aircraft. And each of these aircraft, as they come in, they basically give it 25% to 40% improvement in fuel, irrespective of the OEM [original equipment manufacturer] that makes them," says Stanley.

"The second area which is most near term and exciting is that of SAFs. Certainly, we are also looking at disruptive technologies. For Airbus, it's more about looking at hydrogen aircraft, different designs for wings, different software, operating systems, etc," says Stanley.

Stanley noted that ESG is more about the entire industry – an entire ecosystem that has to come together. "Not just airframes, engines, manufacturers, airlines and airports; its wider ecosystem, including the energy industry."

US carriers have also invested in alternative fuels to reduce their reliance on traditional fuels and lower their carbon emissions. United Airlines has partnered with Fulcrum BioEnergy to develop and purchase up to one billion gallons of SAF over the next decade.

"I think our stances are closely aligned. Fleet renewal is going to be one of the biggest drivers for the improvement in sustainability, particularly across South-East Asia and the rest of the world," said Dave Schulte, managing director of regional marketing at Boeing at the roundtable.

"Boeing is very much focused on the movement of airplanes in and around the airport as we look for opportunities to improve operational efficiencies with airplanes to reduce emissions and reduce our carbon footprint," added Schulte.

Chinese lessors may still face pressure from investors and other stakeholders to adopt sustainable business practices, and they may also see benefits from investing in more fuel-efficient and environmentally friendly aircraft, such as lower operating costs and increased demand for their assets, a Chinese leasing executive who wanted to remain anonymous tells *Airfinance Journal*.

"On the other hand, aircraft lessors may be more impacted by ESG factors than airlines, as they have a longer-term view of their assets and are responsible for the disposal of their aircraft at life-end. As such, they may be more likely to consider the full lifecycle impact of their aircraft, including the impact of their disposal, when making fleet-renewal decisions," says the leasing executive.

"China will have a very good legs up in terms of clean tech and clean energy perspective. It is the largest market and will continue to be in the foreseeable future."

David Yu, chairman of Asia Aviation Valuation Advisors Group

Cost factors cannot be ignored because there are certain things that will basically increase cost. Yu thinks that it is a shared cost for all parties which are involved in ESG movements of airlines and lessors.

"It will probably increase cost, and the question really becomes who is going to bear this cost. It's not going to be just one group that's burdened, but it's something that we're all going to have to share," says Yu.

The investment community has put a big emphasis on airlines' and lessors' ESG movements, but how to make it effective has become an issue.

Yu thinks that given there is an overall mandate of new reporting lines and a global emphasis on ESG, there is no choice but to raise it.

"A lot of people so far don't have good ideas about how do we do it effectively," says Yu, who notes there will be a lot more need for newer technologies and innovation to be able to get to some of these goals.

He adds: "Going forward, given the government's perspective, China will have a very good legs up in terms of clean tech and clean energy perspective. It is the largest market and will continue to be in the foreseeable future."

ALC winds down China exposure

A sign of more troubled times ahead? As Chinese lessors dispose of aircraft with "foreign leases" attached, the US lessor is also reducing its exposure to mainland carriers. **Dominic Lalk** reports.

Los Angeles-based Air Lease (ALC) will deliver only two aircraft into China in 2023 as part of efforts to reduce its exposure to mainland carriers.

In 2022, 11.4% of ALC's net book value was on lease to airlines from China. This was down from 12.8% a year earlier.

"We're continuously evaluating our geographic exposure and our political risk exposure in different parts of the world. And I think at this time, we're seeing tremendous growth opportunities in the Americas, both in North and South America, in Europe, South-East Asia and North Asia. So, as you said, China has become a lower percentile in our overall fleet composition, and that trend will be expected to continue into 2024 and 2025 as we have a very limited number of new aircraft going to China," ALC executive chairman, Steven Udvar-Hazy, said on an earnings call in late February.

"To give you an example, this year we only have two aircraft going into mainland China – two A321neos out of about 70 to 80 new deliveries. So, we expect that percentage to keep declining at a rate that will get us below 10% probably by the end of this year," he adds.

On China's reopening, Udvar-Hazy notes that this is mostly unpredictable and has been "kind of on and off".

He adds: "Also, the domestic business has already been supplied by a lot of aircraft. There was a lot of planes sitting on the ground. For example, there are about 90 737 Maxs that have already been delivered to Chinese airlines that are not in current operation, and so I think the Chinese airlines have enough capacity to deal with their traffic requirements in the next nine to 12 months, and then we will see what happens beyond that."

As ALC is reducing its exposure to China, Chinese leasing players last year got word from the top ordering them to wind down their foreign lease exposure. This had prompted Hong Kong SAR-based China Aircraft Leasing to appoint advisories to shed potentially significant parts of its current portfolio and future orderbook positions. Saudi Arabia's newly established Avilease has reportedly shown interest, sources have told *Airfinance Journal*.

ALC has reported that revenues for the year ended 31 December 2022 increased by 11% to $2.3 billion compared with the previous year. This was driven primarily by continued fleet growth and significantly lower Covid-19-related lease restructuring and cash basis losses.

Nevertheless, net loss attributable to common stockholders for the year ended 31 December 2022 was $139 million, versus net income of $408 million for the previous year. Despite the growth of its fleet, the decrease was because of the net impact of the write-off of ALC's Russian fleet, which totalled about $772 million as of 31 December 2022.

ALC has submitted insurance claims to its insurers to recover the losses relating to aircraft detained in Russia. In December, it filed suit in the Los Angeles County Superior Court of the State of California against its insurers in connection with a previously submitted insurance claim and notes that it will continue to pursue vigorously all available insurance claims, although collection, timing and amounts of any recoveries and the outcome of the ongoing litigation remain uncertain.

Airlines paying up

ALC notes that its customers' financial strength is continuing to improve following the pandemic, as demonstrated by the continued decline of its outstanding deferred balance and strong collection rates.

As of 31 December, the California-based lessor had $148 million in outstanding deferred rentals because of the impact of the Covid-19 pandemic compared with $203 million at the end of 2021. The collection rate for the three months and year ended 31 December 2022 was 101% and 96%, respectively.

ALC stated that 90% of its deliveries through 2024 are placed.

"Airlines are locking in our remaining 2024 and 2025 deliveries at an accelerating pace, and this scarcity has been a significant driver of the lease rate upside we have seen on many of these aircraft. The pace of our widebody lease placement has also continued to accelerate. In fact, out of our entire orderbook, ALC now has only three remaining Boeing 787s left to place in mid-2025," says Udvar-Hazy.

As of 31 December 2022, the net book value of the ALC fleet had increased to $24.5 billion, compared with $22.9 billion a year earlier. ALC owned 417 aircraft in its aircraft portfolio, comprising 306 narrowbody aircraft and 111 widebody aircraft, and it managed 85 aircraft. The weighted average fleet age and weighted average remaining lease term of its fleet as of 31 December 2022 was 4.5 years and 7.1 years, respectively, and its customer base comprised 117 airlines in 62 countries.

The lessor ended the year with $31.4 billion in committed minimum future rental payments, consisting of $15.6 billion in contracted minimum rental payments on the aircraft in the existing fleet and $15.8 billion in minimum future rental payments related to aircraft on order.

Lease rates to keep climbing

"Aircraft demand is bolstering lease rates, accelerating our orderbook placements and intensifying lease extension requests. Airline industry recovery with constrained balance sheets, drive for environmental sustainability and lack of available delivery slots from the OEMs [original equipment manufacturers] continues to favour ALC's business model of providing new aircraft from our orderbook," says John Plueger, ALC chief executive officer and president.

Udvar-Hazy adds: "High-quality commercial aircraft are increasingly in limited supply given strong airline need for capacity – exacerbated by ongoing delivery delays at both Boeing and Airbus, which we do not see abating.

"We expect to see continued growth and strength in global air traffic and airline yields in 2023, offering a counterbalance to global macroeconomic cross-currents."

Volaris eyes bond markets

Olivier Bonnassies talks to the carrier's chief financial officer, Jaime Pous, on fleet plans in 2023 and the possibility of a retap in the bond market.

Mexican ultra-low-cost carrier Volaris is monitoring the bond market for a potential retap of its 2021 bond issuance, which marked the first sustainability-linked airline transaction in America, if conditions are attractive.

In an interview with *Airfinance Journal*, Volaris's chief financial officer, Jaime Pous, says the carrier could consider a local bond in addition to the pre-delivery payment (PDP) facilities it closed last year covering its Airbus A320neo-family fleet.

The carrier has deliveries from 2023, 2024 and 2025 with PDP financing from lessors and Santander alongside Bancomext, Mexico's development bank. The total amount of these facilities exceeds $500 million; one of them is a sustainability-linked PDP facility related to the low-cost carrier, with its 35.4% gCO2/RPK emission reduction target for 2030 (versus 2015).

Volaris has sourced financing from the Spanish lender before.

The low-cost carrier first signed a revolving credit facility with Banco Santander Mexico and Bancomext in July 2011 in connection with financing for PDP for the purchase of 19 A320 aircraft.

Volaris then amended and extended the facility to October 2022 to add PDP financing for 30 additional A320 aircraft under its Airbus purchase agreement.

Pous says Volaris was very disciplined and patient throughout the pandemic.

"We did not incur any additional debt in 2020. We decided not to opt for convertible obligations and raised $170 million through an equity offering in December 2020," recalls Pous.

He adds: "We believe that when the time is right, we will go to the market and evaluate options from the capital and debt financing markets. Still, we believe the rates will go down by 2025, and in the next window, we will explore additional PDPs for future deliveries."

Fleet changes

The carrier has an orderbook of 144 Neo aircraft, including 27 A320neos and 117 A321neos, half for renewal and the other half deployed for fleet growth. Pous explains the change of direction in early 2020 regarding the orderbook with Airbus.

"In 2020, we needed to pay the PDPs on aircraft delivering between 2021 and 2023, around $200 million, and we opted to postpone those deliveries to the 2027-28 timeframe from our orderbook with Airbus.


Jaime Pous, CFO, Volaris

"We saved the cash for the pandemic and saw recovery accelerating late in 2020. We decided to contract aircraft from operating leases with different lessors between now and 2025."

This year, the first aircraft is leased from CALC, but *Airfinance Journal* understands that Air Lease, SMBC Aviation Capital and CDB Leasing will also provide leased aircraft in 2023.

Volaris ended 2022 with 117 aircraft in its fleet, with the A320neo family representing 54% of its total fleet. During the past year, Volaris returned two A319s and added nine A320neo aircraft and nine A321neo aircraft.

In 2023, Volaris plans to have a net growth of nine aircraft, adding 13 new aircraft and returning four Ceo aircraft.

"The majority of this year's deliveries are A321neo aircraft. In the long term, we may end up with 60% of A321neo aircraft and 40% of A320neo aircraft," Pous says.

"We are getting rid of A319s, and our fleet plan is mainly focused on the A320neo and A321neo models. We didn't go for the A321XLR since it is not ideal for our hot and high operations."

The Mexican carrier ended the year 2022 with $4.26 cents per available seat mile cost, one of the lowest in the industry, thanks to a disciplinary approach to control costs.

Pous says the A220 is not considered in the current fleet plan, because it is an aircraft that is more used on thinner routes, and the type does not have the fleet commonality with the A320neo family in terms of pilot rating and mechanics.

"It also brings complexity to our system, and we want to keep a single-family operating fleet," adds Pous.

There is no requirement for aircraft debt financing over the next few years.

Volaris is the leader among the three carriers that control 98% of Mexico's domestic passenger airline market. Its market share was 41% in the third quarter, compared with Viva Aerobus (30%) and Aeromexico (27%).

The carrier says growth in the mid-term will come from international routes, and it is well-positioned to leverage regional shifts in population and transportation trends in Mexico.

Mexico's air travel market is in its early stages of growth, with bus passengers switching to aircraft, an increasing middle class and a strong and resilient core market – visiting friends and relatives.

"We are targeting the premium segment on the longer bus routes in Mexico," says Pous.

"Although we compete only against buses on 46% of our domestic network, we continue increasing our footprint in the domestic market." he adds.

Pioneer in SSL bond

Beyond the sustainable PDP facility with Santander, Volaris issued a floating rate sustainable structured debt bond in November 2021 that was part of a MXN3 billion ($160.6 million) bond programme authorised in 2019.

"We issued the first tranche (MXN1.5 billion) in 2019, and most of our investors participated in the bond," says Pous.

He notes that appetite for the bond programme was mainly from the private banking sector and non-institutional investors.

"In the second tranche, we targeted the Afores (Mexican pension funds) and improved the quality of the investors by diversifying the offering. We had a choice between a sustainable bond and a linked bond. When we started the process with Sustainalytics on the carbon emission programme, we opted for the sustainable-linked bond," he says.

The issuance has the sustainability-linked bond label, by which the company commits to meeting annual CO2/RPK emission targets during the bond's life.

The transaction marked the first sustainability-linked bond issued in Mexico.

In 2021, BBVA Mexico participated as financial structurer, environmental, social and governance structurer and lead underwriter in the transaction.

"We are already amortising the five-year 2019 issuance," says Pous. "It was structured as a two-year bond where we only pay interest, and the principle is paid over a period of three years, between 2021 and 2023."

Future of flight

Delegates at *Airfinance Journal*'s Dublin 2023 conference heard about some exciting new developments in zero emission aircraft designs and the challenges in scaling up to meet future commercial demand. **Hugh Davies** reports.

The array of future propulsion aircraft designs coming to market this decade highlights the strong potential for aviation to decarbonise this century. At the same time, it underlines the importance of first identifying potential uses and markets for smaller aircraft to start off profitably in order to scale up later.

Dan Routier, EU business development director at start-up ZeroAvia, told delegates at *Airfinance Journal*'s Dublin 2023 conference in January that tapping the retrofit market is crucial for the company to show that the industry can start to decarbonise sooner rather than later.

"Our vision is to address decarbonisation as soon as possible. That means 2025-26 and our first commercial product, which is a 600kW powertrain, should enter service in late 2025," he says.

"We don't want to wait to only have a clean sheet design to decarbonise aviation. We have to tackle it sooner and for that we have to deal with the existing fleet of aircraft," he adds.

ZeroAvia's 19-seat Dornier 228 testbed aircraft, retrofitted with a full-size prototype hydrogen-electric powertrain on the left wing of the aircraft, made its maiden flight earlier this year.

"Obviously there are constraints, but it is a challenge we are addressing, and we are currently pretty well down the line and we already have 40 flight tests on our powertrain.

"It is not only a powertrain that we are retrofitting but it is a possibility for operators and lessors to have a simple option to refuel the aircraft with hydrogen and that begins with the production and storage of hydrogen through renewable," says Routier.

Swedish aerospace company Heart Aerospace is designing a hybrid-electric clean sheet regional aircraft, the ES-30, which is expected to enter service in 2028.

Heart Aerospace's chief executive officer, Anders Forslund, told delegates the product will continue to improve in terms of range and capacity as battery technology evolves.

"Electric aviation has the potential not just to decarbonise but to revolutionise the industry – it brings a lot of added value and I think with the technology we already have we can target entry into service this decade," says Forslund.

He also highlights the importance of demonstrating the ability to decarbonise sooner rather than later.

"Net zero by 2050 is not the beginning, it is the end point, so we need to get working on something this decade in order to be able to start that iteration cycle and scale it up for larger aircraft.

"There's no silver bullet to solve this. We're going to need electric, sustainable aviation fuel, hydrogen and so on. It's not just a technology problem but a deployment problem. Real innovation is about getting it done."

Swedish-based lessor Rockton became the first operating lessor to commit to the Heart Aerospace ES-30 variant, following commitments by Air Canada, United Airlines and Finnair, the latter two for the 19-seater ES-19 variant.

Forslund notes the importance of derisking these types of new aircraft to attract investors into the space. In an interview with *Airfinance Journal* last year, he highlighted that involvement by the leasing and financing community will be "integral" to the success of future aircraft propulsion programmes.

"We don't want to bite off more than we can chew," Forslund said at the conference.

"We view it as a platform – batteries continue to improve so the value of the platform will only continue to increase as the technology improves.

"We believe the unlock is to create a new platform for the technology to grow. This then becomes an appreciating asset because the zero emission routes you can fly will only continue to increase as time goes on and the technology improves.

"We can only speculate about where battery technology will be towards the middle of the century, but this is how the industry works. The blueprint of the 707 that became the 737 has been around for so long and has been a new platform that new engine technology has been able to grow on," he adds.

What of the certification risks for these new technologies? At least for ZeroAvia, Routier is confident the start-up can meet the certification requirements by the end of 2025.

"We engaged on that very early with certification agencies, starting with the UK CAA but we are also building up relationships with EASA and the FAA. It is new technology and so, of course, there is caution and scepticism but ultimately we are very confident we can certify the system according to our timeframe," he predicts.

New flight markets

Archer Aviation's aircraft design, which is expected to enter commercial service in 2025, will look to create an entirely new travel market via the growing electric take-off and landing (eVTOL) space.

"Our strategy has been taking the most expeditious path to commercialisation. Before we even started design we hired a data scientist from Uber to help model how people move throughout cities," says its chief financial officer, Mark Mesler.

"We found that there was a real commercial opportunity in that 10- to 50-mile range. With that in mind, we designed the aircraft to be very specific around that market," he adds.

Is now the right time to invest in these technologies, and how can financiers improve visibility in terms of secondary market asset values and depreciation?

"Leasing companies and manufacturers won't have a clear picture of what the secondary market looks like right away," explains Marc Tembleque-Vilalta, head of Avolon-e, a division of Avolon launched in June 2021. Avolon-e has committed to order up to 500 of Vertical Aerospace's VX4 aircraft, which is designed for four passengers and a pilot.

"It is a matter of making sure that early aircraft production is put into the market at the right price point with the right financing solutions to incentivise demand and allow the aircraft to flourish," he says.

"We don't think there will be much clarity around how these assets behave in the market until we are two to three years into the production of these aircraft. That's why Avolon wants to be one of the first movers to be able to capitalise in creating that market and figuring out solutions with customers together," adds Tembleque-Vilalta.

Avolon-e has committed to order up to 500 of Vertical Aerospace's VX4 aircraft

"The purpose of Avolon-e is to support airline partners in their decarbonisation journey. That's our mission and we're looking at the best way to do that which is at the top of their agenda. The way we're doing that is by being the preferred financing provider and advisory partner for airlines," he adds.

Tembleque-Vilalta says Avolon-e will be looking to build financing solutions and leasing options for customers to help them make sense of the new-tech opportunities. It will also help customers make the right choices as they introduce these new technologies to their fleets.

"We're working as fast as we can to help ours work through the curve," he says.

He echoes the point made by other panellists of the importance of finding and developing an asset that was as investable as possible at such an early stage in development, both in terms of capabilities as well as being used by a wide operator base.

"We can only speculate about where battery technology will be towards the middle of the century, but this is how the industry works."

Anders Forslund, chief executive officer, Heart Aerospace

"We identified eVTOL as the fastest way to commercialise electric flight as well as being the best option to complement airlines' operations and extending the reach of their traditional operational capabilities," he says.

Patrick Den Elzen, chief executive officer at Arena Aviation Capital, believes sustainability-linked financing will be a fundamental part of what is going to be a massive change in the way the industry functions.

He warns, however, that despite efforts by lessors to push the sustainability agenda, risks remain around greenwashing, particularly for speculative aircraft technologies.

"Leasing companies have to be careful about advertising themselves as green... Investing in something like eVTOL may make perfect sense because it is another piece of flight equipment that requires financing, but it does very little if anything in terms of decarbonising, so don't point to that when building your green credentials," says Den Elzen.

He adds: "What you can do as a lessor is monitor your lessee portfolio, and report on which proportion of your airlines have made commitments to decarbonise, or look at the proportion of the portfolio and review how much is financed through sustainability-linked financing or how much has some kind of green component."

African rebound

Several lessors with significant experience in Africa spoke to **Hugh Davies** about the challenges in the region and the new opportunities as airlines emerge from the pandemic.

The Covid-19 crisis exacerbated an already difficult financing situation for African carriers, but, as the effects of the pandemic recede and air travel demand returns, aircraft lessors are bullish on placement opportunities given the continent's growth potential.

According to International Air Transport Association (IATA) data, Africa, together with Asia-Pacific and Latin America, is one of the regions that will remain loss making in 2023 with losses amounting to $213 million.

Still, the longer term potential of the continent remains clear, especially for lessors which have built up deep experience in the region.

"Africa has the fastest-growing population in the world with a population expected to grow to two billion people by 2050," Aergo Capital's chief executive officer, Fred Browne, tells *Airfinance Journal* in an interview.

"It's the second-largest continent in the world right now and it is going to explode over the next few decades in terms of population, which means that air demand will only continue to grow.

"There are still infrastructure and GDP problems, and Africa is more exposed to macroeconomic headwinds like we've seen with the invasion of Ukraine blocking grain exports into the continent. But the region is expected to be back to pre-crisis levels by the end of the year. A feeling of normalcy is returning, and airlines have been very good at honouring contracts compared to some other airlines we have come across in the world," adds Browne.

He recalls Aergo's expansion into the market via the acquisition of Safair in 2008, which comprised nearly 50 aircraft with leases attached as well as its cargo operations and maintenance facilities. That business was gradually sold off in the following years but created a strong DNA in Africa for the lessor.

Today, Aergo has 21 aircraft, including under letters of intent, placed in nine different countries in Africa with 11 airlines, and is looking to grow that exposure to about 50 aircraft in the next five years, reveals Browne, including narrowbodies and widebodies.

"We've always had strong roots in Africa, and we continue to expand our footprint as we see niche opportunities," he says.

Acia Aero Leasing's chief executive officer, Mick Mooney, tells *Airfinance Journal* it aims to grow its Africa exposure proportionately in line with the rest of its business.

He notes that four years ago, 90% of the business was in Africa, a share that has been reduced to about 50% as the lessor expands in other markets.

"We want to grow with lessees that are there because there are a lot of opportunities for different aircraft types," he says.

Acia's Africa portfolio is roughly split one-thirds each between passenger, ACMI and cargo operations. He says the segment mix of its portfolio is an important differentiator, with all three of these segments seeing "huge" demand across Africa.

"Even during Covid we saw a lot of demand for our aircraft in each segment. Our portfolio, which comprises a large turboprop variety, is made for that whereas other lessors may not necessarily focus on ACMI or cargo, they're focusing on scheduled traffic because that is more reliable.

"Our focus is more on the ACMI and cargo segments," says Mooney. "We look for the right operator, but we also look at what the underlying contracts are and how reliable they have been in operating and maintaining those contracts over the years."

He explains that African operators which struggled during the pandemic have got back on their feet, right-sized their fleet and are now looking to grow their businesses through new contracts with companies and agencies in Africa.

"A lot of the underlying contracts realised that they couldn't rely on scheduled services to transport their employees. We saw our customers keep a lot of business and win a lot of business because of that fracture in scheduled traffic.

"Regional aircraft play a key role in developing domestic and regional connectivity and have demonstrated their capabilities and success on the African continent."

Maarten Grift, Truenoord's sales manager for Africa, Middle East and CIS

"It's about finding the diamonds in the rough and picking the operators that might be in difficult jurisdictions but have contracts with large multinationals, humanitarian agencies or NGOs [non-governmental organisations]. Understanding the real risk rather than perceived risk is a big part of what we do and what differentiates us from our competitors," adds Mooney.

Maarten Grift, Truenoord's sales manager for Africa, Middle East and CIS, says the company is also looking to expand its footprint in Africa to support the regional fleet plans of African airlines.

"Passenger demand for air travel in Africa continues to recover and is expected to reach pre-pandemic levels this year," says Grift.

"Regional aircraft play a key role in developing domestic and regional connectivity and have demonstrated their capabilities and success on the African continent. Over the past few months, we have witnessed a growing demand for regional aircraft in Africa and we expect this trend to continue going forward," he adds.

Credit watch

Lessors still agree that financing has been and will continue to be difficult in Africa, with credit risk still limiting the inflow of capital into the region despite a strong recovery.

Browne points out good credits are limited to household names, which restricts bank lending and ultimately placement opportunities.

"For conventional debt structures, with the exception of the likes of Ethiopian Airlines, LAM [Mozambique Airlines], RAM [Royal Air Maroc] or Egyptair among others, there are only a handful that you could structure debt into," he says.

"Outside of those it tends to smaller, opportunistic deals with carriers that perhaps don't have as strong balance sheets. You can count on one hand the number of placement opportunities in terms of really scaling up exposure in the region."

Mooney agrees that the banking community has to do more to back lessors in the space if the region is to scale up.

"Without the likes of our partner, Investec, and one or two other banks who are active in aviation in Africa, it would be difficult even for us to continue what we do," he says.

"We do need that support from the banking community. If there is to be significant upgauging of aircraft types deployed into Africa, the banks will need to follow through otherwise it will be difficult for any lessor.

"It also comes back to airline credits – we're always trying to find the best opportunities with the capital we have rather than every opportunity because the flipside to trying to find the diamond in the rough is finding a lot of dirt.

"If we're to expand in Africa beyond the pace we're already growing, we'd need the banks to get behind us and any other lessor would need the same," adds Mooney.

Still, he rules out seeking funding from other lenders active in Africa in the near term.

"Our facility with Investec is very flexible and long term and easy to draw down for new aircraft acquisitions, so it wouldn't make sense to go bilaterally to another bank unless there was a specific reason to, or for a distressed situation on their side where they want us to step in between them and an operator.

"We have a great partner in Investec, who have been lending with us for 15 years and hopefully for the next 15 years as well," he says.

Lessee rebound

Mooney explains that, given Acia's ACMI focus, the pandemic created a situation where airlines were resizing aircraft rather than handing them back during Covid-19, meaning a lot of the support came from juggling aircraft around within the portfolio.

"When scheduled traffic was closed off, a lot of our operators needed bigger aircraft because there simply was no other option for people to move around," he says.

Conversely, other operators needed smaller aircraft due to otherwise low traffic levels. "We did a lot of swaps in our portfolio between operators, taking planes back and immediately delivering them back to other carriers so they could resize their fleets," recalls Mooney.

"That worked quite well and meant that operators weren't being punished for flying an aircraft they couldn't fill and didn't have a contract for, and gave them the opportunity to grow."

Aergo's Browne says: "We've had one or two customers come to us because of deflated passenger demand during Covid. We were definitely supportive of these lessees, and that has paid off because they are still around and have still pretty much caught up again in terms of their commitments."

He notes that apart from Bombardier Q400s placed with Ethiopian Airlines that are export credit financed, all of its placements in Africa have been financed through cash.

"That gives us a lot of flexibility compared with our competitors. We have a good African book at the moment with very few delinquencies. They tend to be higher yielding deals as well, so we feel we're satisfactorily remunerated for the risk we're taking."

Mooney also says there has been a "significant uplift" in lease rate factors and aircraft values in the past 12 to 18 months, which fortunately has coincided with airlines' ability to begin to repair their balance sheets.

"A lot of that is down to the availability of aircraft. We were probably the biggest buyers of second-hand ATRs last year, but we can't find any nowadays.

"We have a good African book at the moment with very few delinquencies. They tend to be higher yielding deals as well, so we feel we're satisfactorily remunerated for the risk we're taking."

Fred Browne, chief executive officer, Aergo Capital

"That dry up in aircraft means that lease rates are only going in one direction. It's good for us. It may not be so good for our customers, but we've seen they've been able to absorb it. Whether they can continue to do so remains to be seen."

Mooney also notes that the Embraer 190 could be the next aircraft to have a big impact in Africa.

"We estimate there are roughly 170 of these aircraft that are coming off lease in the next 24-36 months. That will put a lot of pressure on pricing of these assets which creates opportunities for us, such as leasing them into Africa taking advantage of that better lease rate," he adds.

Truenoord's Grift says that stronger-than-expected passenger levels are encouraging African airlines to re-evaluate their fleets, with carriers increasingly considering replacing or expanding their current fleet of regional aircraft with predominantly larger regional aircraft.

"We saw this process being initiated earlier on in other regions such as Europe, North and South America," he tells *Airfinance Journal*.

Grift also points out that limited availability of well-maintained regional aircraft, as well as supply chain constraints causing delivery delays for new aircraft, is pushing up lease rate factors and values for both new and used aircraft.

"We believe the market for regional aircraft in Africa will continue to grow," he says, "as will the appetite to finance these aircraft through leasing."

Investec Bank sees financing opportunities in Africa

Bradley Gordon, the bank's head of aviation finance, Africa, says 2023 looks a more promising year for investment, especially for refinancing and pre-delivery payment opportunities. **Olivier Bonnassies** reports.

Investec Bank says 2023 will provide opportunities into the commercial aircraft market as airlines are expected to receive more deliveries and there is an increasing need for financing outside the usual channels: government support and export credit-supported financings.

The bank's South African franchise provides coverage for African airlines.

"We do the African airline lending business and integrate into our lending franchise from London, but in addition to that, we lead the group's helicopter and corporate jet finance mandates," explains Bradley Gordon, head of aviation finance, Africa.

"Our team in Johannesburg focuses on providing financing solutions for corporate jets, commercial aircraft, and freighters throughout Africa, as well as to lessors of commercial aircraft, freighters and helicopters globally in conjunction with our global aviation finance team. In addition, we cover global lessors and operators of converted cargo aircraft," he adds.

Across the Johannesburg and London teams, Investec Bank has the ability to cover the full spectrum of the market, whether it is new or used aircraft, or passenger or cargo assets.

"We think that we have the whole spectrum that perhaps some other lenders don't do," says Gordon.

Sweet spot

"Our unique ability is we can finance multiple asset types. This is because we have diverse capital sources both with the bank and other investors' capital," says Gordon.

He adds: "We have a broad offering because in addition to a developed market bank in London and institutional money, we have an emerging market bank which I represent in South Africa with a higher cost of capital. Therefore, our South African team look at transactions that yield up and those tend to be less liquid assets, or less mainstream assets, or more challenging jurisdictions all the way up to managing European pension fund money, which is typically looking for new assets with long leases to tier-one credits."

The South African bank's play is mainly mid-life narrowbody assets as well as regional aircraft, including turboprops. "That is really where we want to deploy our capital in the industry, although we are increasingly doing end-of-life transactions.

Bradley Gordon, Investec head of aviation finance, Africa

"We finance against short-to-medium leases to part out and our London team has closed a facility that focuses on landing gear leases."

Investec is neither a credit lender nor an asset lender, he says.

"We look at a transaction holistically. We assess both the credit and the asset to try to make the transaction work. If it is a really strong asset with lease or loan to a weaker credit, we can take a look at that. Likewise, a weaker asset on lease to a strong credit, we can do it. Some of our competitors may only be pure asset or credit focused," comments Gordon.

Credit

Last year was incredibly slow in Africa, with very little activity, particularly in the used space. Most of the transactions were either leases from lessor's orderbooks or remarketings. Few new lease transactions closed in the region, or new deliveries.

Most of the new deliveries were financed by cash or export finance products. Gordon sees 2023 in a more promising light.

"There are certainly more deliveries scheduled to the continent this year and there is more activity amongst the airlines," he says.

Gordon sees more used aircraft refinancings and acquisitions. "Cargo aircraft acquisitions for leasing will be an interesting space for Africa in 2023."

In terms of financing for Africa, there is effectively three pockets available.

"The biggest provider of capital into African airline financing is the government shareholders. Most of the airlines in Africa are still government-owned and are traditional flag carriers. Lots of governments continue to provide cash-equity to the airlines to fund aircraft," he says.

The second biggest source is export credit agency (ECA) support. "Ethiopian Airlines continue to finance its fleet deliveries with the support from the ECAs. RAM [Royal Air Maroc] continues to use Ex-Im debt support, as well as Air Senegal has used export credit agencies. Export credit agencies continue to be a popular source of financing in Africa."

The third source is commercial financing. "There is a pretty limited supply and demand for commercial aircraft financing for new deliveries in Africa," he comments.

The providers are the three main banks in South Africa: Absa, Investec Bank and Nedbank, together with Africa Ex-Im, a multilateral African development bank.

Gordon says that local banks have emerged over the past few years in the aircraft financing landscape in Africa.

"We have seen Nigerian banks funding a number of deliveries in Nigeria, especially for Air Peace via commercial loans."

Some other local lenders across Africa have started to do aviation transactions, he points out.

In Africa, Investec Bank has historically been a player in the used aircraft financing or refinancing space with airlines.

"Traditionally, African airlines used government money or government-supported exported credit-backed financing for new deliveries and, after five to 10 years, they look to refinance assets by releasing the government cash or pay off the export credit financing into a finance lease," he says.

Gordon sees opportunities into that space this year.

"Many African airlines are dependent on some form of government support but governments have had their budgets stretched by Covid. So airlines have been spending lot of time speaking to governments but not much time speaking with commercial lenders.

"We are starting to see some kind of stabilising, return to normality. Some airlines are looking at refinancing some assets as well as treasury and hedging solutions. It really feels like we are heading to some form of normalcy in the financing market in Africa," he says.

"We find appetite for pre-delivery (PDP) financing increasing. We get requests for pre-delivery payment facilities every month and we are comfortable with this product. We last did one for Air Austral on the Airbus A220s, but we had previously financed PDPs for Comair for many years. This is something the manufacturers are desperately in need of.

"I don't think there is huge difficulty in getting delivery financing. There are enough lenders, lessors and ECAs that would take a view on an asset to do the asset secured transaction notwithstanding the credit. Maybe where OEM [original equipment manufacturers] and export credit support is needed in Africa on products such as the PDPs or junior debt, there is a requirement because not all airlines have the cash equity to contribute the other 15% in funding a transaction.

"We are looking at two or three PDP transactions in Africa this year," adds Gordon.

Investec has done a lot of junior debt financing with Ethiopian Airlines, and Gordon sees the bank continuing its role in supporting transactions with junior debt.

"That is maybe an area where the OEMs can provide support to give the lenders remarketing support or more comfort on the junior debt tranche."

Gordon says pricing has followed the inflationary curve.

"Pricing has probably increased by 50 basis points [bps] from a margin perspective. There has been an inflationary effect. Overall pricing has gone up significantly as the base rates have gone up 400bps. What was previously costing all-in pricing 300bps, is now at 700bps. The lenders' margins are not significant on this new pricing environment," he says.

But Gordon believes pricing has moved more in the institutional market than the banking market.

"Institutional investors would compare any product we bring to them to listed bonds or other tradable instruments and yields there have increased significantly. That pushes the institutional hurdles up. I would say the bank pricing has been more stable and when we look at arranging deals and bring institutional investors in, we need to price to each investor."

He believes this could be temporary to the extent that inflation stabilises and the yield curve follows the trajectory that the forward curve is indicating.

"It depends what the Federal Reserve does," recalling that Investec bank is a "long-term relationship player", and the bank needs to adjust its pricing for clients, especially those with a long-standing relationship.

"Investec Bank lends through the cycles and even during Covid we closed transactions in May and June 2020. We continued to help our clients and added new clients," he says.

An increase in pricing is received poorly by airlines.

"Airlines' business plans and capital investment decisions were taken at the time of purchases and prior to inflationary changes. But, at the same time, there is an understanding that it is out of our control. It is not that the bank benefits from a 400bps increase in US dollar base rates.

"It does have an impact on the capital decisions of airlines," adds Gordon.

"For us, the biggest challenge with African airlines is often the equity piece. There is a desire for PDP financing at 100%, desire for delivery financing is at 100%, which is obviously not asset lending. This is where the junior financing becomes important or the access to a government equity contribution."

Investec Bank is open to do both PDPs and delivery financing.

"The lines are usually dictated by the customer's needs but, in general, export credit financing in Africa is cheaper than commercial financing. Airlines normally turn to the banking market for PDPs and to export credits for delivery financing. This is what we did with Air Austral on the A220-300s and the EDC provided funding for the deliveries."

Freighter conversion market

Investec Bank has supported the cargo conversion market for more than 10 years and has financed a number of ATR72s, Boeing Classic and NG cargo conversions.

"We are looking at 767 cargo conversions," says Gordon.

The bank provides conversion facility financings and post-conversion financing to the marketplace.

"Unfortunately, Covid has been a frustration for us because cargo has been on everyone else's attention. We have financed freighter conversions since 2012. We originally did ATR72-200 and Boeing classic conversions. Now we are doing ATR72-500 conversions and Boeing next-generation aircraft. Cargo has always been a core focus for Investec, probably because it was a less crowded space, but unfortunately it has been brought to everyone's attention," he says.

In the meantime, cargo conversion volumes have increased and the space has attracted leasing platforms.

"There is a good social story around cargo in terms of movement of goods. Some of our African cargo customers also have projects with the likes of World Health Organization, Red Cross or World Food Programme but also provide services for DHL, UPS, FedEx contracts," he says.

Gordon is bullish about the cargo market in the continent.

"For us, e-commerce is here to stay and, in many countries, e-commerce has yet to penetrate the market. In South Africa, e-commerce represents 8% of card transactions. The rest of Africa is further behind but as e-commerce begins to expand and reach the levels of Europe and the USA, there will be a need for more cargo aircraft.

"Africa is a very fertile ground for cargo operations. There is a lot of agriculture goods with many that are perishable in nature, and the only way to move them around is via air cargo. Distances are vast and the train and road transportation systems are very limited. There is no real alternatives and this is why we remain very bullish to support our cargo customers," he says.

At the same time, most exports are to Europe and other parts of the world, he admits.

Last year Investec closed a cargo transaction with Icelandair, in which it funded the acquisition. The asset involved was a Boeing 757-200 leased by WNG Capital. This was the first transaction between Investec and WNG Capital, whose strategy aligns with Investec's ongoing focus on the financing of mid-life and end-life passenger and freighter aircraft.

"We are currently looking at a transaction with a cargo operator involving widebody aircraft," says Gordon.

He adds that Investec Bank is targeting both cargo operators and lessors involved in that market.

"It is pretty even between the two. We have extensively lent to Acia Aero Leasing through their ATR72 conversion programme. We did about eight aircraft that went into cargo conversion in 2022. We anticipate more transactions with them and that is the key part of our strategy."

He is bullish about the potential of the ATR72-600 freighter conversion market.

"We see the profile of customers that Acia Aero has been able to attract and that aligns with our interest. It is people that are operating in Africa but servicing in more communities. From a financial perspective, it is also attractive because the alternatives are limited."

In line with the bank's approach to the aviation market, more regional passenger-to-freighter conversion financing could be on the cards.

Gordon says Investec is looking into potential De Havilland freighter conversions, because De Havilland turboprop passenger aircraft "work well" in the African continent, and the passenger-to-freighter conversion of Embraer 190/195 product.

"The same goes for the emerging Airbus cargo products. We have not financed assets in that market but are certainly considering it," he says.

Sky is the limit

The post-pandemic aviation environment is presenting unique opportunities for lessors with strong financial backing and portfolio diversification, SMBC AC's chief financial officer, Aisling Kenny, tells **Hugh Davies**.

Fresh from the conclusion of its Goshawk acquisition in December, Japanese bank-backed lessor SMBC Aviation Capital (SMBC AC) is looking to flex its financial muscles as it seeks further opportunities for growth while also continuing to pursue its environmental, social and corporate governance (ESG) goals as the industry aims for net zero carbon emissions by 2050.

In an exclusive interview with *Airfinance Journal*, SMBC AC's chief financial officer, Aisling Kenny, says that while there are still headwinds facing the industry, there are also positive signs with surging pent-up demand ultimately beneficial for lessors.

"We're at an interesting point in the cycle. We see various jurisdictions around the world starting to come back on stream and demand for air travel bouncing back quite rapidly once restrictions are lifted," says Kenny.

"But there are headwinds. Clearly looking at inflation, it is at the highest rate it's been for decades, and interest rates are also high. Looking forward for the year, I would view a recession as being a probability as opposed to a possibility.

"Naturally that presents challenges, especially for our airline customers. But I would say the lessors themselves have proven their resilience through the last two to three years of 'black swan' events, in particular during Covid.

"The larger lessors such as ourselves, with well-diversified portfolios, strong shareholder backing and efficient access to capital, are well positioned as the industry emerges from the pandemic," adds Kenny.

She explains that the lessor also has alternative sources of funding, through different third-party funding avenues such as bond markets and the bank markets.

"For the larger lessors who have that, while they still need to manage a potential recession and keep an eye on various credits around the world, it's more of a bump on the road and that can actually present opportunity," says Kenny.

"If capital starts to leave the space, then sale and leasebacks become more of an opportunity and it's an area that we've looked at ourselves over the years. We tend to play the cycle when it comes to sale and leasebacks.

"The business has been around over 20 years, and we've learned to play the cycle through those headwinds, executing on the opportunities that come our way," she adds.

Consolidation

Lessors with an investment-grade rating, portfolio diversification and better access to capital have the ability to execute and leverage their greater scale, a dynamic which will continue to drive consolidation in the leasing space.

"I do see consolidation continuing but it is also interesting to see new entrants emerging. For some of the small-to-medium-sized businesses, they will be looked at for M&A opportunities by larger companies looking to grow.

"For us looking into next year, our first priority is to integrate the Goshawk business in terms of the people, processes and assets, and to deliver value from our combined businesses. If there is a recession, we would expect that to be a good opportunity for us in terms of potentially looking at additional asset acquisitions."

Between the back-to-back black swan events of Covid-19 and Russia's invasion of Ukraine, there have been many lessons learned in terms of asset discipline and credit risk.

"We always take the opportunity to learn the important lessons and we continue to refine our portfolio risk management strategy.

"While there are perhaps some anecdotal lessons around particular credits and particular jurisdictions, I would say that overall, it has reminded us of the importance of asset discipline."

Kenny says that discipline has been "constant" over the years, including the Goshawk acquisition in terms of meeting SMBC AC's standards for keeping the portfolio primarily narrowbody focused.

"We have 82% narrowbodies and just 18% widebodies in our portfolio, and those widebodies are the newer technology A350 and 787.

"Given the shape of the recovery as the industry emerges from the Covid-19 pandemic, which has been short-haul and regional-led to date, narrowbody aircraft clearly represent the asset of choice for airlines. That extends to the investor markets too. Investors are also seeing the shape of the recovery and are investing accordingly in new-technology narrowbody aircraft products."

First reported exclusively by *Airfinance Journal* in November 2021, the Goshawk transaction was officially announced in May 2022, with SMBC AC agreeing to acquire the company for an enterprise value of $6.7 billion.

"The larger lessors such as ourselves, with well-diversified portfolios, strong shareholder backing and efficient access to capital, are well positioned as the industry emerges from the pandemic."

Aisling Kenny, chief financial officer, SMBC AC

The enlarged SMBC AC features a single corporate holding structure incorporated in Ireland, with headquarters in Dublin.

"They're looking for good credits and, thanks to the composition of our portfolio, we're seeing strong demand for our assets and continue to be an active trader of aircraft using it to manage our portfolio and generate profit," she says.

The former shareholders of Goshawk looked to put the company on the market as early as 2019, with the lessor having previously hired HSBC and Citi to explore options, including a sale, in late 2019, as Hong Kong SAR-based shareholders, conglomerates Chow Tai Fook Enterprises and NWS Holdings, decided to exit the business.

This sale process was paused at the start of Covid-19 but restarted in early 2021. *Airfinance Journal* markets sources at the time disclosed that lessors, including BOC Aviation, Blackstone, Bain Capital/Griffin, Castlelake, CDB Aviation and DAE, had explored the acquisition of the platform in the initial process.

"We had been involved in the first process and they came to us bilaterally in the second process, and the reason for that was a strong belief in our ability to execute," says Kenny, noting that the war in Ukraine was an added hurdle in the execution timeline.

"We were in a position in the first half of 2022 to close out the deal but the situation in Ukraine emerged and so we paused again to assess the situation and negotiate with the sellers to exclude the aircraft lost in Russia.

"From the signing of the SPA in May to receiving anti-trust approvals and closing the deal in December took around six months. It probably feels a lot longer when you're going through it, but ultimately it's pretty standard for large acquisitions such as these that touch so many jurisdictions around the world," she explains.

The acquisition creates the second-largest global player by the number of aircraft and the largest Japanese-owned aircraft lessor.

The combined SMBC AC/Goshawk entity has a portfolio of over 700 owned and managed aircraft and additional orders from Boeing and Airbus comprised exclusively of over 240 new technology of Airbus A320neo and Boeing 737 Max narrowbody aircraft.

The Goshawk purchase caps off a slower year for M&A following the pandemic and Russia's invasion of Ukraine.

Among last year's activity was Chorus Aviation Capital's purchase of Falko Regional Aircraft, which was completed in May 2022.

C-suite speakers at *Airfinance Journal*'s Dublin 2023 conference predicted that though consolidation is expected to accelerate for lessors in 2023, it will happen mainly outside of the top five platforms.

More recently, Standard Chartered announced it is considering a sale, among other options, of its aviation unit, with Riyadh-based Avilease and Dublin-based High Ridge Aviation, among others, rumoured bidders for the $2 billion debt book and a $3.7 billion leasing portfolio.

Origination channels

With Boeing and Airbus narrowbody orderbooks effectively sold out until later in the decade, and supply chain pressures continuing to constrain airline and lessor expansion plans, M&A and portfolio purchases are increasingly common post-Covid-19 pandemic as lessors look at alternative avenues for growth.

Kenny, however, explains that while Goshawk's orderbook was attractive, it was a combination of delivered assets and orderbook that tipped the scales.

"The portfolio, including committed acquisitions from the manufacturers, were in keeping with our strategy both from the perspective of the current fleet being primarily narrowbody and a strong widebody content in terms of asset type," she says.

"Their entire orderbook is new-technology narrowbodies, which is consistent with our wider fleet strategy."

She notes that SMBC AC's overall strategy is very much linked with its ESG strategy, which is to continue to transition the fleet to the newest technology aircraft.

"We expect that, by 2025, we will be at 80% new-technology aircraft for the entire fleet and this acquisition supports that strategy.

"But their existing technology assets are also very attractive in terms of trading and to investors given the fact that they're primarily narrowbody. Utilising the proceeds from those sales to reinvest in new-technology aircraft will support our transition to a new-technology fleet."

Kenny notes that the transaction will not necessarily accelerate aircraft trading from SMBC AC's perspective, although the company will continue to be opportunistic.

"That might have been the case if we had acquired a different lessor that had non-standard kit that was not core with our business that we might have needed to offload.

"That's not the case with Goshawk. These are assets we're comfortable holding onto with good underlying credits, so we are sticking to our existing trading strategy but, if we see opportunities to increase our trading levels, we will do so in line with the cycle."

Kenny says the lessor did upsize trading volumes in 2022 because of strong investor demand for narrowbody aircraft.

"This year, we will continue to look at the value proposition of holding versus selling and see how the market evolves," she says.

"During Covid, we closed $6 billion-worth of new transactions at a time when not everyone had access to funding, whereas we had that shareholder funding."

Aisling Kenny, chief financial officer, SMBC AC

"As well as having the financial firepower to support SMBC AC's growth strategy, shareholders SMFG and Sumitomo Corporation also understand that the lessor's acquisition strategy looks at the cycle without closing off any one avenue of growth, adds Kenny.

The lessor received an equity injection from its shareholders of $1.36 billion to fund the acquisition of Goshawk, while also drawing down about $1.6 billion in debt funding from shareholders. Shareholder support stood at $11 billion at the end of the financial year ended 31 March 2022, comprising $2.3 billion equity and $8.7 billion debt.

Subsequently after the year end, the shareholders increased their support of the business to $18 billion in total, enabling the lessor to continue to assess potential acquisition channels.

"During Covid, we closed $6 billion-worth of new transactions at a time when not everyone had access to funding, whereas we had that shareholder funding. Similarly, when we looked at the value proposition around Goshawk, they understood that was the best avenue for growth versus some of the alternatives at that time.

"It's our strategy to assess the value proposition of all avenues at all times," she adds.

Asian lending rebound

Kenny explains that while the Asian banks were a bit more cautious during Covid-19, they are starting to understand the resilience of the industry and ultimately the value proposition that it presents and played an important role in the Goshawk transaction.

"Our overall strategy is to have approximately 50% shareholder funding and the other 50% is made-up of bank market and capital markets debt.

"Obviously over the last year, we've had to raise significant funding for the Goshawk acquisition. We kept an eye on the bond markets and were ready to go if we needed to, but it ultimately didn't represent a good value proposition for us last year.

"On the other hand, our conversations with our banking partners globally, and a decent percentage of that was on the Asian side, did recognise the strength and the underlying credit of our business and didn't react in terms of their credit spreads the way the bond markets did.

"We leaned heavily into that," says Kenny. "The Asian lenders became more positive. We looked at all the options available to us and chose to go down the bank market route."

SMBC AC raised a $2.5 billion syndicated finance facility last year, comprising a $1.8 billion term loan and a $700 million revolving credit facility with a consortium of 32 Asian, European and North American banks. Australia and New Zealand Banking Group (ANZ) and Citigroup Global Markets Asia acted as joint global coordinators.

"We're very happy with getting that deal closed at the size we did in terms of the quantum of debt that was available to us. It really showed the strength of the relationships we have developed over time," comments Kenny.

She adds: "The first syndicated deal like this we did was in 2018 and we then followed with a repeat deal in 2020. Accessing it over time, with the banking relationships within the facility growing each time, meant that, by the time we were doing the larger 2022 transaction, we had quite broad relationships.

"We brought in 20 new banks as part of this bigger facility, which has given us that broader reach which is crucially important."

A good year ahead for Jolco transactions

The Japanese financing structures are back in favour after a pandemic lull. Senior executives tell **Dominic Lalk** that Japanese operating lease with call option funding is near record levels.

The market for Japanese operating lease (Jol) and Japanese operating lease with call option (Jolco) financing structures is starting to look a lot brighter again after three years of pandemic-induced pandemonium and painful airline restructurings that left some Japanese aircraft investors in the dust.

Aircraft transactions are expected to pick up considerably in 2023 as Japanese investors shift their focus back to aviation amid a tightening of tax benefits for maritime assets.

One of the top players in aircraft Jol and Jolco, Tokyo-based Sumitomo Mitsui Financial Leasing (SMFL), tells *Airfinance Journal* that for the current financial year ending 31 March it is on track to post near-record Jolco transaction volumes of ¥68 billion ($504 million).

"The aggregate number for underwriting Jolco transactions in the current financial year is going to be around ¥68 billion. This is a pretty good result, and most of the equity underwritten this financial year was for aircraft transactions, more than 90%. This is a big change from the previous year where most of the underwriting was for shipping, and aircraft transactions accounted for under ¥10 billion," says SMFL's senior managing executive officer, Shinichiro Watanabe.

"If we compare this number [¥68 billion] to the ¥79 billion peak reached in 2018, we are getting quite close. I am getting the impression that, in 2023, we might exceed the ¥79 billion. The demand we are seeing is very strong.

On the sales side, we set a new sales record in 2021 because of a strong rebound of Japanese tax equity demand. This year, we are very close to that number again. The demand for equity remains very strong. Investors are confident again, but the competition among arrangers is getting tough, especially on the origination front," says Watanabe.

Increasing competition, however, was not the only challenge for originators over the past year. The Japanese yen depreciating against the US dollar also presented issues in the second half of 2022.

"We must remember, however, that the corporate tax rate in Japan is 30%. This means that even during a temporary depreciation, a Jolco financing structure will still produce a great advantage for tax investors."

Shinichiro Watanabe, senior managing executive officer, Sumitomo Mitsui Finance and Leasing

In 2022 the Japanese Yen depreciated the US dollar by approximately 25% between March and mid-October, but has since recovered ground.

One financier observes that the Japanese Yen has appreciated against US dollar since last October - by 15% as at February 2023.

Could equity arrangers more cautious about the commitment on the basis of US dollar-denominated equity?

"Most equity arrangers should be cautious about the further increase of the Japanese yen, which will potentially result in lower yield of US dollar-denominated equity or even unrealised loss," the financier comments. "As such, US dollar-denominated equity commitment are therefore more sensitive and risky. This has been somewhat demonstrated by some equity arrangers having incurred losses on their US dollar-denominated equity commitments.

Another financier points out that equity underwriters naturally prefer Japanese Yen-denominated equity, but the exchange rate has been moving more favourable to the Japanese investors. "If this trend continues, the equity underwriters will become more open for the US dollar deals."

Watanabe explains: "The sales of Jolco equity is usually denominated in US dollars, so, of course, the Japanese yen depreciating against the US dollar has had some negative impact since last autumn. That said, from December it has been coming back step by step. We must remember, however, that the corporate tax rate in Japan is 30%. This means that even during a temporary depreciation, a Jolco financing structure will still produce a great advantage for tax investors."

"Even when the yen depreciated more than 20% at the peak last year, investors could be sure they still saved money at the end of the day. Thankfully, this was a temporary scenario and the yen has since rebounded to under ¥130 against the US dollar," adds Watanabe.

SMFL agreed 21 Jolco transactions covering an unspecified total number of aircraft in the financial year ending 31 March. The one asset class that stood out in terms of total deals is the Airbus A321neo, the most popular narrowbody offering from the European manufacturer.

In financial year 2022, SMFL closed narrowbody Jolco financings with lessees attached that include carriers Lufthansa, Turkish Airlines, Pegasus Airlines and Iberia. It also entered into an agreement for Boeing 737 Max Jolco financing with Panama's Copa Airlines as operator.

On the widebody front, the SMBC Aviation Capital parent secured Jolco financing for A350-1000s on lease to British Airways and Cathay Pacific Airways.

Unfortunately, the recovery was slower for the Jol.

"As for Jol transactions, we have had a reasonably good first half for FY2022, but the business has been more adversely affected by the rapidly weakening yen against the US dollar in the second half compared to Jolco deals. The Jol market is recovering from hitting rock bottom in FY2020 and we hope it will recover to the level of FY2019 in FY2023," says Watanabe.

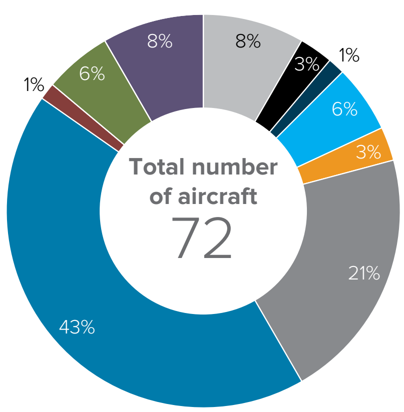
Thierry Pierson, chief executive officer and co-founder of Geneva-based Asset Brok'Air, agrees with SMFL's assessment of market conditions, noting that the Jol and Jolco market "does not react differently from other markets" when facing economic headwinds.

"There was an obvious decline in transactions during the crisis and 2022 was the restart of transactions, more selective obviously and on much lower volumes than those experienced in 2018/2019," says Pierson.

"Dollar-denominated bids were less sought as the yen depreciated, although we are starting to see a rebalancing of exchange rates. Rising interest rates, however, are not bad news for this market, nor for those who can enter it," adds Pierson.

Asset Brok'Air last year arranged a $152 million Jolco financing for an Air France A350-900 widebody, with equity underwritten by JP Lease and debt arranged by Credit Industriel et Commercial.

Jol/Jolco deals by aircraft type



737 Max 9	6	A320neo	15
747-8F	2	A321neo	31
777-300ER	1	A330-900	1
787-10	4	A350-1000	4
A220-300	2	A350-900	6

Source: *Airfinance Journal* Deal Tracker April 2022 - February 2023.

ABL Aviation says it continued seeing steady aircraft financing demand in Japan in full-year 2022.

Its chief strategy officer, Michael Weiss, says ABL closed deals on 13 aircraft in 2021: the Jolco financing of a 787-10 for KLM, as well as two A321neos for Pegasus. The other 10 aircraft were financed on Jol structures and covered three A321neo aircraft and seven A220-300s with American Airlines, Alaska Airlines and Air France attached as lessees.

"Jols and Jolcos are competitive forms of finance that have held up pretty well during the pandemic. Like any financing market, the Japanese market had some restructurings and some defaults. This resulted in investors being more selective about the airlines they are willing to consider. Well-known names are still placeable in the market. However, airlines that are new to the market are analysed more closely with a greater emphasis on balance sheet strength, as well as shareholder quality and support. Airlines that have defaulted or rejected aircraft during the crisis will find it difficult to access the market in the years to come," ABL's Weiss tells *Airfinance Journal*.

He agrees with his peers that "the strength of the US dollar has impacted some investors' willingness to do deals", which often translated into more yen-denominated equity required to close deals.

"Greater uncertainty regarding the forex rate at the end of deals has made some more conservative. When the rate was around ¥150 against the US dollar, Japanese yen equity was preferred," recalls Weiss.

Legal expert and specialist in Japanese financing structures, Watson Farley & Williams partner Simon Collins, confirmed to *Airfinance Journal* that full-year 2022 saw "a steady return of investor confidence in the aviation sector".

Hong Kong-based Collins adds: "The strong recovery in passenger flights, plus the relatively robust strength in asset values and marketability even during the pandemic, all point to the strengths of aviation as a sector for investment. In addition, there are some current tax reforms in Japan impacting other asset classes such as newly built ships, which may accelerate the tide turning toward aviation again. Anecdotally, we are seeing an increasing number of aviation Jolco coming to the market."

Jolco tax reform

Toward the end of 2022, Japan's ruling coalition announced plans, to become effective 1 April, that will affect Jolco transactions for newly built ships.

"The draft tax reform paper has now been posted to the MOJ [Ministry of Justice] website and the implications are still being worked out. It seems special depreciation rules for newly built ships will be adjusted, with eligibility requirements to be tightened, although precisely how is still being determined," says Collins.

"In addition, it was suggested in the policy paper which preceded the draft tax reform paper that special depreciation would not be available for TK investors [Tokumei Kumiani, silent partners]. While all these implications are being assessed, it is probably sufficient at this time to say that such instability is usually a red flag to investors, who have tended to adopt a cautious wait-and-see approach in times of prior tax reform.

"While this may reduce the overall volume of Jolco activity, we might also see this as a factor nudging investors back towards investing in aviation assets," anticipates Collins, who divides his time between Hong Kong SAR and Japan.

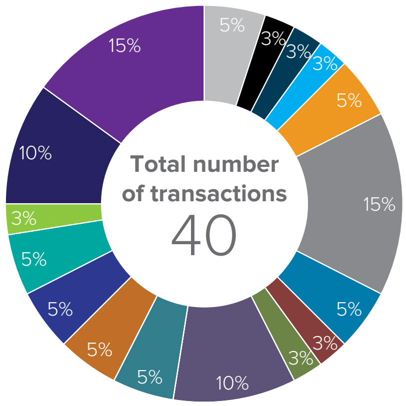
SMFL's Watanabe agrees with Collins.

"Strictly speaking, the government was previously providing additional tax benefit to shipping investors compared to aircraft investors. So, what this change really means is that, from April, both aircraft and shipping investors will be treated equally.

"Companies that have succeeded in protecting Japanese investors during this crisis will certainly be rewarded with even more competitive access."

Thierry Pierson, chief executive officer and co-founder, Asset Brok'Air

Jol/Jolco deals by airline customer



Air France	2
Air New Zealand	1
Alaska Airlines	1
American Airlines	1
Atlas Air	2
British Airways	6
Cathay Pacific Airways	2
Copa Airlines	1
Frontier Airlines	1
Iberia	4
KLM Royal Dutch Airlines	2
Lufthansa	2
Peach Aviation	2
Pegasus Airlines	2
Spirit Airlines	1
Turkish Airlines	4
Wizz Air	6

Source: *Airfinance Journal* Deal Tracker
April 2022 - February 2023.

"For aircraft transactions, I expect this will lead to more demand for aircraft Jolco because shipping now is not as strong as it was during the pandemic. The shipping industry is more volatile, so if the tax benefit is the same, the appetite for aircraft Jolco is very likely to grow. The change coming into effect from April is not bad news for aircraft Jolco. There is an opportunity there," says Watanabe.

Restructuring pains and lessons learnt

Jolco financings are generally not easy to restructure, especially those with multiple Japanese equity investors. The impact of restructuring affects each party differently. This created many headaches and sleepless nights for financiers as airlines around the world entered wide-ranging restructurings during the crisis, many of them shedding excess aircraft and seeking lease discounts.

Arrangers and debt providers who have been deemed to have acted in non-cooperative or even unprofessional ways could easily be excluded from future deals, agree the experts surveyed by *Airfinance Journal*.

Recent cases included Jol and Jolco aircraft involved in the restructurings of airlines including Vietnam Airlines, Vietjet Air, SAS, Aeromexico and Avianca.

Market sources have indicated to *Airfinance Journal* that certain debt providers, particularly some French banks, deeply disappointed transaction partners when they rushed to sell their debt portions on to distressed buyers when the situation worsened and the airlines were unable to pay their lease rentals at the height of the crisis.

"Given the weakening of airline credits during the pandemic, there has been a flight to quality. Airlines that did not request restructurings and kept their leases current are still welcomed by Japanese investors. Those that did default, will find it more difficult to access this type of financing in the future," says ABL's Weiss.

SMFL's Watanabe says: "Given that Jolco financings are a combination of debt and equity, if airlines want to come back to the Jolco market they will need to talk to the debt providers first. Banks are quite cautious now about those restructured airlines. Only when the banks are comfortable can we start thinking about the equity side as well.

"To be very honest with you, we have had a few issues with some South American carriers including Avianca. I stayed up many nights to talk about transaction restructurings and then the next day had to go apologise to the investors here who lost their money. Of course, it would not be easy for us to present the same airline names to those investors again in the short term. They will need to be more patient for the investors to regain trust."

He adds: "The same is true for the Vietnamese carriers. In the case of Vietnam Airlines, some of the arrangers were not good at negotiating with the debt providers or funds. They stood by watching as they sold the debt to distressed buyers, which are everywhere nowadays. As far as I know, some of the investors lost 100% of their investment.

"Those investors may be gone for good and, if they ever do return, I doubt they will enter a deal with a Vietnamese airline as lessee credit. It is an upsetting story that I think comes down to the ability of the arrangers. I am sure those arrangers have learned a valuable lesson; their reputation is quite damaged."

Watanabe says arrangers have to communicate with the debt providers "very closely" on how to restructure Jolco products with the airlines before bankruptcy.

He adds: "If a distressed buyer comes in then, of course, we also must find a way to work out any kind of solution that is in the best interest of our investors here. In our case, we also worked with distressed funds in the case of Aeromexico and, in the end, we found a reasonably friendly compromise between us. Investors still lost money, but we avoided the worst case where the equity investors get squeezed out during the restructuring.

> *The strong recovery in passenger flights, plus the relatively robust strength in asset values and marketability even during the pandemic, all point to the strengths of aviation as a sector for investment.*

Simon Collins, partner, Watson Farley & Williams

"This involved nonstop communication with the debt providers, asking them not to pull or sell their loans as they try to recover their money as quickly as possible. Again, Jolco is a combination of debt and equity, so if the debt providers behave in a certain way, then I think it will not be easy for us to keep this kind of product. The debt providers who did this will definitely be remembered by investors here in Japan. We may find it difficult to work with them again."

Asset Brok'Air's Pierson agrees with his SMFL colleague. "Airlines that have been giving investors a hard time are not likely to return to this market for a long time, or they will have to pay the price. On the other hand, the companies that have succeeded in protecting Japanese investors during this crisis will certainly be rewarded with even more competitive access."

He adds: "Good luck to the airlines which burned their bridges. It takes a decade or so to come back to this market unless the company is consolidated. We will have to find alternative Jolco products to bring them back in. At Asset Brok'Air, we are already working on it."

Until recently, Chinese names were well perceived in the Jol/Jolco market. Have geopolitical changes affected this?

One financier says that equity arrangers may find it difficult to sell assets with Chinese lessees attached. This ultimately boils down to the general geo-political perception of China from Japan (and as such, the regional tensions around the territory of Taiwan, or the support of China to Russia, somewhat negative signals), he explains.

"When it comes to equity arrangers, it ultimately comes back to their responsibility vis-a-vis Japanese investors: what if a Russia/Ukraine scenario happens with comprehensive sanctions on China - and in particular on the aviation sector, with seizure of aircraft in China etc," he asks. "Would some contingent insurance of equity arrangers protect Japanese investors here? We don't think so."

Over the years some 'foreign' entities have ventured into Japan developing franchises of their own. Can this be a threat to the large 'local' players in the market?

"Each player has a different strategy. For instance, some might want to sell more aircraft to investors, while others might keep as many aircraft as possible at the same time," explains one financier.

"Therefore we believe that there would remain roles for new entrants in addition to the market main entities in this market. We have already witnessed the success cases of the-then-new entrants several years ago, for instance Clover Aviation or Japanese trading companies placed their aircraft in the Japanese market. Once again the key differentiating factor is (i) the effective aviation know-how and overall franchise, (ii) the long-term commitment to the sector and true willingness and/or capabilities to protect Japanese Investor interests in the long run."

Will Jolco investors be more selective in the future in terms of credit?

"The 'pre-Covid-19 paradigm' stating that state-owned and/or flag carriers are 'too big (or too important) to fail' has been proven wrong. Besides the selectiveness of Japanese investors (noticing that globally, and compared to aviation banks, those have been far more selective and/or prudent that the aviation finance sector as a whole), what the crisis has demonstrated is the 'heterogeneity' of Jolco arrangers in terms of (i) rightly select the right credits/ assets (at the effective benefit of Japanese investors) and (ii) effective management of restructuring/default situations," observes one financier.

He adds: "What the crisis has unfortunately shown is that while some equity arrangers have been demonstrating highest discipline, commitment and protection of Japanese investors' interests, some others have turned out to be more short-term and/or opportunistic and not necessarily taking care of Japanese investors in the long run. This can unfortunately be seen in some of the most recent restructurings."

But he recalls that what is the most important from Japanese investors' point of view (and interest) is the effective track-record of the equity arrangers across the cycles (and in particular, over the last three years).

Another financier recalls that Japanese investors are more sensitive to airlines' credit, as well as what governments offered to rescue airlines during the pandemic.

Airfinance Journal recorded 72 aircraft transactions in the Jol and Jolco markets between April 2022 and February 2023 for an estimated total of $5.2 billion worth of transactions.

The data shows that airlines tapped the market for a total of 65 aircraft related financings.

In addition three leasing companies, Avolon, Bocomm Leasing and ICBC Leasing were involved in some transactions, according to the data, financing another seven new and used assets.

The Airbus A321neo aircraft was the most popular asset representing 43% of the total number of aircraft. The A320neo accounted for another 21% while the Boeing 737 Max 9 and the A350-900 represented 8% each of the total number of aircraft under Jol-Jolco financings last year.

Additional reporting by **Olivier Bonnassies**

Customer	Structure	Assets	Estimated amount ($m)
Air France	JOL	2xA220-300	70
Air France	JOLCO	1xA350-900	148
Air New Zealand*	JOLCO	3xA321neo	168
Alaska Airlines	JOL	1xA321neo	57
American Airlines	JOL	2xA321neo	114
Atlas Air	JOLCO	1x747-8F	96
Atlas Air	JOLCO	1x747-8F	80
Avolon (TAP Portugal)	JOLCO	1xA330-900	81
Avolon (Vietjet)	JOLCO	1xA321neo	51
Avolon (LATAM)	JOLCO	1x320neo	41
Bocomm Leasing	JOLCO	1xA321neo	56
British Airways	JOL	1x777-300ER	N/A
British Airways	JOLCO	1xA350-1000, 1x787-10	296
British Airways	JOLCO	1xA320neo	52
British Airways	JOLCO	1x787-10	129
British Airways	JOLCO	1xA350-1000	158
British Airways	JOLCO	1xA350-1000	158
Cathay Pacific Airways	JOLCO	1xA350-1000	158
Cathay Pacific Airways	JOLCO	1xA321neo	56
Copa Airlines*	JOLCO	6x737 Max 9	315
Frontier Airlines	JOLCO	2xA320neo	100
Iberia	JOL	1xA350-900	145
Iberia	JOLCO	1xA321neo, 1xA320neo	109
Iberia	JOLCO	1xA320neo	52
Iberia	JOLCO	1xA320neo, 1xA321neo	102
ICBC Financial Leasing	JOLCO	3xA320neo	120
KLM Royal Dutch Airlines	JOLCO	1x787-10	117
KLM Royal Dutch Airlines	JOLCO	1x787-10	110
Lufthansa	JOLCO	1xA320neo, 1xA321neo	96
Lufthansa	JOLCO	3xA321neo	168
Peach Aviation	JOL	3xA320neo	150
Peach Aviation	JOL	1xA321neo	57
Pegasus Airlines	JOLCO	1xA321neo	57
Pegasus Airlines	JOLCO	1xA321neo	57
Spirit Airlines	JOLCO	1xA320neo	50
Turkish Airlines	JOLCO	1xA321neo	57
Turkish Airlines	JOLCO	2xA350-900	292
Turkish Airlines	JOLCO	2xA350-900	291
Turkish Airlines	JOLCO	1xA321neo	57
Wizz Air	JOL	2xA321neo	114
Wizz Air	JOLCO	1xA321neo	56
Wizz Air	JOLCO	3xA321neo	179
Wizz Air	JOLCO	1xA321neo	60
Wizz Air	JOLCO	2xA321neo	120
Wizz Air	JOLCO	2xA321neo	120

*Mandated, not closed. Source: *Airfinance Journal* Deal Tracker April 2022 - February 2023.

Reaching for **more growth**

Aviation is an important growth engine for KKR and an opportunity to deploy capital it both owns and manages. The aviation space offers compelling risk-return opportunities, Patrick Clancy of KKR and Av Airfinance's chief executive officer, Stephen Murphy, tell **Olivier Bonnassies**.

Av Airfinance is positioned to benefit from the broadening opportunity set in aviation finance.

The business benefits from efficient access to unlevered capital within KKR, which gives the platform an ability to pivot between inorganic growth and its primary focus of directly originated loans, Stephen Murphy, its chief executive officer, tells *Airfinance Journal* in an exclusive interview.

He says that becoming a successful long-term player in the aviation lending space requires having access to the right type of capital with appropriate return expectations, a team/sponsor which has the necessary aviation underwriting experience and a back-up servicer that provides comfort to capital providers.

Av Airfinance has all of these features and has become an established industry player in less than two years.

The platform was set up in mid-2021 by investment firm KKR and a team of experienced aviation industry professionals. To support the launch, KKR and Av Airfinance acquired an $800 million portfolio of aviation loans for about 60 commercial aircraft from CIT Group.

Since then, Av Airfinance has closed $1.2 billion of directly originated loans, bringing the total to $2 billion. Murphy says having the backing of a strong partner such as KKR with capital managed from insurance funds provides a solid and stable foundation for growth.

"We are fortunate that the expertise within the team and KKR enables us to underwrite both middle-of-the-fairway and complex deals, ranging from financing new deliveries to freighter conversion or engine deals. This ability to underwrite a broader cross section of deals is a competitive advantage, as we can finance opportunities that others struggle to underwrite," he says.

Deployment

Deployment of capital is across the spectrum of commercial aircraft owners, ranging from lessors and asset managers to airlines. The platform deploys significant capital to asset managers, some of whom do not have access to warehouse financing or where certain assets fall outside of warehouse parameters because of concentration or other criteria.

With balance sheet lessors, Av Airfinance has been most successful partnering with entities that fund away from the 144A market, and which have a requirement for secured funding. In addition, there are opportunities to work alongside the balance sheet lessors which are focused on growing their managed portfolios and rely on non-recourse financing.

The company can do direct airline deals and is in the process of closing a significant deal in the first quarter of 2023.

Having access to a backup servicer (sister company Altavair) allows more flexibility to underwrite direct to airline loans.

"We are optimistic about the year ahead. Because of the dislocation in the capital markets, we are assessing opportunities to term out warehouses, which we are ideally positioned to do given our ability to do scale transactions. We also continue to speak to our network of banking partners, either to work alongside them or, alternatively, to provide refinancing options for loans currently residing on their books," says Murphy.

"We are fortunate that the expertise within the team and KKR enables us to underwrite both middle-of-the-fairway and complex deals."

Stephen Murphy, chief executive officer, Av Airfinance

"While we are always assessing inorganic opportunities, the platform has been built as a direct origination unit and we firmly believe we can be more relevant to our customers by being constantly active. The lending landscape today is very uncertain for secured borrowers and we believe that the differentiated execution speed and certainty that we offer, especially in a constrained banking environment, is highly valuable to our customers," he adds.

"Our offering is competitive from a cost and structure perspective, as evidenced by the high proportion of new delivery fundings we have closed. Our customers also like the fixed-rate funding option we provide, particularly in a volatile rate environment, and our documentation process is efficient, making our overall offering very compelling."

Murphy points to an ever-increasing customer base partly driven by the lessor business model shifting from owning assets to asset light structures over the past couple of years.

"This has accordingly driven a need for non-recourse debt and in parallel we have seen banks focus less on non-recourse debt structures. The supply and demand imbalance creates compelling opportunities for Av Airfinance," he observes.

"We have the scale and expertise to structure deals that meet our customers' objectives regardless of market conditions, including deals that may be too large, challenging, or complex for other lenders to underwrite," says Patrick Clancy, a director in KKR's credit business.

KKR views Av Airfinance as a long-term strategic partner. KKR has been a longstanding investor in commercial aviation across both the equity and debt space, with current market conditions providing attractive opportunities in lending.

Some lenders have retrenched from their activities in the sector over the past two years.

"The CIT loan book acquisition was very strategic because it served as the launch platform for KKR's aviation direct lending strategy. It provided instant diversification from both an asset and credit perspective, which is typically difficult for a start-up lending platform to achieve. The book of loans was predominantly comprised of first lien loans to lessors and asset managers, which aligned with Av Airfinance's strategy," says Clancy.

He sees further opportunities in marrying Av Airfinance's lending and aircraft expertise with KKR's experience in underwriting credit investments and pursuing M&A across a variety of different sectors.

The platform would contemplate inorganic growth again if the transaction made strategic sense, and the target portfolio was complimentary to its existing loan book.

"KKR has a playbook for buying loan books and Av Airfinance would be well placed to do a repeat M&A transaction, given the recent experience closing the CIT transaction in a dislocated market," he says.

"Av Airfinance's capital is flexible, and we do not add leverage to our funded loans or require a warehouse, as our loans are directly funded on an unlevered basis. That ensures we do not have the constraints of having to deal with additional debt providers, which in turn makes ongoing loan management more efficient for our customers. Anytime there is an issue with a borrower – for example, in the case of a lessee not paying – our customer only has to deal with one lender, us, rather than multiple lenders as is the case for a lender using back-leverage," he adds.

"We have the scale and expertise to structure deals that meet our customers' objectives regardless of market conditions."

Patrick Clancy, director in credit business, KKR

The aviation collateral loan obligations and capital market shutdowns in 2022 have posed some challenges for some platforms that rely on these channels for further growth, which may manifest in these platforms doing fewer or smaller deals.

"There are a number of alternative lenders that are effectively running levered strategies by funding themselves in the capital and banking markets. We do not rely on banks or the capital markets for initial funding or refinancing so our growth is not constrained by what happens in external funding markets," says Clancy.

He says 2023 will be the first full year where rates are in a "very different place", whether there is a recession or a soft-landing environment.

"Aviation finance, in many ways, had been a large beneficiary of a lower rate environment, where investors need to reach for yield. It will be interesting to see who is deploying capital in 2023, as it will reveal who was merely a tourist versus those who are long-term players in the space," he adds.

Clancy agrees liquidity and capital flows in the near and medium term will end up driving pricing and returns on deals. "Capital flow is not the only factor but it is an essential one," he comments.

Murphy says the platform was set up to be a long-term player deploying capital right through the cycle rather than only opportunistically focusing on transactions resulting from the capital markets slowdown. Fundamentally, the market has changed, with a number of banks being restricted in what they are able to do because of a number of factors, including capital allocation constraints.

"Certain borrowers," he says, "were probably too reliant on the ABS [asset-backed securities] market, so going forward, we expect to benefit from customers taking a more diversified borrowing approach. The risk-reward on aviation remains attractive but investors will need rates to settle and some relative value to return versus other asset classes before the ABS market really comes back."

Japanese opportunity

KKR and Av Airfinance are continuously evaluating lending opportunities to Japan, which has been a very active market for aviation financing. "It is a market we are open to participating in more through the right opportunities," says Clancy.

"Our experience and expertise in Japan as a firm is helpful but having the right deal structure is equally critical to being successful in this market," he adds.

Av Airfinance has already financed a transaction in the Japanese market using an innovative structure and is encouraged by the rebound it has seen in the Japanese market. "We are pleased that the Japanese market has rebounded so strongly post-Covid and are seeing a good amount of deal flow," says Murphy.

Geopolitical risk is high on the agenda at the moment and the platform benefits from having access to the advice of KKR's Global Institute, a dedicated team that provides expertise and analysis on emerging developments and long-term trends in geopolitics. This resource provides helpful guidance on evolving risks in key markets.

Av Airfinance also referenced an interesting dynamic last year with investment-grade balance sheet lessors opting for large recourse secured portfolio deals that sucked up capacity from the banking sector.

"That, in turn, has had a knock-on impact on commercial banks' appetite for doing non-recourse deals as they can deploy significant capital on investment-grade secured opportunities albeit at much lower margins," says Clancy.

Av Airfinance aims to deploy $1 billion of capital on an annual basis. It expects that the size of funding will be deliverable to the industry in 2023 even outside of doing large warehouse term-outs or inorganic trades, and by being constantly relevant to its customer base.

Embraer pushes for top spot

The regional aircraft market continues to improve in terms of assets reintroduced to fleets, but the market sentiment is slightly down compared with the prior year. **Olivier Bonnassies** reports.

In the latest Investor Poll from *Airfinance Journal*, almost all aircraft rated lower than in 2021.

The top two assets remain the same but this year's poll saw the emergence of the Embraer 195-E2 in the top three.

ATR continues to dominate the regional aircraft market with its ATR72-600 in terms of orders.

The model will reach 12 years of service in August. Royal Air Maroc (RAM) was the launch customer for the first units, on behalf of its regional subsidiary, RAM Express, in August 2011.

During the 2021 Dubai air show in November 2021, ATR announced the new ATR72-600 engine, which is powered by new PW127XT powerplants with 20% lower maintenance cost and 3% lower fuel consumption than the predecessor PW127M powerplant. The turboprop manufacturer handed over the first example with the new PW127XT engine to launch customer Air Corsica at the end of November.

ATR, which had yet to announce its 2022 results at the time of printing, is believed to have delivered approximately 25-30 aircraft to customers and booked a similar number of new orders. Arguably, ATR is the only original equipment manufacturer in town to address the 50- to 70-seat market.

In September, De Havilland announced the site of its new aircraft manufacturing facility would be in Wheatland County, Alberta, Canada. The new facility will be the site of final assembly for the DHC-515 firefighter aircraft, which was launched in 2022, the DHC-6 Twin Otter and the Dash 8-400 aircraft, which the manufacturer is working towards bringing back into production. However, a consistent abundance of relatively young Dash 8-400s on the secondary market has brought new aircraft sales to a virtual halt.

An interesting development is the ATR72-600 type certification of a cargo conversion being developed by lessor Acia Aero Leasing and its partner, IPR Conversion.

The regional lessor says its -600 STC will be approved this year. "In the cargo market, we are expecting to move forward to the ATR72-600 passenger-to-freighter conversion and we will be introducing the -600 in large cargo door and bulk versions."

Acia Aero Leasing has signed a letter of intent for some -600 conversions and is in the market to acquire assets as feedstock for its cargo conversion programme.

"The regional freighter market is continuing to be strong and there is an increased appetite for conversions," says the lessor's chief commercial officer, Sameer Adam.

Converting LOIs

In November, ATR announced an order for three ATR42-600s, marking its re-entry into the Chinese market following validation of the ATR42-600 type certificate by the Civil Aviation Administration of China (CAAC).

The Franco-Italian manufacturer said the ATR42-600 is an ideal route opener for Chinese domestic routes. ATR claims that increasing regional flights by 10% generates a 5% rise in tourism, a 6% rise in regional GDP and an 8% increase in foreign direct investment.

ATR has been focusing on the conversion of letters of intent (LOIs) for 13 ATR42-600s signed in 2017 from China, once the type certificate is issued by the Chinese authorities.

Shaanxi Tianju Investment has an LOI for 10 ATR42-600s while Xuzhou Hantong Aviation Development has a letter of intent for three ATR42-600s to develop commuter services in the Anhui provinces.

The manufacturer defines general aviation as a market covering up to 500-kilometre inter-province sectors covered by up-to-30-seat aircraft. In 2018, it highlighted the requirement for about 800 30-seat turboprops to serve China's general aviation segment, connecting 300 general aviation airports and many regional aviation airports.

The ATR42-600 model would lead to the creation of nearly 1,500 new routes, said ATR at the time, as the 30-seat cabin class "offers a spacious seat layout, the highest standards of cabin comfort and cutting-edge technology".

Of the 300 deliveries of new turboprops forecast within the next 20 years, ATR says 270 units will be in the 61- to 80-seat segment and 30 in the 40- to 60-seat segment.

In the Investor Poll, the ATR72-600 rates the highest in all four categories.

The Embraer 175 is a solid second in the rankings, appreciated for its operational metrics.

The model continues to benefit from scope clauses at the heart of the US market. The E175 remains immensely popular with North American carriers. The aircraft can easily be configured in three classes to offer product consistency with larger mainline aircraft. American Eagle's E175s have 12 first-class, 64 main cabin and main cabin extra seats.

Last year, Alaska Airlines and Skywest Airlines topped up orders for the type.

"The aircraft are still delivering into the US regional operators, with no new-generation aircraft available that can comply with the major mainline pilot union's scope clauses," comments one pollster.

Nevertheless, the acute pilot shortage in the US is dampening demand for the otherwise successful regional jet, with all the capacity purchase agreement providers struggling to source sufficient crew for both the existing and incoming fleets. The bulk of the remaining E175 order backlog sits with just Republic Airlines and Alaska

Regionals (Ratings for each category: 1 is worst, 5 is best)

Aircraft Type	Residual value	Value for Money	Operational success	Remarketing Potential	Overall Score	Last year's score	Difference
ATR72-600	3.6	3.75	4.25	3.65	**3.81**	**4.02**	-0.21
E175	3.2	3.37	4.05	2.85	**3.37**	**3.62**	-0.25
E195-E2	3.15	3.41	3.12	3.09	**3.19**	**3.17**	0.02
ATR72-500	2.66	3.24	3.69	2.82	**3.1**	**3.33**	-0.23
ATR42-600	2.81	2.94	3.4	2.69	**2.96**	**3.37**	-0.41
ATR42-500	2.65	3.06	3.44	2.53	**2.92**	**2.92**	0
E190	2.55	3.26	3.45	2.4	**2.92**	**3.08**	-0.16
E195	2.55	3.21	3.05	2.55	**2.84**	**2.9**	-0.06
E190-E2	2.72	2.94	2.72	2.72	**2.78**	**2.95**	-0.17
Q400	2.5	2.89	3.12	2.53	**2.76**	**2.99**	-0.23
CRJ900	2.44	2.82	2.94	2.47	**2.67**	**3.17**	-0.5
Q300	2.71	2.75	2.94	2.25	**2.66**	**2.91**	-0.25
E170	2.47	3	2.78	2.06	**2.58**	**2.51**	0.07
CRJ700	2.41	2.81	2.88	2.19	**2.57**	**2.95**	-0.38
E175-E2	2.58	3	2.22	2.33	**2.53**	**2.72**	-0.19
CRJ1000	2.18	2.5	2.25	1.81	**2.18**	**2.1**	0.08
SSJ-100	1	1.29	1.07	1	**1.09**	**1.2**	-0.11

Airlines. Embraer also has deliveries to Overland Airways and Skywest, as well an undisclosed customer for three units.

Embraer also continued to develop some markets for the type on the used side. USA-based aircraft lessor Azorra Aviation added Greek carrier Marathon Airlines to its lessee ledger via an E175 operating lease deal. The Flybe, Alitalia and Belavia fleets have been traded with different fortunes: police utilisation, airlines applications as well as part-outs.

Activity on the 70-seat regional jets has been more limited following the exit of Air France's Hop's Bombardier-MHI CRJ700 fleet in 2021, with Skywest Airlines acquiring the 11 aircraft.

Like its competitor, the E170, the Bombardier CRJ700 appears to be limited to opportunities in the USA.

Last year, Mesa agreed to sell 18 CRJ700 aircraft, operating under the United Express brand, to United Airlines. The aircraft were to be leased to Gojet Airlines, part of the United Express brand, for a nine-year term. The carrier expects the net proceeds from the sale to be about $50 million.

The CRJ900 activity is relatively stable, says one pollster. The main activity is around the US fleet. Mesa, having divested from the CRJ700 market, has restructured its United Express deal, and the new agreement would cover all of Mesa's existing flying at American and could increase to 38 CRJ900 aircraft, dependent on the number of E175s that Mesa is operating.

Beside the US market, Cemair continues to add CRJ900ER capacity as the South African operator expands its network, domestically and internationally. The regional carrier added one 2006-vintage aircraft from lessor Regional One in the final quarter. Last August, operating lessor Truenoord placed a pair of 2016-vintage CRJ900ERs with Cemair under long-term operating leases.

In January 2022, *Airfinance Journal* reported that China Express agreed 11-year sales and leasebacks on three 2012-vintage CRJ900s with Wuhu Airport Industrial Investment.

Regional One has also placed former Air Nostrum/Lufthansa CRJ900s with Nigerian operator Valuejet.

Envoy, the American Airlines subsidiary, continues to add two-class 65-seat E170 aircraft to its fleet and is in the process of taking ex-Republic Airways aircraft.

The passenger market for the ATR72-500 model has shifted to the newer -600 variant, but the wide customer base for the type still allows placements.

The ATR72-500 is more than 25 years' old now. It was certified in January 1997 and fitted with more powerful PW127F/M engines, using six-bladed propellers.

Operators ordering the -600 model are -500 customers (Air Corsica is in the process of selling its entire -500 fleet as new -600 gets delivered) but, in the meantime, ATR has worked well to expand its customer base, such as the Maldives national airline, Maldivian, and Japan's Oriental Air Bridge.

The manufacturer also works with the lessor community on some new markets, such as Uzbekistan, on placements.

The ATR72-500 freighter market is gathering pace, because more assets are available for conversions.

Embraer surge

In the Investor Poll the E195-E2 model was one of the few showing an improvement on the previous year. This followed a previous year where it dramatically improved on all four categories: remarketing potential, operational success, value for money and residual values.

Its acceptance, especially with operating lessors, is further developing.

The Porter Airlines fleet shows the attraction from operating lessors for the type. The Canadian regional carrier has mandated an estimated 26 units (out of 50) to various aircraft finance and leasing companies to support its E2 plans.

Truenoord Regional Aircraft will lease six new E195-E2s to Porter under a purchase and leaseback deal. Apollo has entered sale and leaseback agreements, including predelivery financing, for another six E195-E2s scheduled for delivery this year. Falko will acquire five of the aircraft on sale and leaseback including predelivery finance while Azorra Aviation has completed its five-aircraft assignment. Elevate Capital Partners is representing institutions through four units also acquired under purchase and leasebacks.

Aercap, ICBC Leasing and Aircastle are already E2 leasing customers.

At the end of the third quarter, lessors made just under 39% of the E195-E2 backlog, including 33 for Aercap, 15 for Aircastle, 20 for Azorra Aviation and five for ICBC Leasing.

"The E195-E2 is gaining traction and 2022 has seen the greatest number of gross orders, with 52 received from four customers," points out one respondent.

In October, Embraer opened new markets with Salam Air and TUI Belgium selecting the E195-E2 to integrate into their respective fleets.

The Omani airline has signed a firm order for six aircraft, with purchase rights for a further six. Deliveries to Salam Air will be made from the end of 2023.

TUI, meanwhile, will receive three used E195-E2s from Aercap, under a long-term lease agreement. Bank appetite continues to be available, as recently shown by a consortium of Spanish lenders financing Binter Canarias new E195-E2s.

Embraer's E190-E2 has not progressed as much though. But the programme was boosted in February when Scoot, the low-cost subsidiary of Singapore Airlines (SIA), signed a letter of intent with aircraft lessor Azorra to lease nine new E190-E2 aircraft to support the carrier's growth strategy.

Scoot will be the first Singaporean and Southeast Asian carrier to operate the E190-E2 and the aircraft will complement the larger Airbus A320-family and Boeing 787 aircraft in Scoot's fleet, serving thinner routes to non-metro destinations out of Singapore.

The E190-E2 customer base needs to expand. "Market penetration needs more pace," comments one pollster. However, the type could see further applications in Madagascar after the country's president, Andry Rajoelina, recently announced the selection of the E190-E2 as the aircraft of choice for Air Madagascar's fleet renewal. The first regional jet is expected to deliver this year, with two more aircraft to join the fleet in 2024. The aircraft will be deployed on domestic routes with the potential to operate regionally as far as Dubai.

The E190 has benefitted from a liquid market and has probably been the most traded regional aircraft between 2019 and 2021. Supply has been for the most part absorbed, with more than 50 aircraft placed at Alliance Airlines, Airlink and Breeze Airways alone, as well as a number of deals with BA Cityflyer, Bamboo Airways and Cobham. The 2022 activity included Alliance receiving nine E190s previously operated under the American Airline brand via Jetran.

The Australian regional operator also recently agreed to purchase 30 E190s, currently operated in the USA, from Aercap.

South Africa's Airlink has sourced E190 capacity from Azorra Aviation and Falko.

Dominican Republic's Sky High took two former Air Canada E190s on lease from Beautech and Truenoord Regional Aircraft to complement ERJ145 services.

Acia Aero has also acquired former Air Canada E190s from NAC. The lessor opened a new market in Angola with Bestfly for the type.

Air Cairo took delivery of the final three E190 units built by Embraer in December 2022 under the CIAF Leasing order with the Brazilian manufacturer.

The E195 has scarcity value and is in high demand from LOT Polish Airlines, TAP Express, SAS and Breeze, says one source.

Main customer Azul Linhas Aereas started to rollover its fleet as it receives new E195-E2s.

All of its E195s were expected to be phased out by the end of 2022 and were to be subleased at least until the end of the original operating lease term. Two years ago, LOT Polish Airlines signed letters of intent covering 18 units, Breeze is expected to add up to 28 E195s, while some aircraft were being earmarked to TAP Express.

Breeze has also added former Air Europa aircraft via Regional One, while SAS Link leased ex-Flybe E195s under its parent operation SAS.

A350-900 – improving long-range forecast

Despite signs of a recovery in demand, widebodies are causing their manufacturers some concern. **Geoff Hearn** looks at whether Airbus's leading model is any less of a worry.

There are signs that sales of the A350-900 might be picking up

Demand for widebody aircraft has been slow to recover from the impact of Covid-19, but international passengers are starting to return, helped by the opening up of China, which bodes well for commercial aircraft manufacturers. The Airbus A350-900 should be in line to benefit from the trend. The Airbus model continues to be relatively well regarded, having this year again topped *Airfinance Journal*'s investor poll for twin-aisle aircraft.

The popularity has not, however, been reflected in recent order numbers. Sales remained in single figures for both 2021 and 2022, although delivery levels were more respectable. The manufacturer is hoping to restore the backlog as the impact of the pandemic recedes.

The larger Boeing 787 models, which appear to be emerging from their recent manufacturing troubles, will provide the competition. Sales may also be diverted to the A350-1000, which outsold its smaller stablemate in 2022.

Airbus appears confident of the aircraft's future. In a February press briefing, the manufacturer said it sees growing demand in the widebody market as airlines continue to scale up international services.

"We are increasing our A330-family production rates to four aircraft a month in 2024 as well as nine aircraft a month for the A350 family at the end of 2025," commented Airbus chief executive officer, Guillaume Faury.

Annual A350-900 orders and deliveries

Year	Orders	Deliveries
2022	8	50
2021	5	49
2020	21	45
2019	113	87

Source: *Airfinance Journal* Fleet Tracker.

Recent market activity

There are some signs that sales might be starting to pick up. As part of a larger Air France-KLM order that includes A350 freighters, the French flag carrier will take three additional passenger A350-900s. The aircraft are scheduled to join the fleet from 2024. The latest order takes Air France's orderbook for A350-900s to 41 units, of which 20 are already in service.

The A350's fortunes have been boosted by the much-anticipated large order by the Tata Group, Air India's parent company, which included 40 Airbus widebodies in addition to 210 A320neos. However, the majority of the Airbus widebody order (36 aircraft) is for the larger A350-1000 and the deal also includes 30 Boeing widebodies and 100 737 Max-family aircraft.

In addition to the pick-up in orders, there has been increased activity in financing. As reported by *Airfinance Journal* in January, Vmo Aircraft Leasing purchased an A350-900 from China's ABC Leasing, and Griffin Global Asset Management confirmed the purchase and leaseback of a pair of the type to the Italian flag carrier, ITA Airways. Both lessors are building their portfolios to include the latest-generation widebodies.

At the beginning of January, Asian carrier Starlux Airlines received an A350-900, which is leased from Air Lease (ALC). Starlux's fleet includes two of the type with the other aircraft being owned outright. *Airfinance Journal* has also reported that US lessor Aviation Capital Group has purchased an aircraft with a lease attached to Air France.

Extra width

The A350-900 was originally launched in 2004 with an improved A330 fuselage. Comments from potential customers persuaded Airbus to redesign and relaunch the A350 with a wider cabin cross-section. The manufacturer dubbed the redesigned models as XWB (extra widebody) variants.

The XWB family originally consisted of three variants – the A350-800, A350-900 and the A350-1000.

However, production of the A350-800 was cancelled as initial customers switched their orders to the larger A350 variant, or the re-engined A330neo.

Developments

In late 2017 Airbus introduced an aerodynamic performance improvement package, which provided 400 nautical miles of additional range and 1% lower fuel burn. The improvements were leveraged in the development of the A350-900ULR (ultra-long-range) variant.

AIRCRAFT CHARACTERISTICS

Seating/range

Max seating	440
Typical seating	300-350
Maximum range	8,100 nautical miles (15,000km)

Technical characteristics

MTOW	280 tonnes
OEW	140 tonnes
MZFW	195 tonnes
Fuel capacity (standard model)	141,000 litres
Engines	Trent XWB
Thrust	84,000lbs (374kN)

Fuels and times

Block fuel 1,000 nautical miles (nm)	11,810kg
Block fuel 2,000nm	22,010kg
Block fuel 4,000nm	42,410kg
Block time 1,000nm	179 minutes
Block time 2,000nm	291 minutes
Block time 4,000nm	512 minutes

Fleet data

Entry into service	2014
In service	409
Operators (current and planned)	49
In storage	48
On order	303*
Estimated production 2023	48
Average age	4.1 years

Source: Airfinance Journal Fleet Tracker 20 February 2023 *Excludes recent Air India announcement.

Indicative maintenance reserves

C-check reserve	$110 to $120 per flight hour
Higher checks reserve	$100-$110 per flight hour
Engine overhaul	$300-$310 per engine flight hour
Engine LLP	$275-$285 per engine cycle
Landing gear refurbishment	$155-$165 per cycle
Wheels, brakes and tyres	$380-$390 per cycle
APU	$110-$120 per APU hour
Component overhaul	$420-$425 per flight hour

Source: Air Investor 2023.

Airbus delivered the first A350-900ULR to launch customer Singapore Airlines in 2018. The -ULR version has an extended range of up to 9,700 nautical miles. The increase is achieved by integrating a modified fuel system, which increases the aircraft's fuel carrying capacity by 24,000 litres without the need for additional fuel tanks.

The -ULR model has a maximum take-off weight of 280 tonnes, which is now standard on all models. The A350-900ULR can be reconfigured as a standard -900, if required.

More controversially, Airbus is introducing design changes that Qatar Airways says are related to the issues at the heart of its dispute with the manufacturer. Although both companies have recently issued statements saying they have reached an amicable legal settlement, they had been arguing over the safety impact of flaking paint that exposed corrosion in a sub-layer of metallic lightning protection.

The fallout from the dispute has been very public and resulted in the annulment of some orders for the carrier, which was the launch customer of the type. However, it is believed that orders for the A350 are being reinstated as part of the agreement.

Operating cost

Analysis carried out by *Airfinance Journal* indicates that at recent fuel prices ($3.15 per US gallon), the 787-9 has about a 9% cash-cost advantage over the A350-900 on a 4,000-nautical mile route. This is a reflection of the technology used in the 787 but needs to be set against the greater capability in terms of range and capacity of the Airbus aircraft.

In the absence of reliable published list prices, it is difficult to gauge the manufacturer asking prices, but *Airfinance Journal* believes Airbus would be hoping to achieve a 10% premium for the A350-900 over the 787-9. Data supplied by appraisers for Air Investor 2023 imply that the current market value differential is closer to 5%.

An Appraiser's view

Gueric Dechavanne, vice-president, commercial aviation services, Collateral Verifications (CV)

CV is aware of only one Airbus A350-900 available for sale and/or lease worldwide in the secondary market. Mainly because of the Covid-19 pandemic, there are close to 50 aircraft currently in storage but it is our belief that all of these will go back into service as the industry continues to recover.

The current trends for the aircraft have shown good signs of stability and recovery in its market value and lease rates, which can be seen at about $1.1 million a month on average, for operating leases of new aircraft. With international markets opening up once again, as Covid restrictions are lifted, we expect to see strong demand for this aircraft along with a recovery in its values and lease rates going forward.

There is a potential for a widebody aircraft shortage currently forming based on the challenges the original equipment manufacturers have been facing to ramp up production. Until these challenges are resolved, we expect this to further strengthen the widebody market in the near term. This should mean positive trends for aircraft such as the A350.

Although there had been some softness in market values because of the Covid-19 crisis, in the long term, the residual values should remain stable and unchanged for the type. Because of its efficiency, the A350 will eventually replace many of the ageing aircraft types such as older A340s and A330s, as well as Boeing 767s and 777s.

With more than 700 orders since its launch, the A350-900 has already shown great signs of success and it will continue to do so as the fleet expands and it becomes a widebody of choice for the industry.

Although the larger A350-1000 offers improved costs per seat, we believe the -900 is optimally sized and will remain the most popular variant among operators and investors. With the 787-9 enjoying success as well, the A350-900 will have competition from an aircraft that offers attractive performance and operating economics.

Both manufacturers claim that their aircraft offers better economics over the other, but CV feels that both will do well as the demand for this type of aircraft increases from the global operator base.

Collateral Verifications' view of A350-900 values and lease rates

Build year	2015	2017	2019	2021	2023 (new)
Current market value ($m)	83.7	97.1	110.7	126.9	154.9
Lease rate ($'000s/month)	650	750	850	950	1,100

Values reflect half-time maintenance condition except for new aircraft.

Boeing struggles to catch up in single-aisle market

Larger family models are increasingly dominating single-aisle aircraft sales, but the baseline Airbus A320neo and Boeing 737 Max 8 remain important to their manufacturers, particularly Boeing. **Geoff Hearn** reports.

The 737 Max 8 and A320neo are direct competitors

Single-aisle aircraft dominate the orderbooks of the two major civil aircraft manufacturers. Between them, Airbus and Boeing have chalked up more than 14,000 sales of their respective Neo and Max models, and *Airfinance Journal*'s recent poll confirms the popularity of the respective models among the investment community.

Historically, Boeing and Airbus have benefitted more-or-less equally from buoyant sales in the single-aisle sector, but for the latest generation, the European manufacturer has a significant lead in terms of market share.

Some of the advantage can be attributed to the troubled in-service history of the Boeing 737 Max. The worst of the Boeing aircraft's problems look to be behind it, but other factors are sustaining the Airbus A320neo's ascendancy.

For the previous generation of single-aisle aircraft, the core competition was between the baseline A320 and 737-800 models, albeit that the A321 started to make inroads as airlines switched to larger models.

Despite the emerging trend to larger aircraft, Airbus and Boeing chose to make the direct successors to the A320 and 737-800 the launch models of their next-generation aircraft. The battle between the A320neo and the 737 Max 8 therefore remains important to the manufacturers.

Recent market activity

There are indications that the fortunes of the 737 Max 8 are picking up. As reported by *Airfinance Journal*, recent developments include an announcement in January by Singapore-based BOC Aviation that it has ordered 40 additional 737 Max 8s. All aircraft are scheduled for delivery in 2027 and 2028. This takes BOC Aviation's confirmed Max orderbook with Boeing to 80 units.

Another indication of renewed lessor appetite is Griffin Global Asset Management's purchase and leaseback transaction with Middle East carrier Flydubai.

Orders for Neo and Max families

Type	Total orders	2022 orders	Type	Total orders	2022 orders
A319neo	88	14*	**737 Max 7**	276	12
A320neo	3,990	370*	**737 Max 8**	3,773	447
A321neo	4,518	501	**737 Max 200**	255	25
			737 Max 9	325	21
			737 Max 10	728	192
Total Neo	8,596	885	**Total Max**	5,357	697

Source: Airfinance Journal Fleet Tracker, 20 February 2023. *Excludes corporate jets

A further encouraging sign was the delivery of 53 Max models in December – making it the best month of 2022. Arguably the most important development is the return of the Max to service in China – a major market for single-aisle aircraft.

In January, China Southern Airlines operated the first commercial flight with the type since its grounding by the country's regulator in March 2019. The Chinese authorities have lagged many of their international counterparts in allowing operations with the aircraft to restart. In response to the development, Boeing says it will pause efforts to remarket some 737 Max aircraft that had been destined for Chinese airlines.

Boeing's chief executive officer, Dave Calhoun, says China needs the Max to satisfy its demand, noting that the reopening of the Chinese market is a serious boost for the entire aviation industry.

The various developments suggest the Max 8 is able to compete for orders with the A320neo on a more even footing, but the deficit in deliveries looks unlikely to be eliminated for several years. Airbus has delivered close to 1,000 more A320neos than Boeing has managed for the 737 Max 8.

The Max 8 may eventually be able to overtake its direct competitor in terms of sales, but this owes as much to Airbus customers preferring the larger A321neo as it does to the competitiveness of the Boeing aircraft. As the sales figures show, the Max 9 and Max 10 have been no match for the A321neo in its various guises, although there have been recent reports that Hong Kong-based Greater Bay Airlines is planning to order 15 Max 9s.

Somewhat perversely, the Max 8 may be benefitting from the delayed certification of the larger Max 10. Market sources tell *Airfinance Journal* that Qatar Airways will begin taking delivery of 737 Max aircraft this year. The airline had agreed to take 25 Max 10s, but as type certification is proving more challenging than expected, Qatar Airways has now agreed to take Max 8s instead, say sources.

In any case, Airbus won more narrowbody orders than Boeing in 2022, even discounting A220 sales, which added a further 127 firm commitments.

Neo and Max family deliveries

Type	In service/stored	Type	In service/stored
A319neo	11/3	**737 Max 7**	None
A320neo	1,591/65	**737 Max 8**	703/135
A321neo	914/35	**737 Max 200**	90/0
		737 Max 9	140/2
		737 Max 10	None
Total Neo	2,516/103	**Total Max**	933/137

Source: Airfinance Journal Fleet Tracker, 20 February 2023.

Operating cost

In the face of the usual claim and counter claim by the manufacturers, *Airfinance Journal* has carried out its own analysis of operating costs.

For the purposes of this analysis, the widely accepted 12-seat advantage for the 737-800 over the A320 is maintained for the baseline comparison of the A320neo with the Max 8. Both manufacturers have developed cabin layouts designed to increase the typical and maximum seating capacities of their latest-generation models. Some airlines are taking advantage of this, but the new aircraft are not intrinsically larger than the previous-generation models.

The analysis confirms that the relative costs of the Max 8 and the A320neo are closely matched and follow a similar pattern to the differences that *Airfinance Journal* has previously found in comparisons between the 737-800 and A320.

The Max 8 costs about 3% to 4% more per trip to operate than the A320neo, which equates to a seat-cost advantage of about 4% for the Boeing model. The seat-cost advantage of the Max 8 has helped it in the direct competition with the A320neo, but as the analysis shows, the problem for the Boeing model is that the A321neo provides even better seat-mile costs. This is of particular concern given the increased capabilities of the larger Airbus model, particularly in terms of range.

Indicative relative cash operating costs (COC)

	A320neo	737 Max 8	A321neo
Relative trip cost	Base	103.6%	109.2%
Relative seat cost	Base	95.9%	92%

Assumptions: 500-nautical mile sector. Fuel price is $3.15 per US gallon. Fuel consumption, speed, maintenance costs and typical seating layouts are as per Air Investor 2023.

Supply issues outweigh cost differences

Previous *Airfinance Journal* analysis has indicated lower savings for the new-generation models over their predecessors than the figures presented by the respective manufacturers. However, at current fuel prices, the savings start to approach the marketing claims. Consequently, as passenger traffic returns, demand for the new models is surging.

Whether the manufacturers can ramp up production to match the increase is another question – most commentators and industry insiders think supply chain issues mean they cannot. Availability, rather than marginal cost differences, may be the key to obtaining market share.

Airbus A320neo and Boeing Max 8 – the background

Airbus A320neo

The new-engine-option (neo) version of the A320 is the first member of Airbus's upgraded and re-engined single-aisle family. The baseline A320neo has a choice of two new-generation engines (the PurePower PW1100G-JM from Pratt & Whitney and the Leap-1A from CFM International). The aircraft also features fuel-saving wingtip devices known as sharklets, which were also available on later models of the first-generation A320.

The respective engine manufacturers claim that their engines offer a fuel saving of about 15% compared with their equivalent predecessors. There are reports that in-service experience has shown slightly lower savings, but improvements to fuel burn are an on-going process.

Another area where performance has not matched expectations is engine reliability. The new-generation engines are not matching the impressive reliability levels that had been established by the previous-generation engines.

737 Max 8

The 737 Max 8 replaces the Next-Generation (NG) 737-800. As with the NG family, Boeing has opted to go with CFM as a single source engine supplier, selecting the Leap-1B engine as the sole powerplant option. The first 737 Max 8 entered service in May 2017. It offers additional range of about 400 nautical miles (740km) compared with the 737-800. The Max family aircraft are all equipped with Boeing's Sky Interior, which was introduced as an option on NG models in 2010.

Boeing launched the 737 Max 200 – a high-density variant of the 737 Max 8 – in September 2014. The programme was based on a requirement of launch customer Ryanair, but Boeing says it developed the variant in response to the needs of the fast-growing low-cost sector, which the US manufacturer forecasts will account for 35% of single-aisle airline capacity by 2033.

In 2019, aviation authorities worldwide grounded the 737 Max after two fatal crashes. The return to service took the best part of two years and has significantly impacted the programme.

Key data A320neo versus 737 Max 8

Model	A320neo	737 Max 8	A321neo
Maximum seats	194	210	244
Typical seats	150-180	162-178	180-220
Range (Nm/km)	3,400/6,300	3,515/6,510	3,995/7,400
Entry into service	2016	2017	2017

Source: Air Investor 2023.

Rating agency unsecured ratings

Airlines

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

Source: Ratings Agencies - 21/2/2023.

Lessors

	Fitch	Moody's	S&P	Kroll Bond Ratings
Aercap	BBB-(pos)	Baa3(pos)	BBB(stable)	-
Air Lease Corp	BBB(stable)	-	BBB(stable)	A-(stable)
Aircastle	BBB(stable)	Baa3(Stable)	BBB-(stable)	-
Avation PLC	WD	-	B-(stable)	-
Aviation Capital Group	-	Baa2(stable)	BBB-(stable)	A-(stable)
Avolon Holdings Limited	BBB-(stable)	Baa3(stable)	BBB-(stable)	BBB+(stable)
AWAS Aviation Capital Limited	-	Baa3(Stable)	-	-
BOC Aviation	A-(stable)	-	A-(stable)	-
CCB Leasing (International) Corporation	-	-	A(stable)	-
CDB Aviation Lease & Finance	A+(stable)	A2(stable)	A(stable)	-
Clover Aviation Capital	-	Baa3(stable)	-	-
Dubai Aerospace Enterprise	BBB-(stable)	Baa3(stable)	-	BBB+(stable)
Fly Leasing	-	Caa1(stable)	CCC(developing)	CCC(neg)
Global Aircraft Leasing	-	B2(neg)	-	-
ICBC Financial Leasing	A(stable)	A1(stable)	A(stable)	-
ILFC (Part of Aercap)	BBB-(pos)	Ba2(hyb)(pos)	-	-
Macquarie Group Limited	A(stable)	A3	BBB+(stable)	-
Marubeni Corporation	-	Baa2(pos)	BBB+(stable)	-
Mitsubishi UFJ Lease	-	A3(stable)	A-(stable)	-
Park Aerospace Holdings	BBB-(stable)	Baa3(Stable)	-	BBB+(stable)
SMBC Aviation Capital	BBB+(stable)	-	A-(stable)	-
Voyager Aviation	WD	WD	-	WR

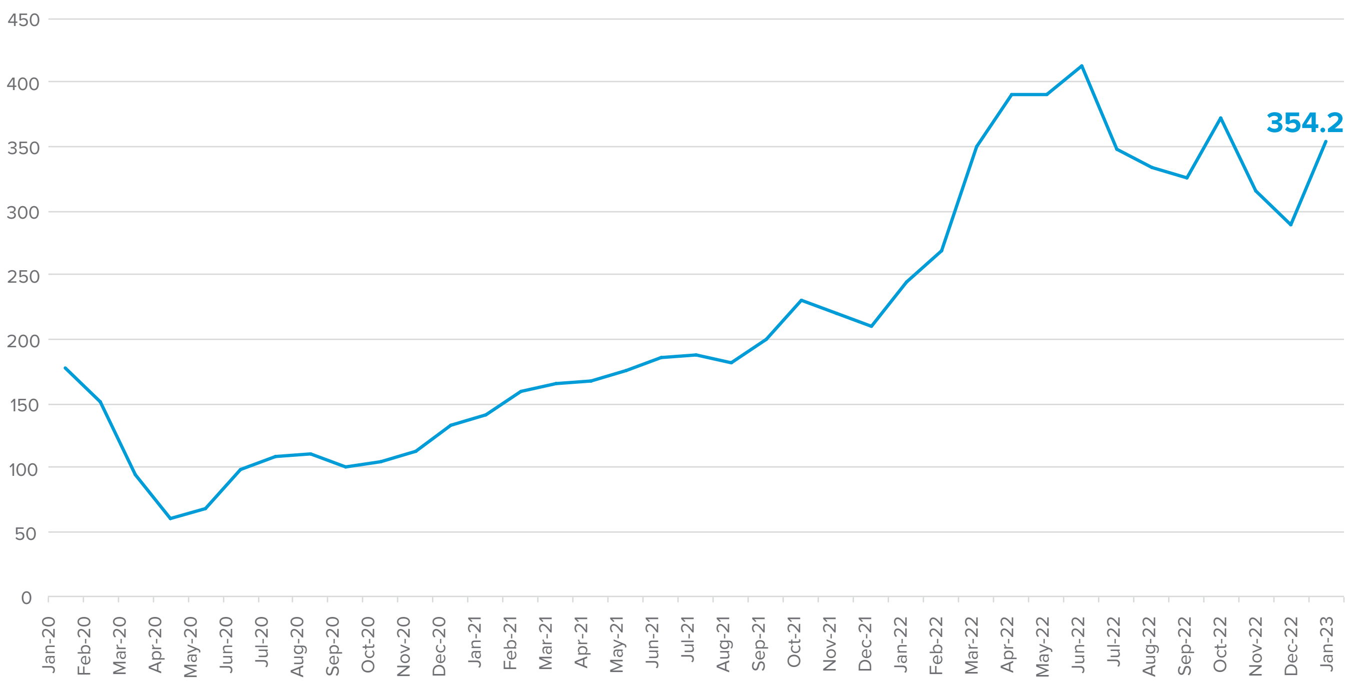
Source: Ratings Agencies - 21/2/2023.

Manufacturers

	Fitch	Moody's	S&P
Airbus Group	BBB+(stable)	A2(stable)	A(stable)
Boeing	BBB-(stable)	Baa2(stable)	BBB-(neg)
Bombardier	WD	B3(stable)	B-(stable)
Embraer	BB+(stable)	Ba2(stable)	BB+(stable)
Rolls-Royce plc	BB-(pos)	Ba3(stable)	BB-(pos)
Raytheon Technologies Corp	-	Baa1(stable)	A-(neg)

Source: Ratings Agencies - 21/2/2023.

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



Source: *US Energy Information Administration.*

Commercial aircraft orders by manufacturer

	Gross orders 2023	Cancellations 2023	Net orders 2023	Net orders 2022
Airbus (31 January)	37	1	36	820
Boeing (31 January)	55	10	45	774
Embraer (2022 net orders to be confirmed)	0	0	0	62
ATR (2022 net orders to be confirmed)	0	0	0	27

Based on *Airfinance Journal* research and manufacturer announcements until 28/02/2023.

Recent commercial aircraft orders (December 2022-February 2023)

Customer	Country	Quantity/Type
Air France	France	Three A350-900
Avolon	Ireland	Five 737 Max family
Avolon	Ireland	Two 787-9
CIT Leasing	USA	10 A330-900
Delta Air Lines	USA	12 A220-300
El Al Israel Airlines	Israel	One 787-9
Financial Institutions	N/A	Two A350-900
Martinair-KLM Cargo	The Netherlands	Four A350F
Pembroke Capital	Ireland	Five 737 Max family
Southwest Airlines	USA	10 Max 7
Undisclosed customer	N/A	Nine 737 Max family
Undisclosed customer	N/A	Five 787-9
Undisclosed customer	N/A	One 787-10
Undisclosed customer	N/A	15 E195-E2
Uzbekistan Airways	Uzbekistan	Eight A320neo, four A321neo

Based on *Airfinance Journal* research December 2022-February 2023.

New aircraft values ($ million)

Model	Values of new production aircraft
Airbus	
A220-100	33.7
A220-300	38.1
A319neo	39.3
A320neo	51.5
A321neo	59.6
A330-800 (neo)	89.9
A330 900 (neo)	103.8
A350-900	147.9
A350-1000	161.9
ATR	
ATR42-600	15.4
ATR72-600	19.3
Boeing	
737 Max 8	50.5
737 Max 9	51.9
767F	80.7
777-300ER	121.6
777F	166.7
787-8	105.4
787-9	141.8
787-10	152.4
Embraer	
E175	26.5
E190-E2	31.6
E195-E2	35.4

Based on ISTAT appraiser inputs for Air Investor 2023.

New aircraft lease rates ($'000 per month)

Model	Low	High	Average
Airbus			
A220-100	210	245	227.5
A220-300	235	290	262.5
A319neo	222	315	268.5
A320neo	285	375	330
A321neo	335	420	377.5
A330-800	557	750	653.5
A330 900	655	875	765
A350-900	897	1,100	998.5
A350-1000	950	1,170	1060
ATR			
ATR42-600	105	135	120
ATR72-600	125	166	145.5
Boeing			
737 Max 8	280	350	315
737 Max 9	285	370	327.5
767F	450	750	600
777-300ER	800	949	874.5
777F	970	1,400	1185
787-8	630	755	692.5
787-9	865	1,050	957.5
787-10	895	1,110	1002.5
Embraer			
E175	170	229	199.5
E190-E2	189	235	212
E195-E2	219	270	244.5

China's re-opening and genuine black swan events

Adam Pilarski, senior vice-president at Avitas, was as surprised as anyone with China's about-turn on its zero-Covid policy. It was good news for the aviation industry, but there may be other concerns on the horizon.

The sudden and dramatic re-opening of China took many people by surprise. While everyone realised that the "zero-Covid" policy was not sustainable in the long run and a mistake by the supreme leader, Xi Jinping, the speed with which it was reversed astonished most analysts. It was a stunning reversal of existing policies with an abandonment of lockdowns, mass testing, quarantines and contact tracing.

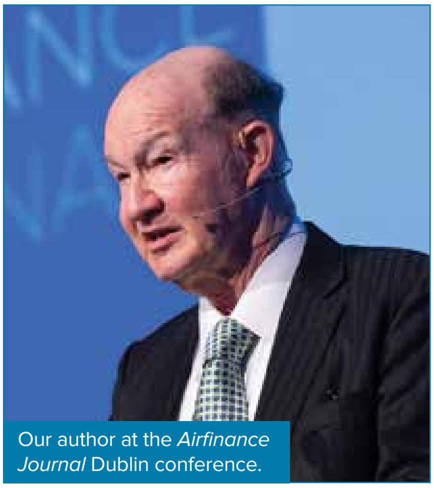
China was the only country in the world pursuing such policies and eventually had to adjust to the hard realities of the virus. No one imagined that the total abandonment of stringent and often cruel measures such as the dramatic lockdowns of large cities would happen in the manner it did. This was related to our assumptions about Xi's ego. (Please note the actions of other supreme leaders, such as Vladimir Putin, for example, who do not follow logic but continue policies they have mandated because they truly believe in their hearts that an inspired leader such as themselves can never be wrong.)

Most analysts, including myself, assumed that once Xi's prestige was tied to a policy, he would not be willing to retreat and change policies, in effect admitting his own fault and culpability in the countless deaths of his subjects. It is immaterial whether Xi had a choice or was pushed by the actions of the Chinese people, who vehemently protested government policies.

Whether Xi deserves credit does not matter; like other absolute leaders, he did not explain or apologise. He just changed course.

In the past, other leaders continued their wrong policies to the detriment of their people, like Putin does at huge costs and suffering. Or as Chairman Mao, in China, and Joseph Stalin, in the Soviet Union, did many years ago.

I count the dramatic turnaround of Chinese Covid policy as a "black swan" event, one that was not predicted by analysts, who, based on historical realities, assumed an autocrat would continue his policies despite huge costs. Xi did not admit defeat but conveniently ignored the issue and let new realities take over, which



Our author at the *Airfinance Journal* Dublin conference.

> *China's economy will recover after the first quarter and its role in the worldwide supply chain will fairly quickly come back to pre-Covid levels.*

is different from what we generally expect from autocrats.

What are the implications of such developments in the second-largest economy in the world and for years the engine of growth in aviation? Obviously, China is going through a very hard time in terms of acquiring herd immunity in a rapid and unplanned manner. The massive movements of people who were isolated for a long time coincides with the Chinese New Year (Year of the Water Rabbit, happy new year to all the readers!) and the strong desire to travel and visit family.

Historically, this time of the year is a huge travel period, and especially so this year after the years of lockdowns that forced a break in the tradition. This will speed up the number of infections and, eventually, fatalities, mainly among the unvaccinated and elderly.

China's economy will recover after the first quarter and its role in the worldwide supply chain will fairly quickly come back to pre-Covid levels. Overall, the outcome for the world economy and aviation, including international travel, will be unexpectedly positive.

Going back to my black swan analogy. I will try to predict a possible black swan event coming this or next year. I do realise that, by definition, black swan events are unpredictable. So how come I try to predict one? The potential event I want to talk about is in the political arena and concerns the possible invasion of the territory of Taiwan by China.

While China has been talking for decades about its very publicly declared goal of "reunifying China" (really meaning subjugating Taiwan), most of the world has not considered this as very probable.

Logistically, politically and economically, the world believed it more an aspirational than an operational goal. China can do much better talking about it rather than actually invading. This view was further reinforced by the Ukraine debacle that Russia stumbled into and which must raise very serious doubts in the mind of Chinese military planners re the probability of success in invading a much smaller but determined adversary.

I am convinced that whatever plans existed were put in a back drawer to be kept there forever. However, the situation may change now, if some events happen in China caused by the sudden and unplanned Covid policy reversal. I can foresee a situation where, on learning the true costs of the now abandoned Covid policy, the people will demand an accountability for the estimated one to two million fatalities expected this quarter.

If strong condemnation of the Xi policy materialises, I can see the supreme leader trying to deflect blame and attention of the people. In such a case, diverting people's attention to outside nationalistic factors may be the preferred option of an autocratic regime facing strong pressure. And a massive new international crisis may erupt.

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