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Changes on the horizon?

Hong Kong's latest bid to become a global leasing hub

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Mixed messages in **ATR market**

Although some lessors are showing an increased interest in the ATR, it is hard to say whether this interest will be matched by the airlines.

There were a few interesting talking points from the European Regional Airline (ERA) Conference in Denmark in March. Several people indicated that the ATR market is oversupplied, and some aircraft brokers said they had been remarketing the aircraft type for more than six months. There was a general consensus that bargain oil prices had been one of the factors behind the market's softening.

On an earnings call last September, Jeff Chatfield, chief executive officer of Singapore-based regional lessor Avation, said that the market is oversupplied because of ATR trying to broaden its presence in the US and Chinese markets. He added that, although the market is oversupplied, it could become undersupplied very quickly if ATR is successful with its forays into these regions.

The ATR market is a tale of two cities at the moment. Some lessors, such as ALC, have left the market, selling off the remainder of their ATR portfolios. Other lessors have recently expressed more interest in ATRs, seeing them as aircraft of the future. And there is some demand for them. For example, the manufacturer's 20-year forecast indicates a market of 2,200 turboprop aircraft of the ATR72's size.

Aergo Capital, a leasing outfit based in Dublin, acquired a portfolio of seven ATR72-500s from TAT Leasing at the beginning of April, bringing the lessor's fleet size for the aircraft type to nine. Also, DAE has shown more interest in the aircraft. Speaking to *Airfinance Journal* (*see page 16*), Firoz Tarapore the Dubai-based lessor's chief executive officer, says the company is looking to acquire more ATR72-600s, after buying 14 of the aircraft type from GECAS in March. At the time of writing, the airline also had a request for proposals out to finance seven more units to bring the number owned and committed for the aircraft type up to 57. DAE is looking to own up to 100 ATR72-600 units, eventually.

Although some of the lessors are optimistic at the aircraft's prospects, the percentage of the fleet that is active seems to tell a different story. Discussing the ATR72-600 (*see page 41*), Mike Yeomans, head analyst, commercial aircraft and leasing at IBA, says that the percentage of stored aircraft in the fleet is 9%, a relatively high number for a type that only came into service less than six years ago.

Some sources argue that the main problem is that there are too many speculative lessor orders taking up the market's share. Of the 245 ATR aircraft on order globally, 69 of them were ordered by lessors, making up 28% of the share of orders, according to Fleet Tracker. As a result of this share being high, many lessors have to place aircraft in higher-risk jurisdictions. For example, DAE has ATR aircraft in Myanmar and Papua New Guinea, while NAC has ATR aircraft in Indonesia and Mongolia.

This may be a good idea from a diversification perspective, but you would think that these lessors would prefer to lease these aircraft to airlines in lower-risk jurisdictions.

However, some of the lessees in lower-risk jurisdictions may have chosen to buy these aircraft from the manufacturer instead, because it can sometimes work out cheaper for them and you have a brand-new aircraft at the end of it.

Turboprop lessors need not worry much about competition from banks when it comes to financing turboprops. Although there is plenty of appetite from the banks to finance jets, several airlines at the ERA conference said that there is not much interest in turboprops. One airline CFO said that because residual values of turboprops are not always obvious, banks can be hesitant to finance them. Other banks may be reluctant to finance turboprops if they are operating with a weak lessee credit.

However, the main reason is likely to be the returns on investment. A loan to cover some of the value of a single turboprop – likely to be $15 million at best – can be hard for banks to justify, because they still have to pay the same high documentation costs and similar legal costs they would pay for financing a larger aircraft, such as a Boeing 787 or Airbus A330.

Financing for one A380 is likely to amount to more than 10 ATRs, and most banks prefer the big-ticket transactions.

Original equipment manufacturers will sell aircraft regardless of where the interest comes from, but they should be mindful of a potential glut in supply and do their utmost to try to place their aircraft into new markets – otherwise aircraft lessors and sellers may find it harder to find homes for their aircraft.

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Fastjet appoints new CFO

Pan-African carrier fastjet has appointed Michael Muller as its new chief financial officer (CFO).

Muller replaces Lisa Mitchell, who, according to the airline, has decided to step down "to pursue other opportunities".

Mitchell will remain in her position until 30 April.

Muller has been with fastjet since November, working out of the company's Johannesburg offices. He has more than 10 years' experience in aviation, including in management accounting roles with South African Airways and as CFO and director of Air Chefs, a subsidiary of South African Airways.

Fastjet has also appointed Rashid Wally as non-executive chairman, and Peter Hyde as non-executive director and chairman of the Audit Committee.

Wally was expected to assume his new role on 1 April. He is chairman and member of the audit committee of Mango Airlines. He will be stepping down from the South African low-cost carrier to take over the role of chairman of fastjet from chief executive officer Nico Bezuidenhout, who was appointed interim chairman in November.

Hyde will begin his new role with immediate effect. He spent more than 30 years in the financial services industry, including extensively covering the transport and aviation sectors as a research analyst. He also previously served as chief executive officer of EasyBus and held senior project management roles at National Express.

Hyde is an independent non-executive director and not a representative of EasyGroup.

Wizz Air promotes COO

Hungarian low-cost carrier Wizz Air has promoted its chief operations officer (COO) Diederik Pen to executive vice-president and COO.

Pen joined Wizz Air in 2013 as chief operations officer. In his new role, he will be based at the company's Budapest operations headquarters, reporting to Wizz Air's chief executive officer, Josef Varadi.

Speaking to *Airfinance Journal* in Dublin in January, Varadi said the airline was looking to finance aircraft on its balance sheet for the first time, when it takes delivery of its first Airbus A321neo.

The first deliveries are expected in 2019 and Wizz Air will come to the market with a request for proposals in the second half of this year, he adds.

Wizz Air has a fleet of 77 aircraft, comprising 63 A320s and 14 A321s, according to *Airfinance Journal's* Fleet Tracker. Lessors the airline works with include Avolon, BOC Aviation, CCB Leasing and SMBC Aviation Capital.

Fiji Link gets new general manager

Fiji Airways has appointed Athil Narayan as general manager of its domestic subsidiary, Fiji Link.

Narayan replaces Thomas Robinson, who has become executive general manager, engineering, at Fiji Airways Group.

Narayan started his career with Fiji Airways in 1994 as a graduate trainee. He has held management positions at Fiji Airways, Galileo GDS systems, Telstra Clear and Freedom Air.

He has senior management experience at Starwood Hotels (Denarau), ANZ, Westpac and Wormald Fire & Security.

SIA veteran joins **Stephenson Harwood**

Singapore Airlines (SIA) veteran Jack Koh has joined the Singapore office of law firm Stephenson Harwood (SH) as a consultant.

In an interview with *Airfinance Journal* at the Inaugural Korea Airfinance Conference in Seoul, Koh pre-empted the obvious question of why a former airline executive is joining a law firm.

"When law firms review documentation these days, they may not want to comment because it is not their area of expertise," says Koh. "What SH is trying to do is see whether we can give a complete service to the customer. We are trying to offer this as part of the SH product. What else can SH provide other than the legal service? I guess the important thing is what value can SH bring that other law firms cannot."

He adds: "I think the key reason is I feel strongly that my experience and knowledge should not go away from me. I should be able to pass on some of this knowledge to the industry."

Koh says, for example, that if an airline wants to buy aircraft from Airbus or Boeing, he could manage the sales campaign on its behalf.

"I can advise them what they need to negotiate with the manufacturer," he says.

He also believes that the existing clients of SH could benefit from his skill set. "Most airlines lease rather than own their aircraft. I should be able to advise airline clients on how to meet the lease return conditions and avoid any delay to the returns."

Koh joined SIA in the early 1970s, working in Singapore Airlines and SIA Engineering. He retired from the company two years ago.

He says one of his most interesting projects at the company was leading the introduction of the Airbus A380, for which SIA was the launch customer.

Hogan Lovells hires Singapore partner

Law firm Hogan Lovells has hired Matthew Leigh as a partner in its Singapore office.

Leigh joins the firm from Norton Rose Fulbright, where he was a senior associate in its asset finance practice in Singapore. His practice specialises in asset financing for banks, financial institutions, lessors and borrowers.

The firm has been seeking a strategic addition to its asset finance team in Singapore, which has seen its banking practice develop under partner Alexander McMyn over the past five years.

In January, Hogan Lovells promoted Richard Goss from counsel to partner in its London office.

Former Freshfields lawyers join **Holland & Knight**

Five aviation finance lawyers who were previously at Freshfields Bruckhaus Deringer have joined Holland & Knight's transportation finance practice in London.

William Coleman and Victoria Koob join the firm as partners, while Laurence Long, Fabio Miceli and Rachel Thomasen arrive as associates.

The lawyers have a range of asset finance experience, including cross-border asset finance and leasing structures, with a focus on the aviation industry. They represent leasing companies, airlines, banks and other financial institutions in a wide array of transactions, including export credit-supported financings, multi-aircraft portfolios, leasing and predelivery payment facilities.

Their practice focuses on the Middle East, advising on various Gulf-based project finance, securitisation and offset transactions using both Islamic and conventional financing structures.

In October, *Airfinance Journal* reported that Freshfields was due to close its London-based aviation practice. Rob Murphy, co-head of the firm's aviation sector group, left at the end of 2016 to join China Development Bank's aircraft leasing unit, CDB Aviation Lease Finance, as its general counsel and chief operating officer.

HK Airlines promotes Jiaqi to CFO

Hong Kong Airlines has named Luo Jiaqi, Jacky as its new chief financial officer (CFO).

He is responsible for the company's overall financial management, capital planning and allocation.

Jiaqi has almost 20 years' experience in the aviation industry. Before this promotion, Jiaqi served in managerial roles in the company's finance department for several years.

"Luo has been devoted to leading his team to develop and enforce high professional standards. I believe that Luo will leverage his rich experience in financial management in the aviation industry to continue to support the company's rapid development in his new position," says Wang Liya, Hong Kong Airlines' president.

HFW hires Paris partner

Holman Fenwick Willan (HFW) has appointed Richard Jadot as the new finance partner for its Paris office. Jadot's practice focuses on international syndicated loans, acquisition finance, asset finance, factoring and tax-advantaged financings. His main expertise and knowledge is in the renewable energy and aviation sectors.

Jadot joins from Hogan Lovells in Paris, where he headed the banking practice. Before that, he has worked at CMS Francis Lefebvre and Clifford Chance (Paris and Vietnam). Jadot will hope to grow HFW's finance practice in Paris, which is led by Jean-Marc Zampa, who joined in April 2015, and Diane de Moüy, who joined in September 2016. Both lawyers are recognised for their experience in shipping finance, acquisition finance and corporate finance.

BNP Paribas promotes Eugene to head of risk

BNP Paribas' Eric Eugene has been promoted to a new role within the bank, effective 2 May.

He joins the risk division of BNP Paribas as the global head of corporate risk. He previously served as the global head of asset and export finance.

Eugene will be a member of the BNP Paribas risk executive board, the risk corporate and institutional banking management team and will also sit at the corporate coverage, financing and advisory board.

He will be succeeded by François Artignan, currently head of BNP Paribas' EMEA media and telecom industry group.

Eugene joined BNP Paribas and its aviation finance department in 1991. He moved to Tokyo in 1995 to create an Asian aviation presence for the bank. In 2001, he became global head of aviation finance. Then in 2007, he was made global head of transportation, adding shipping and offshore to his responsibilities.

CALC names new chief risk officer

China Aircraft Leasing Group (CALC) has appointed Yu Tai Tei as chief risk officer.

Tai Tei has more than 30 years' experience with multinational and Hong Kong-listed companies, as well as the Hong Kong Inland Revenue Department, in the areas of finance, business control, auditing and tax. He joined CALC in June 2013 as chief financial officer.

In his new role, Tai Tei is responsible for CALC's risk management and internal controls. With a deep understanding of the group's business operations, as well as its risk tolerance and thresholds, he will tailor and streamline a comprehensive risk management framework for the group and will analyse all risk-related issues so as to manage inherent risks in the group's business activities.

Aside from full compliance with the statutory requirements, he will help to enhance CALC's corporate governance structures and optimise the group's business model.

Shiro Kambara retires from Nomura

Shiro Kambara retired from Nomura Babcock and Brown (NBB) in February after serving at the firm for 23 years.

Kambara spent much of his professional life exploring the intricacies of the Japanese operating lease with call option (Jolco) structure. At the same time, he maintained a deep reverence for Japan's natural beauty, geography, history, culture and religion.

He, therefore, speaks as fluidly and lucidly about the intricacies of a tax lease as he does about the core tenants of the Japanese religion, Shinto.

When *Airfinance Journal* caught up with Kambara in Tokyo, he was planning a trip with some Brazilian tourists that weekend to Mount Takao after becoming a certified National Guide-interpreter – a prestigious title awarded by the Japanese government – seven years ago.

Although Kambara intends to spend his weekends as a volunteer guide helping visitors from overseas, he is not saying goodbye to the aircraft finance market just yet. He is in discussions with an undisclosed market player and is seeking a new job, though the move has not yet been finalised.

"I think my life will be more or less the same, assuming that I work continuously," he says.

After Kambara completed his very first Jolco with one of the European airlines for NBB, he took the airline employees to Kamakura – a peaceful coastal town about one hour from central Tokyo, and one of Kambara's favourite places to bring foreign guests. Kambara declines to disclose the name of the airline.

"And then just after that we got another deal with them," he says. "I'm a certified tour guide, but I did not charge the airline for my services – I charged them for the new deals," he adds, jokingly.

For the last three years, he stopped working on Jol and Jolco transactions and became head of the internal audit department. His last deal at NBB was an enhanced equipment trust certificate transaction for British Airways in relation to $1.3 billion worth of aircraft involving both narrowbodies and widebodies.

He grew up in Kanagawa prefecture next door to Tokyo and studied legal studies at Waseda University, beginning his career in April 1979 with Fuyo General Lease.

Kambara first developed his interest in aircraft financing after joining Fuyo. After spending three or four years covering the domestic Japanese market, he was transferred to their international division and embarked on ship finance and aircraft finance, and other cross border lease transactions. One of these was the so-called JLL, or Japanese leveraged lease, which first emerged in 1985.

Having worked on the structure from its very inception, Kambara has born witness to all the major changes to the tax benefits of the structure.

"There were several types of tax law changes, but the most significant one was in 1998, affecting the cross border JLL," he says.

Just before that tax law change, Kambara started working on a then-new product, or the Jolco – though initially it bore a slightly different name: Jalco.

"In the group, we nicknamed that product as 'Jalco', but when Babcock and Brown acted on that as advisor to Iberia, Iberia mentioned in reference to that nickname with the Jalco. In the market it was recognised as a mistake – that that should be a 'Jolco', not 'Jalco'. Thus, the product is now commonly known as 'Jolco'."

Jenner & Block launches aviation practice

Jenner & Block has announced the formation of a new aviation and aerospace practice group with the addition of three well-known and established global industry professionals. Serving as group co-chairs are Thomas Newton Bolling, a former United Airlines vice president and deputy general counsel; Marc Warren, most recently the chair of Crowell & Moring's Aviation Group; and Abby Bried, former United Airlines Associate General Counsel for regulatory, alliances, government affairs and legal administration.

All three join the firm as partners. Bolling and Warren will be based in Jenner & Block's Washington, DC office and Bried will be resident in the firm's Chicago office.

The new aviation and aerospace practice extends the firm's already strong reputation in serving clients in the transportation sector. The practice provides full-service, multi-disciplinary capabilities in areas such as antitrust and competition, environmental, international, regulatory, government contracts, administrative enforcement, business transactions and litigation matters, including investigations and arbitrations. In addition to representing United Airlines, the firm represents a number of clients in litigation, transactional and regulatory matters including Gulfstream, Jet Aviation Holdings, General Motors, Nissan, Mitsubishi, CSX, GATX, Hertz and Amtrak, among others.


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AF-KLM Ebitdar: moving in the right direction

The Franco-Dutch group has overcome some major challenges to post good results.

Air France-KLM's annual financial results released in the first quarter of this year showed the carrier is heading in right the direction financially, despite intense competition on its network, strikes and terrorism threats impacting its operations.

The airline's financial rating, as assessed by *Airfinance Journal's* Financial Ratings, has increased by three notches to BB- from B over the past two fiscal years. Last year's improved results reflect ongoing progress in the group's turnaround.

The group reported a €792 million ($835 million) net profit for the year 2016, up from €127 million in 2015. At operating levels, the Franco-Dutch group posted a €1.05 billion profit, up from €780 million in 2015.

Operating margin is now at 4.2% compared with 3% a year ago. Year-on-year Ebitdar (earnings before interest, tax, depreciation, amortisation and rent costs) was up €373 million to €3.78 billion. And its Ebitdar margin continues to improve.

At 31 December 2016, it represented 15.2% compared with 10% two years ago. Even since the third quarter of 2016, its Ebitdar margin has improved 0.3 percentage points.

The group's leverage has greatly improved as a result of its restructuring plans since 2010.

Air France-KLM says 2016 was the fifth year of improvement in the adjusted net debt/Ebitdar ratio, which decreased to 2.9 times at 31 December 2016 from 3.4 times at the end of 2015. At the end of 2014, leverage was 5.3 times, according to Financial Ratings.

Other key metrics highlight a continuous improvement in financial terms.

Fixed-charge coverage, which represents the number of times Ebitdar covers the sum of net interest expense plus aircraft rent, has improved to 2.8 from 2 over the past three years.

Liquidity, or unrestricted cash, has slightly improved over the past three years, the data shows. It represented 16% of the past 12 months of revenues at 31 December 2016. This compared with 12.7% in 2014.

Average fleet age has increased to 11 years over the past three years but changes are underway because Air France-KLM has started to introduce more new-technology widebody aircraft to replace Boeing 747s and Airbus A340 fleets.

In 2016, the group took delivery of three 777-300ERs, a single 787-9, along with four 737-800s and four Embraer 175s.

The group has 82 aircraft under firm orders, with 21 deliveries planned this year. Air France-KLM will take two 787-9s, one 777-300ER, eight 737-800s, two Airbus A320s and eight E175s.

Air France-KLM says it is maintaining strict capital expenditure discipline, targeting positive free cash flow before disposals. The 2017 investment plan stands at between €1.7 billion and €2.2 billion.

Better cash flow management

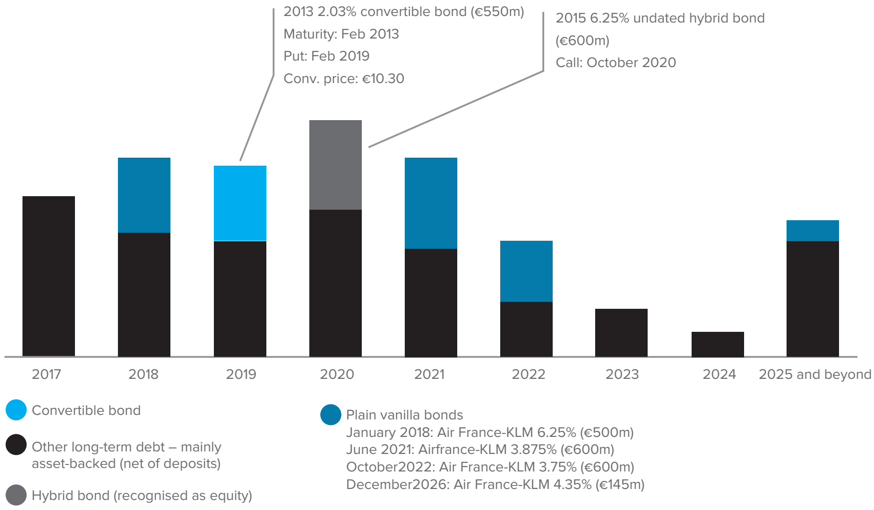
During the period between 1 January and 31 December 2016, net cash flow from operating activities totalled €2.24 billion. In the earlier period, it amounted to €1.89 billion.

But the group used €727 million net cash flow in investing activities compared with €1.16 billion in 2015.

Net cash flow from financing activities totalled €667 million compared with €504 million in 2015.

Air France-KLM says last year's free cash flow before disposals was positive at €347

Debt reimbursement profile at 31 December 2016



Source: Air France-KLM, February 2017

million because of the disciplined growth in investments.

Net debt was further reduced thanks to free cash-flow generation. As a result, net debt amounted to €3.65 billion at 31 December 2016, versus €4.31 billion a year earlier, an improvement of €652 million despite currencies having a significant negative impact of €73 million. At the end of 2012, Air France-KLM's net debt amounted to €6 billion.

The group is pursuing a further reduction in net debt, targeting an adjusted net-debt-to-Ebitdar ratio below 2.5 times mid-cycle by the end of 2020.

During 2016, Air France-KLM divested from two shareholdings: it sold a total of 4.95 million of Amadeus shares representing 1.13% of the share capital and finalised the transaction to sell 49.99% of the Servair share capital.

Air France-KLM continues to lengthen its debt profile. In 2016, the group successfully placed a six-year bond for €400 million at 3.75% and issued 10-year senior notes for $145 million at 4.35%.

The group's debt profile shows €1.05 billion-worth of long-term debt for repayment this year. In 2018, Air France-KLM has €800 million long-term debt to repay along with a €500 million bond, which was priced at 6.25%.

During the course of 2016, Air France-KLM further strengthened its liquidity situation and continued to reduce its finance costs. Last year, the net cost of debt totalled €260 million compared with €310 million in 2015 and €370 million in 2014.

Cash flow before voluntary departures and changes in working capital requirements reached €2.37 billion compared with €1.99 billion in 2015. Financial operations, mainly through disposals, generated a further €346 million over the 12-month period. The group recorded €201 million cash-in from the sale of Amadeus shares and €142 million net cash-in from the Servair catering transaction.

Air France-KLM continues to enjoy a good level of liquidity, with net cash of €4.3 billion at 31 December 2016, and undrawn credit lines of €1.76 billion. The two main undrawn credit lines amount to €550 million for Air France-KLM and another $500 million for Air France. KLM has a €575 million revolving credit facility that matures in July 2020.

Profitable long-haul

The group's long-haul network profitability further increased despite the unit revenue pressure and the geopolitical environment. This market resulted in €1.3 billion operating profit for Air France-KLM in 2016.

But Air France-KLM is losing ground on its "medium-haul hub operations". Its Paris hub operating profit decreased by €120 million as the group was notably impacted by terrorism attacks last year.

In the meantime, the Amsterdam hub's operating profit increased by €60 million.

To combat this, Air France is densifying its A320-family cabins this year, while KLM is offering higher capacity with a new E175 fleet.

In parallel, the group is accelerating its low-cost vehicle Transavia operations as it seeks to become a major player in the point-to-point business provider within Europe to and from its home markets.

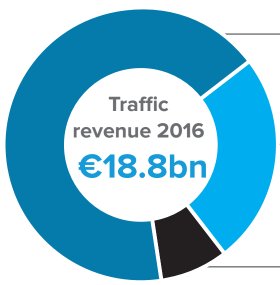
The point-to-point restructuring is on track, says Air France-KLM. In 2016, the group posted a €50 million operating loss, albeit a €20 million improvement on 2015.

Under its Perform 2020 plan, the group continues to focus on unit cost reduction. Air France-KLM is looking at unit cost reduction in excess of 1.5% a year between 2017 and 2020.

As part of the unit cost reduction, Air France is creating a new carrier within the group. The Boost project will focus on ultra-competitive markets. This will enable the group to go on the offensive and strengthen its Paris CDG feeding.

Air France-KLM says the fleet will include about 10 widebody aircraft by 2020.

Paris hub feeding impacted by terrorist attacks



	Traffic revenue (2016 €bn)	Operating profit (estimates 2016 €m)	Change (vs 2015 €m)
Long-haul AIR FRANCE KLM	12.7 67%	1,300m	+250
Medium haul hub feeding AIR FRANCE KLM	4.7 25%	-200m	-60m
Point-to-point AIR FRANCE HOP!	1.5	-50m	+20m

- Long-haul network profitability further increased despite the unit revenue pressure and the geopolitical environment
- Medium-haul hub feeding notably impacted by terrorism
  - Amsterdam hub feeding operating profit increased by €60m
  - Paris hub feeding operating profit decreased by 120m notably impacted by terrorist attacks
- Point-to-point restructuring on track, further reducing the losses

Source: Air France-KLM, February 2017

First Korean operating lessor **sets up shop**

Crianza Aviation set up in Seoul in August 2016 with investment from Korean and German companies. The lessor is now in talks for new investment and is aiming for a fleet of 50 aircraft by 2020, **Michael Allen** reports.

South Korea is not known as being a home for aircraft operating lessors, but a recently established Seoul-based company thinks it can buck that trend.

Crianza Aviation, established in August 2016, has already acquired seven widebody aircraft and plans to set up a leasing platform in Dublin to take advantage of the jurisdiction's favourable tax regime and widely regarded status as a centre of excellence for aircraft leasing.

Crianza's fleet consists of aircraft such as the Boeing 777-300ER and Airbus A380 models leased to state-owned "creditworthy" airlines, including Singapore Airlines and Emirates Airline.

The company was formed by a joint venture between Korean private equity company IMM, which was set up in 1999, and Cerritos Holdings. Crianza's other investors include German company EMP Structured Assets and Youjee Partners.

Pumsoo Ra, chief executive officer of Crianza Aviation

Korean foothold

"We and IMM discussed the establishment of an aviation leasing company from early 2016 onwards at the executive level. After a few months' lengthy discussion, instead of pursuing investment in a senior or junior piece on an aircraft deal-by-deal or portfolio deal, we both concluded to set up an aircraft leasing company, which it seems is something IMM also has been considering for a long time – and that was my dream too," says Pumsoo Ra, chief executive officer of Crianza Aviation.

Crianza wants to tap into the "special characteristics and requirements" of the Korean financial markets on aviation investment, he adds.

Philipp Prior, founding and managing partner of EMP Structured Assets, also told *Airfinance Journal* that the investment will give EMP a channel in order to place its deals into South Korea.

"There is a lot of discussion about deals going on and there's more talk than deals get closed, and I think this is good to streamline investor appetite and group investors around you," he says.

"IMM, one of the largest private equity firms in Korea, has shown significant financial performance in the last 10 to 15 years and they are quite well known by financial institutions in the Korean market," adds Ra.

Jin Heum Paek, director at IMM and managing partner of Crianza Aviation, says that IMM has paid attention to aircraft financing and investment for three years and had invested on two individual aircraft transaction tranches, though he would not disclose specifics, citing confidential issues surrounding the deals.

"Ultimately, there was a limitation on making individual investments. Therefore, we formed an aircraft leasing platform to expand investment and deal with different types and styles of investment structure," he says.

"We believe an aircraft leasing platform provides us not only with risk diversification, but also generates stable income because of the portfolio effect and naturally following economy of scale. With these circumstances in mind, an in-depth discussion with Youjee Partners led us to this stage and concluded with the establishment of Crianza Aviation."

Ra adds that IMM had considered investment in aircraft for a "long time", not only reviewing individual aircraft investments but also portfolio investment approaches in the aviation sector.

"I felt it was matter of timing to IMM," he says. "It seems partnering with IMM put both parties completely in the right market position in Korea and made both parties' idea a reality."

Dublin expansion

James Choi, marketing director of Crianza Aviation, says that the Seoul office will cover the structuring and investor relations, and the rest will be handled outside of South Korea.

"Crianza's board believes that it has to go to Dublin to become an international aviation leasing company. We are meeting manufacturers and airlines and making a contract to get the mandate from the airlines," he says.

Crianza plans to raise finance and acquire and lease 10 additional aircraft in 2017, with the goal of having 50 aircraft by 2020. The company wants to begin with state-owned or creditworthy airlines as a "growth base", according to Choi. EMP's Prior, commenting on Crianza's choice of aircraft, adds: "I think the emphasis is still on the widebody because you can do full-payout on junior tranches without any, or too much, residual value or balloon risk in the end."

Although Crianza's shareholders are composed of Korean institutional investors and a "small number" of foreign investors, this year the company expects to attract not only more Korean institutional investors but also "significant" foreign investors, too. Aircraft leasing out of South Korea is a brand new development for the market.

Two industry sources active in the Korean market were reluctant to comment on Crianza's business model or whether more companies in South Korea could follow suit, saying it is still early stages and not enough information about the company is available to make an informed judgment.

Since Crianza sees a Dublin aircraft-owning entity as essential to its growth, it appears that while South Korea may in the future serve as a home for the lessors' operations and management, the real leasing will be done overseas.

APAL bets on Hong Kong

New aircraft lessor Asia Pacific Aircraft Leasing Group is hoping Hong Kong will soon benefit from tax reforms favourable to aircraft lessors.

Patrick Liu, the chief financial officer of Asia Pacific Aircraft Leasing Group (APAL), tells *Airfinance Journal* he has faith that Hong Kong's legislature will pass a bill later this year that will significantly reduce Hong Kong's tax rate for aircraft leasing companies domiciled in the Chinese special administrative region.

Airfinance Journal reported in January that Hong Kong has taken a step towards introducing tax reforms that could make the jurisdiction significantly more competitive for aircraft lessors, with an 8.25% tax rate. The changes could come into effect as early as this summer (*see cover story, page 29*).

Liu, who formerly served as chief operating officer and chief financial officer at fellow Hong Kong lessor China Aircraft Leasing Group Holdings (CALC), said a number of market research reports foresee that China's aviation industry will see long-term growth over the next 10 to 20 years. His company opted to set up its headquarters in Hong Kong because of its natural position as a gateway to China with ease of access to business and financing opportunities, he adds.

The company has been in discussion with various free-trade zones (FTZs) in China to set up its onshore leasing platform, but the progress has been slowed down because of the "severe market competition driving the lease rate factor in the Chinese market to a record low".

Liu says: "Although some FTZs may subsidise aircraft lessors by offering special grants and subsidies for a certain period of time, the total expected return for onshore deals is still relatively less attractive at the moment.

"Unless APAL has a special agenda other than maximising our return on investment, we prefer to do the right things at the right time for our shareholders. Furthermore, it is currently not economically feasible for the onshore leasing platform to do offshore deals."

Hong Kong, on the other hand – with its separate legal and tax systems that are significantly different to mainland China's – offers more certainty to companies.

"Once the LegCo [Legislative Council of the Hong Kong Special Administrative Region] approves the new bill, we could expect it to run for quite some time prior to the next review, if any," he says, "and it will be economically justifiable to carry out both onshore and offshore leasing transactions at one place."

Liu adds: "Hong Kong has a very good and simple tax structure. Apart from the proposed dedicated tax regime for the aircraft finance and leasing business, salary tax and the living and working environment are also important factors to attract those industry professionals to come and work in Hong Kong."

Growth strategy

Liu does not believe that growth at any cost should be APAL's goal. The company, which was established in Hong Kong in March 2016, wants to maintain a medium-sized portfolio and trade aircraft out to maintain this size.

He says that in its first year of operations, the company managed to aquire three aircraft on lease to two airlines operated in the Asia-Pacific region.

APAL's target is to maintain a fleet of between 50 to 70 units, trading aircraft out of the portfolio in order to maintain its desired composition of fleet age and underlying lessees for a balanced risk and return.

"At this stage, bank financing seems to be our best choice for aircraft acquisitions, although alternative financing channels are also available to us. Given the fact that APAL is founded and managed respectively by Chinese investors and a management team, we deliberately picked one of the Chinese policy banks to finance our very first aircraft acquisition transaction," says Liu.

The first two aircraft acquired by APAL were financed by the Export-Import Bank of China.

For its third aircraft, the company used financing from its own equity and is now undergoing the refinancing of this aircraft with an international bank.

"For all subsequent transactions, we will diversify our financing channels with different financiers who offer the best terms to us," says Liu.

The company's fleet comprises both narrowbody and widebody aircraft types. Liu declined to disclose the MSNs of the aircraft and the names of both lessees.

> *"Unless APAL has a special agenda other than maximising our return on investment, we prefer to do the right things at the right time for our shareholders."*
>
> **Patrick Liu**, chief financial officer, Asia Pacific Aircraft Leasing Group

Ownership

Liu would not disclose the names of APAL's shareholders, but a filing to the Hong Kong Stock Exchange indicates that VST Holdings has agreed to invest $30 million into the lessor. VST Holdings said it made its investment to "diversify its investment portfolio".

Another investor is Yuxing Infotech, which holds an effective shareholding interest of 9.47% in APAL, according to Yuxing's 2016 interim report.

Other investors, whose names are not in the public domain, have agreed to provide $50 million, $10 million and $15.6 million, according to the stock exchange filing by VST Holdings.

APAL overview

Started business operations: March 2016

Total number of aircraft: three

Aircraft model: Airbus A321 and A330

Average fleet age: less than 1.4 years

Remaining lease term: 10 to 12 years

Staff: 15 people spread across its Shenzhen office and Hong Kong head office, located on the sixth floor of the China Building in Central

Principal bank: The Export Import Bank of China

Second-hand market boosts **Embraer**

With the E195-E2 making its public bow, the Brazilian manufacturer's current-generation aircraft are enjoying a second coming.

Embraer made the headlines in the first quarter of this year with the roll out and first flight of its E195-E2 model, but activity for used current-generation aircraft remains buoyant.

The E195-E2 model had a tremendous month in March. Embraer rolled out its largest aircraft at its Sao Jose dos Campos, Brazil, facility on 7 March and performed the first flight on 29 March.

The flight, which was originally scheduled for the second half of 2017, comes 10 months after the first flight of the E190-E2.

Embraer will use two aircraft for the E195-E2 certification campaign. The first prototype will be used for the aerodynamic and performance tests. The second prototype, which will also make its inaugural flight by the end of this year, will be used for the validation of maintenance tasks and of the interior.

The E195-E2 is scheduled for entry into service in the first half of 2019, with Brazilian carrier Azul.

The E195-E2 has three additional rows of seats, when compared with the current-generation E195, and it can be configured with 120 seats in two classes of service, or up to 146 in a single class. The aircraft also has a significant increase in range of 450 nautical miles, which allows trips of up to 2,450 nautical miles.

With a 20% lower cost per trip and a cost per seat similar to larger aircraft, the E195-E2 is the ideal aircraft for regional business growth, as well as to complement existing low-cost business plans and mainline fleets, says Embraer.

The Brazilian manufacturer states the E195-E2 will save up to 24% in fuel and 20% in maintenance costs per seat, when compared with the current E195.

"With a unique level of efficiency, the E195-E2 offers our airline partners the opportunity to develop new markets with greater profitability without compromising unit cost competitiveness. It's a profit-hunting machine," says John Slattery, president and chief executive officer, Embraer Commercial Aviation.

The E2 family has accrued 275 firm orders – 90 for the E195-E2 – in addition to 415 options, purchase rights and letters-of-intent, totalling 690 commitments from airline customers and leasing companies.

In the first quarter, Embraer booked orders from Scandinavian regional carrier Wideroe, which operates Bombardier Dash 8 turboprops.

The Norwegian carrier has a contract with Embraer for up to 15 E2-family aircraft, consisting of three firm orders for the E190-E2 and purchase rights for 12 further E2-family aircraft.

Wideroe will receive its initial aircraft in the first half of 2018.

The manufacturer also received welcome news from operating lessor Aircastle which placed three E195- E2 aircraft with Brazilian carrier Azul Linhas Aereas.

Market sources indicate the US-based lessor is working on placing its other aircraft from the order it lodged at the 2015 Paris Air Show, which also includes E190-E2s.

Second-hand activity

Meanwhile, the second-hand market for current-generation products continues to be strong. In the first quarter, Amsterdam-based TrueNoord Regional Aircraft Leasing closed four of the six Embraer E190 aircraft it purchased in January.

The portfolio is made up of aircraft built in 2013 and 2014 with leases attached to three different airlines.

Two of the aircraft are on lease to TUIfly Belgium, says one source, while a pair of E190s are leased to AeroMexico Connect.

TrueNoord Regional Aircraft is expected to close the remaining two units, which are on lease to Air Astana, in the second quarter.

All six units are being acquired from BOC Aviation.

The E190 investment marks the start of a highly targeted on-going development and growth strategy for the TrueNoord fleet under lease, after investment from private equity firm Bregal Freshstream in 2016.

TrueNoord financed the first tranche through a term financing facility with DVB bank and PK AirFinance.

Saudi Arabian Airlines selected AerFin for its Embraer 170 fleet phase-out programme, say sources.

The Saudia fleet, which is between 10 and 12 years old comprises 15 Embraer 170s and engine spares.

The UK-based maintenance, repair and overhaul (MRO) and end-of-life specialist entered the bidding along with two other companies, says a source.

Sources add that some aircraft will be operated as "flyers" but others could be sold to support the aftermarket.

Last year, AerFin said it was looking to acquire more E170s after completing the acquisition of two former Estonian Air Embraer 170 aircraft from SMBC Aviation Capital.

Last autumn, it sold a 2005-vintage E170 aircraft to Austrian operator People's Viennaline.

It also parted out another 2005-built E170 and sold the engines to General Electric.

Japanese investor Fuyo General Lease acquired two new E175s under a sale and leaseback transaction with KLM. The units were delivered new to KLM Cityhopper in August and October 2016.

Large fleets transits

Canadian carrier Sky Regional Airlines is taking delivery of some E170 and E175 models under operating lease agreements with GECAS. The units were previously in operation at AeroMexico Connect and LOT Polish Airlines.

GECAS has also been busy moving ex-Republic Airlines E170s to S7 Airlines after the Russian carrier agreed to lease 17 units late last year. All the aircraft are 2004/05-vintage, and last flew for Republic Airlines and Shuttle America.

Embraer received the type certificates from the Russian authorities for E170s and E175s in October 2016, paving the way for Russian airlines to operate those aircraft types.

The E190 and E195 were certified by Russia in 2012, and Saratov Airlines has been flying the E195 since 2013.

S7 Airlines was expected to introduce the first aircraft at the end of March. Deliveries are scheduled for a period of up to two years.

Nordic Aviation Capital continues to transit the ex-Air Canada E190 fleet with lease placements to AeroMexico Connect. The Danish lessor has committed to place five aircraft of the type with the Mexican carrier.

Another part of Air Canada's former fleet is heading to US-based aircraft trader BeauTech Power Systems, which is acquiring the 2006 units for part out.

South African carrier Airlink is acquiring a total of 13 E-Jets – 10 E190s and three E170s – as part of its fleet modernisation.

Embraer's ECC Leasing will provide five E-Jets – three E170s and two E190s – to the regional carrier as Airlink replaces its Avro RJ85 fleet. Airlink will start to receive the aircraft in the first half of 2017.

In late March, Airlink received a 2008-vintage E170 unit that was previously operated by Virgin Australia.

Another Virgin Australia E190 found a home at Israel's Arkia Airlines in a transaction arranged by Nordic Aviation Capital during the first quarter.

DAE increases ATR72-600 exposure

The Dubai-based company looks to become the largest lessor of the aircraft type. **Jack Dutton** reports.

Middle Eastern leasing company Dubai Aerospace Enterprise (DAE) is looking to acquire more ATR72-600s, after buying a GECAS portfolio and issuing a request for proposal to finance seven more units to bring its total owned and committed number for the aircraft type up to 57.

"We believe the ATR72-600 is a good asset from a lessor's perspective," DAE chief executive officer, Firoz Tarapore, tells *Airfinance Journal*. "Our global reach and deep credit analysis capabilities allow us to offer a great product to our lessee customers. We will be further increasing our presence to become the number one lessor of the ATR72-600."

DAE says it looks to own up to 100 ATR72-600 units.

"DAE firmly believes in the potential of the ATR72-600 in regional networks, both in terms of its technical capabilities, as well as the superior customer experience it provides," adds DAE's managing director, Khalifa Hassan AlDaboos. "Especially in emerging markets, the ATR72-600 has proven to be an invaluable asset that we will continue to invest in."

Recent acquisitions

In March, DAE acquired a portfolio of 14 ATR72-600s from GECAS, which includes two aircraft leased to Jet Airways, two on lease to LIAT, three on lease to Alliance Air and seven on lease to Brazilian carrier Azul.

The lessor is financing this portfolio acquisition through a combination of commercial debt and equity. Although Tarapore would not comment on the specific financing parties involved, one source familiar with the deal says the lessor tapped local banks to finance the portfolio.

This purchase brought the total number of owned and committed ATR72-600 aircraft in DAE's fleet to 57, making DAE one of the largest lessors of the ATR72-600 worldwide. In addition, DAE has options with ATR for a further 20 aircraft of the same type.

With the GECAS portfolio acquisition, DAE is taking on more Azul risk, now having 17 ATR72-600s with the carrier, which are between 2012 and 2015 vintage.

"We believe there is adequate compensation for taking on incremental Brazil and Azul risk," says Tarapore. "Azul remain an important client for us, and we are pleased to grow and continue to provide Azul with a high level of consistency and customer care."

Along with this, DAE issued a request for proposal in mid-March to finance seven ATR72-600s that are on 12-year leases with Alliance Air in India.

> *"Our global reach and deep credit analysis capabilities allow us to offer a great product to our lessee customers. We will be further increasing our presence to become the number one lessor of the ATR 72-600."*
>
> **Firoz Tarapore**, DAE chief executive officer

DAE first entered the turboprop market in February 2014 when it committed to 20 aircraft of the type, as well as 20 options. It has also acquired ATR72-600s from airlines through sale and leaseback deals.

Although there is a pressure on lease rates for the ATR72-600, Tarapore says that the 14 aircraft, which have leases already in place, "already have favourable rates and remaining tenor" and the lessor takes "a longer-term view of the attractiveness of these assets".

Source: ATR

Leasing market to **split into two camps**: Sheridan

Paul Sheridan, the acting chief executive of the Dublin-based lessor, tells **Jack Dutton** that ambition could see lessors going down different paths. It is one of the reasons he is on a hiring spree.

Established less than three years ago, Accipiter is a Hong Kong-owned lessor based in Dublin which focuses on younger, more liquid assets. Despite operating in an increasingly competitive leasing industry, Accipiter's chief executive is positive about being able to make returns.

"We all like to grumble about how hard and bad it is out there, but in reality, the leasing market couldn't really be in any better shape than it is at the moment," said Paul Sheridan, acting chief executive officer of Accipiter.

"Airlines are making money and there's a huge amount of resilience in their balance sheets. There's only a handful of airlines out there that don't lease any more. There's a whole lot of really good airlines that lease older aircraft as well as younger aircraft, making them financeable through their full lives," he adds.

Sheridan also notes that some lessors have led the way in opening up new markets.

"If you look at BOC Aviation, for example, doing a Hong Kong listing like that and really just being the first to go in and do it is something we can tip our collective hats at because people will follow and it will be made easier because they did it," he says.

Lessors now have ample access to debt through the bank market, private placements, asset-backed securities (ABS) and bonds. They are also able to acquire second-hand aircraft easily from other lessors.

"We've also seen a very strong trading market," says Sheridan. "It means it's tougher with deals but we shouldn't really be complaining too much because the deals are out there if you can find them."

New entrants

The industry has seen a deluge of new leasing entrants recently and, although it means more competition, Sheridan sees this as a positive move.

"It's good to have proper liquid markets," he says. "There will be a lot of people who start up who just won't have the ambition to grow to the size that you need for a full infrastructure. There will be others like ourselves, that set themselves up and build a full-service platform here in Dublin."

Sheridan believes that as the market develops, the industry will start to see people splitting into one of those two camps. He adds that Accipiter will want to be able to hold onto aircraft for their full lives if it needs to, and be flexible on when it trades aircraft.

It can be tricky being a lessor with 30 to 40 aircraft instead of being smaller or a lot larger, but Sheridan says that the market can take more new entrants.

"If we're all looking for the same thing that inevitably means pricing's softer and yields and terms will go down because there's just more competition. We'll see what happens, if and when the next downturn hits, depending what type of a downturn it is, and whether people are in the same market or not."

Hiring new hands

Accipiter has a team of 28 people in Dublin and looks to have more than 40 staff based there by the end of the year. "We're at that stage in our evolution where we have our aircraft coming back off lease, so that always increases the workload," says Sheridan. "And then, as you always need to in any leasing company, you build yourself up and protect yourself against the unknowns – the things that might come at you when you don't expect them."

To stay on top of this workload, throughout 2017, Sheridan will be hiring for positions across the board, including in the capital markets, legal and risk departments. In an increasingly crowded leasing market, Sheridan has to distinguish his lessor from the others to continue to win deals.

"It's not an easy task," he says. "You have a lot of competition out there and you have to get to know your airline customers and your lessors that we would buy from as well as possible."

Sheridan regards the relationship and low execution risk aspects as particularly important when trying to negotiate a deal. He adds that lessors need to make sure that the airlines understand how to deal with the leasing company when it comes to the return of the aircraft. Leasing companies need to ensure airlines that they are "not going to play games with deliveries", he says.

"We all like to grumble about how hard and bad it is out there, but in reality, the leasing market couldn't really be in any better shape than it is at the moment."

Paul Sheridan, acting chief executive officer of Accipiter

Fleet plans

In 2017, Accipiter will take 13 more aircraft. The lessor will take a further 14 in 2018 and 2019. These acquisitions are through sale and leaseback transactions and purchases from lessors. Making no further acquisitions would bring Accipiter to 78 aircraft by the end of 2019, but Sheridan says that the lessor is in the market to acquire more aircraft. He adds that Accipiter does not have a specific target for the number of

Source: Accipiter

Accipiter has a fleet of 51 aircraft including two widebodies

aircraft in its fleet, but instead has specific return targets.

The company also does work with Vermillion – a joint venture between Accipiter's parent, Cheung Kong Property Holdings, and MCAP – which has 22 aircraft on its books and commitments for 16 more. Vermillion and Accipiter have committed 51 aircraft between them.

Accipiter's 51-aircraft fleet has only two widebodies: one Airbus A330-300 (MSN 1385) on lease to Iberia and one Boeing 777-300ER (MSN 35248) on lease to Air Canada. Accipiter remains cautious about increasing its widebody exposure and draws the line at 20% to 25% of its fleet's total market value being made up by twin-aisle units.

"We always look at widebodies and you can make a case for them, but I think we're inevitably always more cautious [than with acquiring narrowbodies]."

Widebodies take up about 6% of the total current market value of Accipiter's assets. Sheridan says he would consider increasing that share with the acquisition of medium-sized widebodies, but it would be only "purely deal driven" and the lessor would have to be able to make the case for it.

"I'm just not a believer in large-sized widebodies as a leasing asset," says Sheridan. "The depth of market is still unproven and much less so for medium-sized widebodies. And the definition of medium changes over the time because the traffic growth increases. Medium used to be 200 to 250 seats; it's now 300 to 350 seats. The market that the 767 and now the A330 filled so well will now be filled by the 787 and A350 and in the future the A330neo."

Many industry observers believe that because the 777X will not be flying for a few more years, it has not yet demonstrated whether it will be a "lessor's aircraft". In other words, it is too early in the programme to know whether lessors will choose to order the aircraft as opposed to only airlines ordering them. For this reason, Sheridan has not fully studied the aircraft yet.

"A lessor aircraft is a simple enough calculation," says Sheridan. "It's how many aircraft will be in service over time. So you build up the orders, deliveries every year and how widely spread out they are around the world. When we see that, the obvious cases that fall into that category are the really strong narrowbodies. Until we get to a point when the 777X is really filling all those markets, it's not on our radar."

Diversification is key

Despite not wanting to increase his company's widebody exposure significantly, Sheridan ensures that Accipiter's portfolio has strong geographic diversification.

"I think a global mix of lessees is really vital in this business," he says. "Of all the portfolio diversifications you can have, the two that I always care about the most are geographic mix and lease return dates, so you don't have too many aircraft coming back in any one year and they're all spread around the world."

He adds: "If you look back since the recovery of the financial crisis, 2009-10 Asia-Pacific was going great everywhere, Europe was obviously in crisis mode, the US was somewhere doing okay, soon after that South America was really coming on strong and then Europe started to come up a bit. And now the US airlines are doing incredibly well, while Asia-Pacific is suffering a little bit from some capacity and competition constraints. All those regions go at different speeds and having exposure across each of them in some proportion is really essential for a leasing company."

Sheridan believes it is important that lessors are open-minded as to which markets they lease aircraft.

"As a lessor, you can't avoid certain jurisdictions," he says. "We have a number of aircraft coming off lease in 2018 and 2019 and it may well be that an airline in Russia or Turkey is the best thing for that aircraft. But it doesn't mean that we would follow up and try and do business necessarily. It all depends on the situation."

Preparing for interest rate rises

For lessors, challenges do not only arise from fleet expansion and repossessing aircraft that are leased into difficult jurisdictions – there are marcoeconomic events they need to be wary of too. In mid-March, the Federal Reserve raised short-term interest rates from 0.75% to 1%. It was the third hike since the 2008 financial crisis. Although the move came across as more dovish than hawkish, the Federal Open Market Committee expects interest rates to rise by two further quarter-points this year.

To prepare for a potential rise, Accipiter has hedged its interest rate exposure on the debt financing deals that are on the company's books. Once you have done that, says Sheridan, "you can fit in a reasonably happy spot" as a lessor.

He adds: "Let the interest rates rise if they must because higher interest rates can make older aircraft more attractive, depending on the mix of costs for the airline. We take a capital markets-based approach to how we look at the funding and pricing of the aircraft, so we know what interest rate risks we might be taking."

Sheridan does not see interest rates in the 2% to 4% mark having a significant impact on the aviation industry, but says rates higher than that could be a problem.

Financing options

One of Accipiter's biggest milestones was the $1.2 billion financing it closed last year with a syndicate of 11 banks. The Dublin-based lessor came out with request for proposals in autumn 2015, a time when there was a bit of uncertainty in the capital markets, so it chose to tap the commercial debt market instead.

Sheridan says he was pleased with the outcome of the deal.

"I've worked on deals in the past where the financing constrains your choices and ability to do something on remarketing or in a situation where you have to repossess. No one really wins in those circumstances, so we were very focused on making sure we could keep the operational flexibility with the debt facility and we were able to get that from the banks," he says.

Sheridan adds that Accipiter getting approval from all of those banks to be a servicer of the aircraft was also "a really big win" for the company, which is still relatively young.

The market is seeing an increasing number of leasing companies turning to the asset-backed securities (ABS) market to finance their fleets. Elix Aviation and Dubai Aerospace Enterprise priced ABS transactions in the first two months of 2017, and sources say there is another lessor looking to issue a large ABS in the coming months.

Sheridan would consider an ABS, but it is not something he is looking at currently.

"It's a good product, but our assets are all a young age and are mainstream and we're happy to hold the equity in them. I think it better suits older aircraft or more niche aircraft where you can use an ABS as a financing tool or where you have young mainstream assets and want to use it as a sales channel."

Getting a rating is also something the company is keeping its eye on for the future. "We're still not even three years old yet, so we need to be a bigger and larger team and have a longer track record and then we can start really looking at those things."

China's capital flight concerns

Because there is a lot of competition in the leasing market, particularly among Chinese lessors, Sheridan says it is a rational decision for investors within China to diversify and look at US dollar-based assets in an environment when people are worried about depreciation of the currency and when the country is opening up a lot more to allow that investment.

Although he believes these capital flight concerns will have a short-term impact, he does not believe they will have a significant long-term impact on aviation finance.

"I think the official Chinese policy is to promote aircraft leasing and invest in that and to help it to happen. There are enough people invested in a very large way for now so it's long term."

Details of the Chinese government's plans for capital flight control remain murky. "It's not something you always hear any detail of when you're sitting here in Dublin apart from the occasional story you read in the FT [Financial Times]," says Sheridan.

Changes in Hong Kong

Hong Kong, where Accipiter's parent company, Cheung Kong Property Holdings Limited, is based, is also looking to pass new legislation that could be game changing for the leasing industry. The autonomous territory is looking to reduce the corporate tax rate from 16.5% to 8.25%.

Sheridan welcomes this development, but does not necessarily think it will be game changing. "Ireland and Singapore have spent a lot of time building up infrastructure and knowledge base, experience and withholding tax, through double-taxation treaties and everything else you would want to have to support a big leasing business. It takes time. It's not that it can't be done in Hong Kong, of course not, but I think it will take longer than just this one piece of legislation."

If Sheridan is right about leasing in Hong Kong, nobody should take offence. After all, in this industry, competition should not be something to grumble about.

Accipiter's current portfolio

MSN	Aircraft Type	Lessee
1385	A330-300	Iberia
2732	A320-200	Asiana
3409	A320-200	Wizz Air
3531	A320-200	Wizz Air
3562	A320-200	Wizz Air
4814	A320-200	Virgin America
4849	A320-200	Vueling
4867	A320-200	Virgin America
4960	A321-200	American Airlines
5012	A320-200	Philippine Airlines
5062	A320-200	Volaris
5103	A320-200	Philippine Airlines
5308	A320-200	Volaris
5322	A320-200	Volaris
5329	A320-200	Juneyao
5337	A320-200	Volaris
5339	A320-200	Juneyao
5434	A320-200	Spring Airlines
5455	A320-200	Juneyao
5649	A320-200	Jetstar Japan
5778	A320-200	Spring Airlines
5804	A320-200	Spirit
5861	A320-200	Spirit
5880	A320-200	Spirit
5911	A320-200	Spring Airlines
5992	A320-200	Indigo
6115	A320-200	Wizz Air
6131	A320-200	Wizz Air
30914	737-800	American Airlines
31097	737-800	American Airlines
33203	737-800	American Airlines
33518	737-800	American Airlines
35248	777-300ER	Air Canada
35727	737-900ER	Lion Air
35728	737-900ER	Lion Air
36806	737-800	China Eastern
36879	737-800	Norwegian
37285	737-900ER	Lion Air
37422	737-800	Hainan
37888	737-800	China Eastern
37953	737-800	Hainan
37955	737-700	WestJet
38039	737-800	SAS
38305	737-900ER	Lion Air
38684	737-900ER	Lion Air
38733	737-800	Lion Air
39383	737-800	Hainan
39625	737-800	GOL
40763	737-800	American Airlines
40765	737-800	American Airlines
41266	737-800	SAS

Source: *Accipiter*

AFJ announces
2016 Deals of Year shortlist

AIRFINANCE JOURNAL
AWARDS2017
New York Marriot Marquis, 17 May 2017

Airfinance Journal publishes the shortlist for the 2016 Deals of the Year and the winners of its individual and team awards.

Now in its 21st year, the awards are an essential calendar fixture for airlines and the global aviation finance sector.

Each year *Airfinance Journal* shines a spotlight on aviation transactions that standout in terms of innovation, size, timing, pricing and whether the deal created a new market standard.

The shortlist for this prestigious event, which will take place at the New York Marriot Marquis on 17 May, has been compiled after a rigorous judging process. More than a 130 submissions were received for 92 deal categories, comprising 80 unique transactions valued at approximately $50 billion. The submissions were then narrowed down to three deals per category by *Airfinance Journal*'s editorial and data experts.

The *Airfinance Journal* team also was made available for discussion about the entries with the aviation sector throughout and after the submission process.

The shortlist now has been passed to a judging panel of senior aviation finance executives, including Bertrand Grabowski (former board member and head of aircraft finance at DVB Bank), Jeff Knittel (president CIT Transportation & International Finance) and Norm Liu (former CEO and chairman of GECAS).

There are 10 categories up for grabs and the only winner not chosen by the judges is in the Editor's Deal of the Year category.

The industry has spoken and voted for the individual and team awards through a publicly available "survey monkey" platform, which was open for submissions throughout the entire month of February.

For more information about the *Airfinance Journal* 2017 Awards please contact **Chris Gardner** Tel: **+44 (0) 207 779 8231**
Email: **chris.gardner@airfinancejournal.com**

The 2016 shortlist of the best industry deals:

Bank Loan Deal of the Year
- **Accipiter** $1.2bn 7-year recourse financing of 43 aircraft
- **LATAM** 3-year senior secured facility spares deal
- **NAC** $590m dual-tranche acquisition facility

Export Credit Deal of the Year
- **Sun Express** Exim-French lease
- **Apple Bank Atlas Air** GE engine upgrade
- **Avianca SACE/Coface** Bond

Tax Lease Deal of the Year
- **CALC Pegasus** 2xA321s Jolco
- **THY/HSBC** French tax sparing
- **Aeromexico** Jolco 1x787

Operating Lease Deal of the Year
- **IAFC/Saudia** Operating lease of 30xA320s + 20xA330s
- **GECAS/Hainan** 737-800s
- **Etihad Goshawk/BBAM** PDPs & SLBs

Sale and Leaseback Deal of the Year
- **Emirates Stellwagen** 1x777-300ER
- **Amedeo Air Four Plus** 2xA380s + 2x777-300ERs
- **Etihad Natixis** ADGM 2xA380s

Equity Deal of the Year
- **BOC Aviation** IPO
- **CDB** Leasing IPO
- **Floreat** Equity raising

M&A Deal of the Year
- **Bohai/Avolon** Acquisition
- **FedEx/TNT** Acquisition
- **NAC Jetscape/Aldus** Acquisition

Capital Markets Deal of the Year
- **United** 2016-2 EETC
- **Southwest** $300m unsecured bond
- **Blackbird** ABS

Innovative Deal of the Year
- **Emirates EMP** Korean E-notes
- **Air Austral** Tax loan
- **Apple Bank Atlas Air** GE engine upgrade

Overall Deal of the Year
- **Bohai/Avolon** Acquisition
- **BOC Aviation** IPO
- **Labrador** (GECAS) ABS

Individual & Team Winners

Winners chosen by industry submissions:

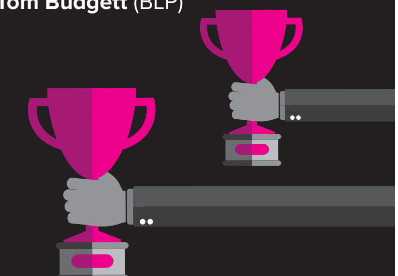
Airline Treasury Team of the Year
American Airlines

Lessor Treasury Team of the Year
AerCap

Aviation Woman of the Year
Amelia Anderson (American Airlines)

Aviation Young Person of the Year
Ahsan Gulabkhan (Virgin Atlantic Airways)

Lifetime Achievement Award
Tom Budgett (BLP)



IAFC: the asset is not enough

Moulay Omar Alaoui, chief executive officer of Dubai-based lessor International Airfinance Corporation (IAFC), tells **Jack Dutton** about widebody markets, doing business in Iran and airline consolidation in the Middle East.

Airfinance Journal: What is your opinion on the leasing industry right now? What assets are most liquid?

Moulay Omar Alaoui: Competition is fierce. There has been a massive inflow of capital from Asian state-owned/related entities, which have put pressure on lease factors, particularly for new widebody and narrowbody equipment. Because of this, many lessors and investors need to deploy funds and increase their fleet size rapidly, and therefore close their eyes on certain fundamentals.

Concentrating solely on the asset is not enough, as you require a good combination between strong credit and right asset. Narrowbodies are still the most liquid assets, but not necessarily the most profitable from a return-on-equity standpoint.

What does IAFC bring to the table? How is IAFC different from other lessors?

Our ability to tailor make our offers in order to be of service to our clients. We are one of the few lessors capable of offering competitive Sharia-compliant financing structures, such as the $1 billion syndicated ijara facility, which awarded us best structured finance deal in EMEA [by EMEA Finance Magazine].

How does IAFC continue to win deals off other lessors in a leasing market that is more competitive than ever?

By being even more competitive – not just in terms of pricing, but in terms of understanding the customer and their needs. This means being able to work together towards mutually acceptable lease terms, but also being flexible in negotiations with manufacturers and other third parties such as those involved in engine maintenance programmes. Our pioneering deal on Airbus A330 regionals with Saudia is an example of that.

What is your outlook for aviation in the Middle East, a region that has been hugely affected by the low oil prices?

Oil price is not the major issue. Middle East traffic will become only a segment for the Middle Eastern airlines. GCC [Gulf Cooperation Council – Saudi Arabia, UAE, Kuwait, Oman, Qatar and Bahrain] will become the largest hub in the world (80% of the world's population is within an eight-hour radius). The major threat for the region is if the western world will accept that or will impose protectionism barriers.

A consolidation of two airlines among the big four in the region could create a giant that will be impossible to stop.

Are banks as active in the region for aircraft finance as they were when the price of oil was higher?

Yes, they are still active, but access to financing is not limited to the region – many international banks are financing aircraft in the Middle East.

What opportunities have you seen in the Middle East recently? Has more business opened up to you because of the lower fuel prices?

We are working on a couple of RFPs [request for proposals]; however, competition is fierce as usual.

Which aircraft types do you have in your fleet and what are your plans for growing your portfolio? Are there any specific markets you are looking to enter?

We have 55 aircraft: 30 narrowbodies and 25 widebodies. Our objective is to increase the size of our portfolio in the next three years. Our core market is the GCC. We are also targeting the MENA [Middle East and Northern Africa] region and central Asia.

What is your target market geographically? Is there a region you will not enter?

Our core market is the GCC and, ideally, our lessee mix would comprise of all flag carriers from the region. Furthermore, given the Sharia-compliant nature of our funding structures, we believe we provide a certain appeal to this segment of the market. We are not equipped for Iran – we do not know how to lease, how to finance and how to recover eventually our assets. Aside from Iran, however, we would consider expansion into other markets such as the broader MENA region and central Asia.

Moulay Omar Alaoui, chief executive officer, International Airfinance Corporation

What is the latest with the Saudia A330/A320 transaction? How many have been delivered? How many are due to deliver this year?

From August 2016 to February 2017 we have successfully delivered to Saudia 12 A330s and five A320s. Eight A330s and seven A320s will be delivered this year and 18 A320s will be delivered in 2018. All aircraft are leased for a long-term lease period.

We are in a rising interest rate environment. What are you doing to prepare for higher costs?

All of our financial costs are hedged; we prefer to offload the risk of interest rate volatility rather than speculate, and will continue to implement these strategies in the future.

Are there any other financial structures you look to tap which you have not tapped as a company yet? Which ones are you looking at and why?

We may consider sukuks. We have the critical mass for it and the appetite is there. The objective is to reduce further our financial costs.

What are the biggest challenges IAFC is likely to face in the year to come?

Obviously, all the senior debt financing for 2016 has been arranged (approximately $1 billion). All 2017 senior debt financing (approximately $1.2 billion) is in place. We will be approaching banks, in the coming months, for 2018 deliveries. In parallel, we are actively contemplating new transactions.

Could Intrepid go public in 2017?

An updated regulatory filing from the US widebody aircraft lessor sparks the question again.

Source: Intrepid

Intrepid Aviation's name crossed the public markets again in February. Early in the month it filed an update to a regulatory form (an S-1/A) that companies must file if they are preparing for an initial public offering (IPO). Companies must make regular updates even if they are only exploring the process, so the filing should not be read as a sign that Intrepid will imminently tap this market.

The lessor's chief executive officer, Olaf Sachau, tells *Airfinance Journal* that Intrepid will be focused on growth and diversification in 2017, with a potential IPO being just one of the options available.

"That's what we're going to be very much focused on this year: to explore how we can raise incremental capital for the business," he says.

Given recent appetite in aircraft lessors, an IPO could be a good avenue for Intrepid. But while demand has been high in recent years, leading to above-book premiums for several major purchases, there are doubts about whether demand will continue at such high levels.

In the past few years, enormous amounts of equity capital have flowed out of China in pursuit of aircraft lessors. HNA Group, for example, via its leasing subsidiary, Bohai Leasing, paid $2.5 billion to buy Avolon in 2015. Then, in 2016, Avolon bought US lessor CIT for $10 billion.

Similarly, Asia Aviation Capital (ACC), Air Asia Berhad's aircraft leasing unit, has reportedly received about a dozen bids, most of which come from Chinese companies. The deal was expected to be announced in the first quarter of this year.

> *That's what we're going to be very much focused on this year: to explore how we can raise incremental capital for the business.*

Olaf Sachau, chief executive officer, Intrepid

"The market was somewhat saturated with the many deals that were done last year," notes Marjan Riggi, managing director at Kroll Bond Rating Agency, "so I wonder whether the pricing that issuers are looking for will be there in 2017."

Last year, China signalled plans to curb foreign investments, after news that Chinese companies were targeted to spend ¥1.12 trillion ($162 billion) abroad. These curbs are expected to last through the end of 2017, with Chinese regulators due to pay special attention to highly leveraged firms and those with poor returns on investments.

Although aircraft lessors are providing good returns for investors, the trickle-down effect of the Chinese government's measures may be leading to less outward investment. It may help explain why only two Chinese firms are involved in the latest round of bidding for AWAS, which is being sold by private equity firm Terra Firma. According to reports, as *Airfinance Journal* went to press, Ping An and China Minsheng Investment Group were the only two firms to have made the latest round of bidding for AWAS's portfolio.

Given how active Chinese firms have been in snapping up leasing platforms, their apparent absence in this market cannot be good news for those companies hoping to sell.

Putting the past to bed

Intrepid is in a considerably better position now than in January 2015. That month, its exposure to Skymark Airlines proved disastrous when the carrier went bankrupt and cancelled lease agreements. Intrepid had leased or committed seven aircraft to the airline, all of which were configured in a specialised one-class layout at the carrier's request.

Intrepid has since remarketed these aircraft – to Turkish Airlines in 2016 – putting an end to the uncertainty surrounding their future home.

As a result of the unusual one-class layout, Intrepid has had to reconfigure all of the aircraft ahead of their leases to Turkish Airlines, at a cost of $10 million per aircraft. Intrepid is raising financing from Airbus to meet some of the costs, but the impact will reach about $60 million in 2017 alone.

But Intrepid says it has drawn a line under the affair. Michael Lungariello, chief financial officer, admits that the Skymark problem did constrain Intrepid's growth potential while it was being addressed. However, he notes that the problem "did not really have a substantial impact on the bottom line", once payouts and other factors are taken into consideration.

Widebody exposure

Intrepid's business model is centred on widebody aircraft. Although the lessor has recently diversified into single-aisle aircraft, it is and will remain primarily a widebody owner. *Airfinance Journal* Fleet Tracker showed that 29 out of the 30 aircraft in the lessor's portfolio were twin-aisle aircraft at the end of March.

Given the recent softening in this sector, potential investors will have to weigh up Intrepid's exposure to this market.

Intrepid likes widebodies because of the longer cash flows, better-than-average credit dynamics of the operators that lease them and typically higher yields for the owners. The company adds that airlines are also more likely to re-lease twin-aisle aircraft because of the higher investment they make in the interiors at the start of the leases.

However, in recent years, appraisers, investors and operators have all drawn attention to declining lease rates, lower-than-expected residual values and remarketing difficulty across the widebody sector.

"It is very difficult to see how the widebody market can improve in the short term," says Olga Razzhivina, director at Oriel.

She notes that the Boeing 777 is the bigger concern out of the two widebody families (777 and A330) that Intrepid is exposed to the most. The A330 has had a secondary market for some years, adds Razzhivina, but the used market for 777-300ERs has not yet been fully tested.

Speaking about the smaller -200ER variant of the Boeing twin-aisle, she says that these aircraft "haven't really been flying off the shelf", which "raises the question for the 777-300ER".

"The Skymark problem did not really have a substantial impact on the bottom line."

Michael Lungariello, chief financial officer, Intrepid

Razzhivina adds: "However, if we're looking more in the medium term, when Intrepid's leases are starting to come back, there could be a different market dynamic. So we can't really tell at the moment what is going to happen. The one thing we know for sure is that any expectation of residual values of widebodies is probably going to be much lower than people would have imagined even two to three years ago."

Intrepid has no remarketing to worry about in the near term. Its first aircraft to come off lease is a 777-300ER on lease to Air France, in 2022, and the second aircraft will not need remarketing until 2024. But residual values are still a concern.

No white tails

Intrepid's Sachau thinks that the two largest manufacturers will take further steps to reduce oversupply in the market, which will support future residual values.

"As much as I regret that both Airbus and Boeing haven't slowed down production rates faster, they have reacted," he says.

"I do believe that the two OEMs [original equipment manufacturers] will, over time, behave more rationally than they have. Of course, they will always be inclined to sell more aircraft, especially widebody aircraft because they are higher yielding, typically. But I do feel we will have a better supply situation, a more controlled environment, in a year or two."

He adds: "They cannot afford to produce white tails."

In any case, says Lungariello, Intrepid's focus on long-term cash flows helps to mitigate residual value risk.

"Our cash flows are longer – we do spend an incredible amount of strategic focus on investing in aircraft with longer-term cash flows. A lot of the residual impact on our underwriting case is minimised because of that," he notes.

Recent activity by the two largest OEMs could justify confidence in future widebody values. Airbus and Boeing have announced cuts to the production rates of various twin-aisle models. In August, the 777 will drop from 8.3 a month to five a month, as orders for the new-technology 777X draw sales away from the current-generation models. Meanwhile, Airbus plans to slash the A380 rate to one aircraft a month in 2018. Boeing has even considered ending production completely on the 747 if it cannot attract more customers.

Balance sheet

Intrepid's latest financial statements might also concern potential investors.

The most recently available data is from the latest S-1/A form, which covers statements up until the third quarter of 2016. As a private company, Intrepid is not obliged to release quarterly updates.

Revenues had reached $190 million at the end of the third quarter of 2016, compared with $255 million at year-end 2015. Projected across the full year, the third-quarter results would suggest expected full-year 2016 revenues that are flat or below those of 2015.

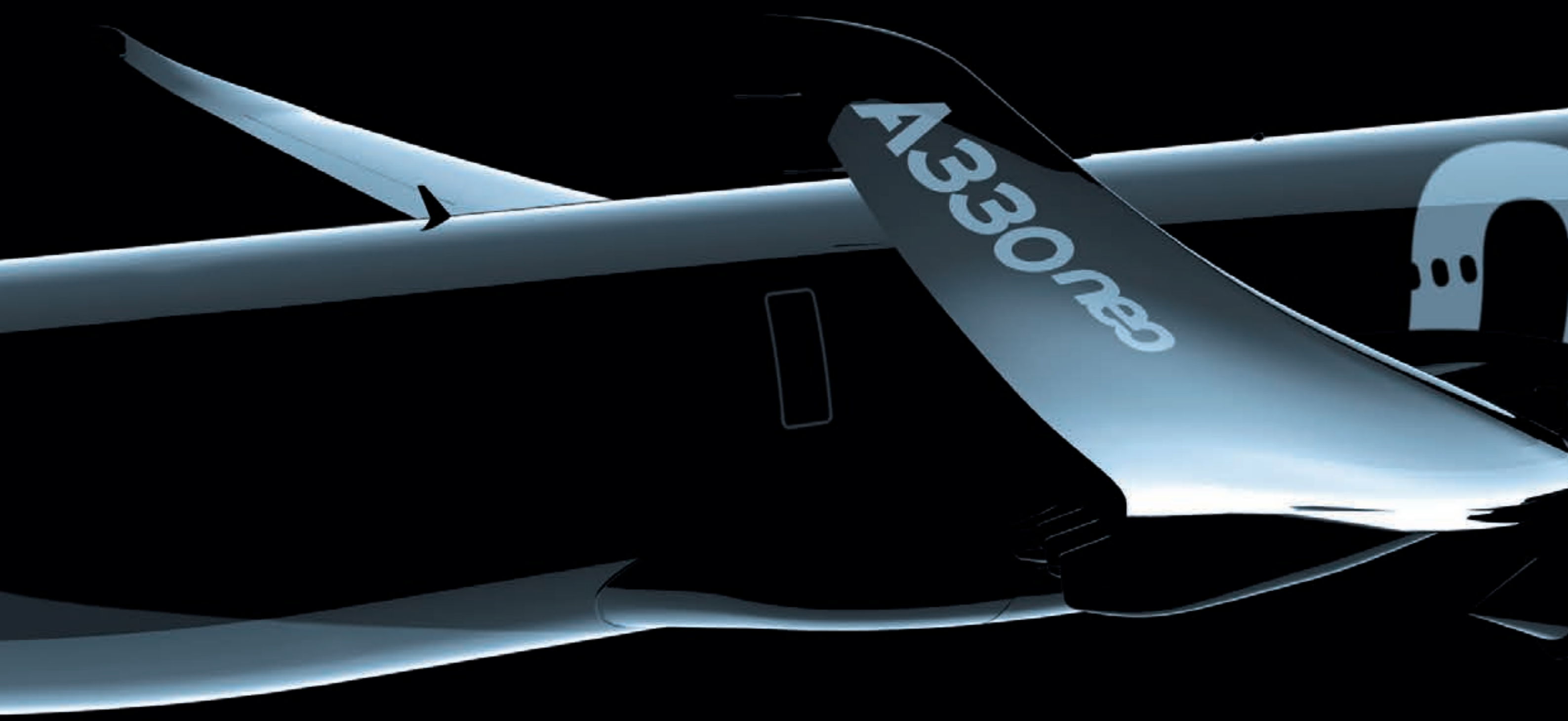
Intrepid made $12.5 million in net income in 2015, but it had racked up $5.7 million in net losses in the third quarter of 2016.

Its cash position has declined over the past year, although unrestricted cash is stable. At the end of 2015, Intrepid had $55.6 million in cash and $124.6 million in restricted cash, while, in the third quarter of 2016, it had $55.8 million and $111.4 million, respectively.

However, Intrepid has completed a modest amount of deleveraging in the past year. In 2015, net debt stood at $2.61 billion, or 4.77 times equity. In the third quarter of 2016 the total stood at $2.43 billion, or 4.50 times equity.

Speaking about the financial results, Lungariello says the full-year numbers, which have not been made publically available, are "substantially better than people would expect". Without going into specifics, he says Intrepid finished 2016 with a "significant net income position for the year".

Without numbers to hand it is hard to make an assessment about Intrepid's improvement. But reversing the net loss position is certainly a step in the right direction.


A330neo

Bohai moves into the top three

The $10.38 billion purchase of CIT's leasing business is the icing on the cake of the Shezhen-listed company's recent acquisitions, but does this signal the end of its spending spree? **Laura Mueller** reports.

Bohai Capital's takeover of CIT Aerospace marks its third operating lessor acquisition in the past five years and pushes it to number three in the sector, but whether the Shezhen-listed entity can continue to flex its purchasing muscle remains to be seen.

In 2012, Bohai, which is majority owned by HNA Group, expanded its Yangtze Leasing operations through the acquisition of Hong Kong Aviation Capital.

It then pushed the boat out further by moving its acquisition target overseas. The $7.6 billion takeover of Dublin-based Avolon in 2015, for $31 a share, represented a 55% premium to the lessor's initial public offering at $20 a share in December 2014.

Also, and more significantly, the move proved to market observers that a Chinese buyer could indeed complete a cross-border lessor purchase, after the numerous failed attempts by a Chinese consortium to buy ILFC from then-troubled American International Group in 2012.

As *Airfinance Journal* went to press, Bohai, through its Avolon subsidiary, closed its largest overseas purchase to date – the $10.38 billion acquisition of CIT's leasing business.

"Bohai's latest round of purchases makes the HKAC investment almost seem insignificant and, clearly, that was not the case as HKAC, at the time of the sale, had around 75 aircraft," a lessor chief, who wishes to remain anonymous, tells *Airfinance Journal*.

Avolon priced $1.75 billion-worth of five-year senior notes at 5.25% and $1.25 billion in seven-year notes at 5.5% to help secure funding for CIT's business. Also, the lessor recently upsized its $600 million existing revolving warehouse credit facilities to $725 million to boost its capital position as part of the acquisition. Korea Development Bank (KDB) and Scotiabank joined the facility with a $125 million contribution of new revolving credit.

Avolon becomes the world's third-largest commercial aircraft lessor by number of aircraft. The combined in-service portfolios totals 551 owned and managed aircraft with an average age of 4.6 years.

The new entity has orders and commitments for 301 aircraft, including 196 Airbus aircraft (A320neos, A330neos and A350s), 61 Boeing 737 Max aircraft and 25 Boeing 787s.

Bohai Leasing's customer base will also increase with a more balanced distribution among Asia-Pacific, Europe and North America.

"The integration of C2 [CIT Aerospace] will actually make Bohai the true leader in world aircraft leasing business," says Bohai Capital. "With the highly professional operations team and business model, Bohai believe the continued increasing aircraft leasing business will bring long-term returns to the investors and Bohai itself."

Lucrative financial returns

Bohai accelerated the development of its aviation leasing business starting in 2013, particularly domestically, through its wholly-owned subsidiary Tianjin Bohai Leasing. The entity was set up exclusively with the Tianjin Dongjiang free-trade port government, to provide aircraft asset management consultancy services to third parties.

At the time of the Avolon purchase, Bohai made clear its plans in aviation leasing. The lessor said the acquisition would bring lucrative financial returns, as well as enhance its bargaining power and influence in the global aviation industry.

It also said the takeover was aimed at boosting the development of the China aircraft leasing market through the integration of "advanced aircraft asset management, improvement of risk management and added resources".

But now, with its largest target to date nearly under its belt, will the buying spree continue? Does the lessor have the appetite and purchasing power for another lessor? Or could increased capital controls out of China curb its acquisitive behaviour?

"You have to believe that Bohai will continue to be Bohai. Perhaps $10 billion is a huge deal now, but I bet in five years' time it won't be. You only need to look at the pace and increased scale of its acquisitions to see that this is a company with an agenda," says an Asian-based lessor, who adds: "As long as China Inc is on board and wanting to move the yuan

"You have to believe that Bohai will continue to be Bohai. Perhaps $10 billion is a huge deal now, but I bet in five years' time it won't be. You only need to look at the pace and increased scale of its acquisitions to see that this is a company with an agenda."

Asian-based lessor

into US-dollar assets, there is no reason for Bohai to change its behaviour."

Another lessor agrees, adding: "China's Five-Year Plan clearly cites aviation, so expect more aviation and leasing growth. Perhaps it won't be Bohai buying a GECAS next time around, but expect ongoing expansion."

Bohai also looked at the assets of operating lessor AWAS in 2015. However, sources at the time indicated Terra Firma, the majority owner of the lessor, could not agree on pricing with HNA and Bohai, after the Chinese lessor made two separate bids, so a deal never materialised.

No doubt China has its focus on aviation. It is projected that by the end of China's 13th Five-Year Plan, which is issued by China's State Council, the region will have over 260 airports. The plan, which spans 2016-20, aims to have a transportation hub comprising more than 20 large-scale airports during that period. China's State Council has also issued a follow up set of policies aimed at supporting the development of air transport operations and promoting investment in general aviation.

Bohai and HNA have aided this expansion plan, which really started in China's previous or 12th Five-Year Plan.

During the past couple of years, HNA has acquired stakes in Brazilian carrier Azul, Gategroup, the airline catering and onboard products group, and cargo-handling company Swissport further expanding its aviation reach.

Perhaps the best testament to Bohai's continued growth comes from Avolon's chief executive officer, Dómhnal Slattery, who said that, while the CIT transaction is strategically compelling and will double the scale of Avolon, "it is not the summit" of Avolon's ambition.

"Avolon has a strong brand, a best-in-class fleet, a proven business model and a long-term strategic shareholder committed to the sector. We look forward to continuing to drive the disciplined growth of the business in the years ahead," he adds.

Curbs on foreign investment

But not all lessors are confident about the continued expansion of Bohai Leasing or Chinese lessors in general, particularly because of China's recent curb on foreign investments.

These curbs are expected to last through the end of 2017, with Chinese regulators due to pay special attention to highly leveraged firms and those with poor returns on investments.

"I think we are seeing a definite cooling off from China, but how long and how deep this will last remains to be seen," says a US-based lessor.

Steven Zissis, the president and chief executive officer of BBAM, the manager of Fly, indicated that increased capital controls out of China are impacting the flow of liquidity to the sector.

"Definitely, the Chinese are a bit less active this year than prior years, and there is a lot of talk about capital controls and a kind of paring back of their appetite for aviation," says Zissis.

He notes a pullback on sale and leaseback bids, in particular.

"We see less Chinese showing up on those RFPs [request for proposals] than we have in the past. And then, on a couple of aircraft portfolio and one-off trades from lessors, we're also seeing less activity in that market. It's just our feel of the marketplace; it's not that we actually count how much capital is still in each of these deals.

Market sources cited China's growing concern about capital flight, where investors send their money out of the country to take advantage of a strong US dollar, for the lack of Chinese companies in the latest bidding round for operating lessor AWAS.

However, Chinese lessors do not see a let up in leasing activity because of capital controls that have been imposed by the Chinese government.

"The curb is more of an investigation on Chinese companies that are buying overseas assets that have little investment ties with their core business," says Huang Zhen, executive vice-president of CMIG Leasing, who adds: "So I don't think China or Chinese leasing is slowing down – there is more strategy behind the investments now."

Wei Lu, vice-president Minsheng Financial Leasing, agrees: "The curb on capital is more about the government trying to regulate foreign investments, as some of that has resulted in losses."

Senior representatives from ICBC Leasing and Bocomm Leasing agreed.

Chinese lessor panelists at the Inaugural Korea Airfinance Conference, March 2017. L to R: **Pieter Burger**, Deloitte Ireland (moderator), **Huang Zheng**, EVP & COO, CMIG Leasing, **James Lin**, managing director and head of Asia Pacific, aviation finance, ICBC Financial Leasing, **Li Ling**, managing director - aviation, Bocomm Leasing, **Wei Yu**, vice president, Minsheng Financial Leasing

Li Ling, managing director aviation of Bocomm Leasing, says that Chinese lessors are now focusing more on improving their own business models rather than growing for growth's sake.

New entity

While the fleet composition of the new Avolon/CIT entity is certain, what is far from certain is what the new management team will look like.

Various members of CIT Aerospace's senior management, including the president of CIT Transportation, will not transfer to the new leasing entity that will be formed after the sale to Avolon, say sources.

New York-based Jeffrey Knittel, a 31-year industry veteran, who is also president of CIT International Finance, will not be part of the new leasing entity after CIT Aerospace's purchase.

Knittel was due to leave his position "as early as mid-March if the sale goes according to plan", according to a lessor source.

Knittel is responsible for the management of four CIT businesses: aerospace and commercial airlines, business aircraft, rail and maritime. He also oversees the international operations of CIT corporate finance and equipment finance located outside of North America.

Tony Diaz, president of CIT commercial air, and an employee of the group since 1987, and John Morabito, group head of financial institutions, commercial air and maritime finance, also will not be moving to the new leasing entity. Neither will Damon D'Agostino, chief commercial officer of CIT.

Exact details remain vague about the number of CIT employees that will maintain their roles, or assume new ones, say lessor sources.

> *"I think there will be continued consolidation in leasing as there are significant benefits of scale. I would expect to see more of the second-tier guys rollover."*
>
> **Aengus Kelly**, chief executive officer of AerCap,

It is certain, however, that the joint venture between CIT and Tokyo Century (TC) will not be part of the new entity.

Instead, Tokyo Century will merge the soon-to-be-acquired joint ventures TC-CIT Aviation Ireland and TC-CIT Aviation US with its leasing business.

The Japanese financier agreed to acquire a 30% ownership in joint ventures TC-CIT Aviation Ireland and TC-CIT Aviation US from its joint-venture partner CIT Group. The purchase was expected to close as *Airfinance Journal* went to press.

Tokyo Century, which already has a 15-aircraft portfolio, will combine its joint-venture businesses with its leasing division to strengthen further its aircraft financing business. It targets to grow the balance to $3.5 billion while carefully monitoring the market.

In addition to aircraft leasing, it will focus on developing its engine leasing, aircraft parts financing and other "innovative businesses related to aircraft assets", says the company.

As well as pursing its own strategy in aircraft leasing, TC aims to create strategic initiatives jointly with alliance partners in order to accelerate growth.

The TC-CIT joint ventures were established in October 2014 through a 70% equity contribution by Tokyo Century and 30% equity contribution by CIT. To date, both leasing entities have invested about $1.5 billion in commercial aircraft, building a portfolio consisting of 33 aircraft.

The aviation leasing sector will continue to face further consolidation following the purchase of CIT Aerospace, opines AerCap's chief.

Aengus Kelly, chief executive officer of AerCap, told *Airfinance Journal* in an interview: "I think there will be continued consolidation in leasing as there are significant benefits of scale. I would expect to see more of the second-tier guys rollover."

Avolon fought off several other contenders throughout the bidding process. *Airfinance Journal* understands that the final round of bids for CIT included Aircastle, along with a silent partner, as well as Macquarie Airfinance, which teamed up with the leasing arm of China's Ping An Insurance Group and Apollo Aviation. Century Tokyo Leasing, together with private equity firm Blackstone, were also involved, according to sources. A truly global bidding turnout like that suggests that AerCap's Kelly probably is right, the rollover in this sector is likely to continue.

Tax reduction for Hong Kong lessors could soon become reality

A bill could be approved as early as this summer to relieve taxation for aircraft lessors in Hong Kong. **Michael Allen** speaks to the key people involved and explains how lessors will be able to take advantage of the reforms.

Lessors based in Hong Kong may soon be paying as little as 1.65% in tax

William Ho pokes his head around the meeting room door, giving *Airfinance Journal* an apologetic nod while simultaneously speaking rapid-fire Cantonese into the mobile phone seemingly glued to his ear.

Half-an-hour later, the Berwin Leighton Paisner (BLP) lawyer takes a seat in the conference room at his firm's new offices in Taikoo Place, a commercial complex in the east of Hong Kong Island.

"Sorry, I was just on the phone to the government," says Ho, explaining his delay in attending our interview.

Ho, a veteran lawyer of Hong Kong and China's aircraft leasing markets, who had his own boutique asset finance practice in the Chinese special administrative region before merging with British firm BLP in 2016, can be forgiven for his lateness. He – along with several others – has been working hard for the past few years to boost Hong Kong's competitiveness as an aircraft leasing and financing jurisdiction.

"Two years we've been talking about it, but now it's real," he says.

The term "real" may be slightly premature, because the bill guaranteeing

The driving forces (L to R): **Dewey Yee**, **William Ho**, **CK Chow** and **Clarence Leung**

Out of the top 10 global aircraft lessors, all of them have a presence in Ireland and eight in Singapore, while only two have a presence in Hong Kong.

Source: *Proposed Dedicated Tax Regime to Develop Aircraft Leasing Business in Hong Kong LegCo Paper*

these long-sought reforms still needs to pass through the territory's Legislative Council (commonly referred to here as LegCo), but Ho and others are confident that lawmakers will be persuaded by the benefits such reforms could bring to Hong Kong's economy and pass the bill.

On 23 January, a paper was presented for discussion to LegCo members outlining the proposed reforms and recommending a 50% reduction, from 16.5% to 8.25%, in corporate tax rate for aircraft lessors in Hong Kong leasing to non-Hong Kong airlines. Only 20% of rentals will be taxed, meaning the rate is essentially only 1.65%.

The Proposed Dedicated Tax Regime to Develop Aircraft Leasing Business in Hong Kong paper argues that Hong Kong can be developed into a competitive leasing jurisdiction and encourage international and mainland Chinese lessors to set up operations there. It notes that out of the top 10 aircraft lessors, all of them have a presence in Ireland and eight in Singapore, while only two have a presence in Hong Kong.

On 10 March, the Hong Kong government gazetted the Inland Revenue (Amendment) (No 2) Bill 2017 for a first reading. Once enacted, the concessionary tax regime will apply from year of assessment, 2017/18.

Lessors' views

There are already several leasing companies set up in Hong Kong, including Avolon, Asia Pacific Aircraft Leasing Group (APAL), China Aircraft Leasing Group Holdings (CALC), CDB Leasing and most recently Orix.

APAL's chief financial officer tells *Airfinance Journal* (*see page 12*) he has faith that Hong Kong's legislature will pass a bill later this year that will significantly reduce Hong Kong's tax rate for aircraft leasing companies domiciled in Hong Kong.

"Apart from the proposed dedicated tax regime for the aircraft finance and leasing business, salary tax and the living and working environment are also important factors to attract those industry professionals to come and work in Hong Kong," he says.

One leasing company executive in Ireland tells *Airfinance Journal*, however, that it can be difficult to hire the people with the right expertise in Hong Kong, because the market there is small and the number of lessors fewer than in Ireland or Singapore.

"If an employee has to leave their company in Hong Kong, it may be difficult to find another job due to the small leasing market and they may face the prospect of having to leave Hong Kong. In Ireland, it is a different matter as there are plenty of other companies that person could move to," he says.

However, other companies with Hong Kong ownership have decided not to base themselves out of Hong Kong. Accipiter, owned by Hong Kong conglomerate Cheung Kong, has its head office in Dublin.

Although Paul Sheridan, chief executive officer of Accipiter, welcomes a change in legislation, he believes it will take more than that to transform Hong Kong into Asia's main leasing hub.

The chief executive officer of Goshawk Aviation, another Dublin-based lessor with a Hong Kong parent, did not respond to a request for comment.

An airline source also notes how Hong Kong's tax status has created the "bizarre" situation where CALC has decided to lease aircraft to China Southern Airlines via Ireland thousands of miles away, even though China Southern's base is just a couple of hours up the road from Hong Kong in Guangzhou.

Winnie Liu, executive director, deputy chief executive officer and chief commercial officer of CALC, says the proposed tax reforms are "encouraging news for the industry".

She says: "We believe the proposed tax regime will help to boost the development of the aircraft leasing business in Hong Kong, and attract operators and leasing-related businesses to enter the market, creating a new driver for economic growth, which will have a ripple effect in terms of employment and Hong Kong's competitiveness in the global market."

Driving forces

The driving force behind the reforms is the aviation task force (to which Ho serves as an adviser) of the Working Group on Transportation, one of the four working groups set up under the Economic Development Commission (EDC), a body established in 2013 by CY Leung, the Hong Kong chief executive, with the task of providing advice to identify growth sectors that could further Hong Kong's economic development.

The Working Group on Transportation focuses on examining the air travel sector to consider how the government can help develop Hong Kong International Airport and the aviation industry, in order to enhance Hong Kong's hub status and competitiveness.

Along with this, in 2015, the Hong Kong government reduced the withholding tax on People's Republic of China-Hong Kong leasing transactions to 5% from 7%. The reduction is significant because it allows Hong Kong lessors to offer more attractive rates to their PRC airline customers.

Clarence Leung, director, tax services at PwC Hong Kong and also an adviser to the aviation task force, says it is common for Chinese airlines to bear the China tax cost for leased-in aircraft. The favourable withholding tax rate of 5% for aircraft rental payments under the Hong Kong/mainland China double tax arrangement and the proposed tax regime for qualifying aircraft lessors may "potentially result in a win-win situation for both contracting parties".

He adds: "Subject to the detailed rules to be stipulated by the Hong Kong Special Administrative Region government, Chinese airlines may wish to consider the flexibility of establishing a leasing platform in Hong Kong to lease aircraft into China in order to tap into the financing market in Hong Kong."

No other concrete plans to benefit the aircraft leasing industry have been announced since then, and the Inland Revenue (Amendment) (No 2) Bill 2017 could mark the next significant step towards developing Hong Kong's competitiveness as an aircraft leasing hub.

Hong Kong's leverage lease losses

The demise of the Hong Kong leveraged lease (HKLL) has been a key reason why the territory has not developed as an aircraft financing and leasing centre since 1992, say sources.

Johnny Lau, now chief executive officer of advisory and consultancy firm Astro Aircraft Leasing, joined Cathay Pacific in summer 1989. It was there, after a transfer from the salaries department to the aircraft

Johnny Lau, CEO, Astro Aircraft Leasing finance department, that he had his first encounter with the HKLL, a tax structure popular in Hong Kong at that time.

The HKLL involved a Hong Kong partnership acting as lessee to an airline, allowing steep depreciation allowances to the Hong Kong partnership, in which the equity investor was the majority partner. The structure allowed an initial depreciation allowance of 60% in the first year and an annual depreciation allowance of 30% at the end of the first year and in each subsequent year on the reducing value.

Such generous depreciation allowances created substantial losses to the Hong Kong partnership in the first three years of the lease. These losses would then be utilised by the equity investor in accordance with its shareholdings in the partnership to set off against its taxable profits from other businesses. The tax benefits generated would be shared by the airline.

When a HKLL is dipped into another country's tax lease, this is referred to as a "double dip". One example is Japanese leveraged leases dipped into Hong Kong leveraged leases, whereby the Japanese lessor took legal ownership of the aircraft and leased the aircraft (with a purchase option) to an airline. A Hong Kong partnership then made a hire purchase (with purchase option) from the airline and took economic ownership of the aircraft, then leased it back to the airline.

This structure was not too common, however, because it would have to be hidden from Japan's tax authorities and so was high risk, therefore other tax lease jurisdictions – such as Sweden – saw more double dips with Hong Kong leveraged leases.

By the time Lau joined Cathay, the airline had already closed 12 such transactions, naming each one after the number it corresponded to. However, since the number 13 is considered unlucky in the West and the number 14 unlucky in Chinese culture – because of the Chinese word for "four" sounding similar to that for "death" – Cathay decided to call these transactions HOO Limited Partnership and HOP Limited Partnership instead.

He recalls two aircraft – 747-400s with tail numbers HOO and HOP – that were dipped into Swedish leases, providing efficient financing for the Hong Kong flag carrier.

"When I started at Cathay, Hong Kong was the centre of aircraft leasing in Asia, and Singapore was only a fringe," he tells *Airfinance Journal*.

But the tax-deferral arrangement available with the HKLL meant Hong Kong suffered tax losses, without any compensatory macroeconomic benefit. Consequently, the government took the view in 1990 that the product had been misused and caused "a major hemorrhage to the public revenue", according to Hong Kong's then financial secretary.

After 1992, Section 39E of Inland Revenue Ordinance, together with IRD DIPN No 15 (Revised), modified the structure so that depreciation allowances were only allowed for leases to operators with an air operator certificate from Hong Kong's civil aviation department. Foreign airlines were excluded from using the structure, but local carriers such as Cathay Pacific and Cathay Dragon (formerly Dragonair) continue to enjoy the benefits of this structure.

"I don't think they deliberately set out to kill the leasing industry, but that's what they did," says a source whose career has included work on HKLLs.

"Inside the government, nobody has been thinking of how to use a tax incentive to make Hong Kong a more attractive place, at least not until Dewey Yee, special adviser at leasing company Aergo Capital, mentioned it in the Hong Kong Economic Development Commission," says Lau.

Dewey Yee's surprise phone call

At 9.30pm on 15 January 2013 and Dewey Yee was at his home watching a television news programme about the 2013 policy address of Hong Kong chief executive, CY Leung, planned for the next day.

Little did Yee know that he was about to receive a phone call that would lead to him getting involved in a commission established by Leung that was aiming to boost Hong Kong's economy.

Aviation has been the focus of most of Yee's career, having been hired in the 1980s by Tony Ryan as Guinness Peat Aviation's head of marketing in Hong Kong and tasked with opening China to the aircraft leasing business. He also held senior roles at GATX Capital Corporation, Babcock & Brown, Tokyo-Mitsubishi International, Société Générale Asia and China Everbright.

When Yee picked up his ringing phone, a man on the other end of the line started speaking Cantonese, though Dewey, an American, could not understand what he was saying.

"So after he'd finished, I said, 'Can you repeat it in English again?' and he said 'The chief executive has set up a Hong Kong Economic Development Commission; we'd like you to join'," Yee told an audience at PwC's Aviation Finance and Leasing Forum in Hong Kong on 8 February 2017, four years later.

Hong Kongers are subject to a seemingly higher than usual volume of nuisance calls with the caller usually speaking in Cantonese, so Yee was at first sceptical. But after contacting a government number provided by the caller he was convinced it was legitimate.

They wanted him to work on developing Hong Kong as an aircraft leasing and financing centre. The gig was pro bono and it would be a lot of work, he was warned.

"Very simply, it's about money. It's about how Hong Kong can create more wealth by just attracting these companies called aircraft leasing companies. Really, it's a big black hole that just sucks up all this cash."

Dewey Yee, special adviser at Aergo Capital

His wife, Yvonne Remy, turned to him and said: "This is a boy's club. If you're going to join, have a deliverable. Do something."

"So, I replied to him saying I would be delighted to join this commission," recalls Yee.

"Though I thought I must be the last on the list because this guy is calling me at 9.30 at night and the announcement is tomorrow!"

It transpired that the office of the Hong Kong chief executive, through a "highly secret" process, chose Yee, and there was no application process because it is an appointed position. It came as a big surprise to him. "I was among society elites and powerful leaders – I am a nobody," he says.

A few weeks later, Yee had his first meeting as part of the aviation taskforce. He found himself in a meeting room in the Central Government Offices in Tamar with convener Chow Chung Kong (CK Chow), along with Cathay Pacific chairman, John

Slosar, and Victor Chu, the founder of Peach, an Osaka-based airline.

Chow went around the table and asked the members to make suggestions on how they could “beef up aviation and make it a stronger presence in the region”.

When it came to Yee’s turn to speak, he said: “Well, did you know for the past 20 to 30 years, a lot of the global aircraft have been financed through Hong Kong, and my suggestion is that we make Hong Kong an aerospace finance centre.”

Yee got “a lot of very strange looks” around the table, with some people “scratching their heads” because they did not really understand what it was all about.

“I’ll tell you what,” said Yee. “Since I have all these glassy-eyed stares, I’ll give a presentation next time and tell you how I’m going to do this.”

A couple of months later, in May 2013, Yee prepared 80 PowerPoint slides – only to find he was told he had just 10 minutes for the presentation. He ended up presenting just eight slides and giving everyone the print-outs to read at home.

“After 10 minutes, I think everybody in the room understood what I was talking about,” he says. “Very simply, it’s about money. It’s about how Hong Kong can create more wealth by just attracting these companies called aircraft leasing companies. Really, it’s a big black hole that just sucks up all this cash.”

But Yee needed help to make this ostensibly simple plan a reality. He sought three external advisers: one legal, one accounting and one governmental.

“The government person was needed to help me write and draft all these documents so government people can understand,” he says. Yee chose KC Kwok, a former government economist for the Hong Kong Special Administrative Region government.

For the accounting adviser, Yee’s friends introduced him to “this young lad who just came over from the UK having been advising the UK government”. His name was Clarence Leung, from PwC.

Several lessors including CALC, CDB Leasing and Orix have offices in Hong Kong

Before going to Leung, he went to his old friend William Ho, who he calls “one of the unsung heroes of aviation law”.

So Yee, Kwok, Leung and Ho would form the core team that would take on the challenge of developing Hong Kong into an aircraft financing and leasing centre.

“We have a little code word for our team – H15,” explains Yee. “That means Hexagon 15. If you read or understand the I Ching [A Zhou dynasty Chinese classical text], the most powerful hexagon is number 15, and number 15 is humility.

“So, I said the way that we’re going to approach all these government departments – and there are a lot that don’t understand and don’t want this to happen – is we’re going to become their best friends. But we’re going to do it with a very soft approach – and give them a reason to accept this.”

Yee tells *Airfinance Journal* he is optimistic that the reforms he has worked so hard on will pass, but adds that people need to be patient.

“Firstly, everyone is on board that needs to be on board. Secondly, we just need it to work through the system both officially and unofficially.

“The reason is because again this is not a scheme – it’s going to become a law so it needs to go through the proper normal process of making a concept into real legislation,” he says.

“We just need to sit tight and see how it goes – and keep our fingers crossed.”

Status and progress of reforms

January 2013: CY Leung, chief executive of Hong Kong, establishes the Economic Development Commission to advise the government on the strategy to broaden Hong Kong’s economic base, to identify growth sectors and to recommend policies and support for those industries.

July 2013: the Economic Development Commission sets up an aviation task force to examine in detail the feasibility of developing Hong Kong into an aircraft leasing and financing centre.

December 2013: PRC State Council Circular No 108 [opinions on accelerating development of aircraft leasing industry]: “Bringing Hong Kong’s strength as an international financial, trading and transportation centre into play, encourage [PRC] aircraft leasing enterprises to set up specialised companies in Hong Kong to develop overseas markets and to enhance internationalisation of the [PRC aircraft leasing] industry.”

January 2016: Leung announces in his policy address: “The government is formulating measures to develop Hong Kong into a centre for aerospace financing.”

February 2016: John Tsang, financial secretary, announces in his Budget speech: “[The government] shall examine the use of tax concession to boost aircraft leasing business and explore business opportunities in aerospace financing.”

January 2017: *Proposed Dedicated Tax Regime to Develop Aircraft Leasing Business in Hong Kong* paper presented to Legislative Council of Hong Kong members. Recommends halving of corporate tax for aircraft lessors from 16.5% to 8.25%, with only 20% of rentals being subject to this tax, making the effective rate 1.65%.

Source: Berwin Leighton Paisner

Legislation challenges

Compared with other jurisdictions, the Hong Kong reforms look rather attractive. The corporate tax rate will be lower than Ireland's 12.5% and lower even than Singapore's 5% or 10% tax rate under the Aircraft Leasing Scheme (ALS). However, Ireland allows eight-year depreciation allowances and Singapore five- to 20-year depreciation allowances, while Hong Kong will not offer any under the new scheme.

PwC's Clarence Leung argues that lessors which want to do an initial public offering (IPO) could be interested in setting up in Hong Kong under the new proposed regime.

"As no depreciation allowances will be available to a qualifying aircraft lessor, broadly speaking, there should be no re-capture of any depreciation allowances on the disposal of the aircraft. Hence, the profits on the disposal of the aircraft should be tax-free," he says.

"As a result, the effective tax rate of a qualifying aircraft lessor from a profit-and-loss account perspective should be considerably lower than that in the other leasing centres. Essentially, under the proposed tax regime, it is a choice of between a small amount of cash tax but with better profit-and-loss effect."

Therefore, it may be of benefit for those aircraft lessors which have an IPO in mind in the future, because it seems the effective tax rate under the proposed new tax regime is lower than that of Ireland and Singapore, he adds.

"For a lot of my clients, the reason why they're attracted to investment in the aircraft industry is because of the size, because it's big, lots of new money is required, the return is good – they want to IPO. Everybody wants to IPO," says Leung.

Time value of money

Leung argues that the Hong Kong reforms need to be examined from a "time value of money" perspective.

As the financial statements are prepared based on historical costs and do not take time value of money into account, it is important to evaluate and compare the different regimes also from a time value of money basis, he says.

Under the Hong Kong proposed regime, an aircraft lessor is likely to pay cash tax every year. However, Irish and Singapore tax rules allow the lessors to claim accelerated depreciation allowances on aircraft. This will create tax losses that can be carried forward to offset against any future profits and, generally speaking, an Irish/Singapore lessor will only pay tax or crystallise the tax liability when the aircraft is disposed of.

Therefore, it is important for each lessor to take time value of money into consideration to see whether Hong Kong is suitable for them based on their own criteria, says Leung.

Double tax treaties

Although Ireland and Singapore have established a more extensive tax treaty network than Hong Kong, Leung observes that many of the existing tax treaties in Hong Kong are on par with Ireland and Singapore, and one or two are "even better".

It is important, he says, for lessors to perform overall assessment on the specific tax treaty clauses in different leasing platforms (eg, Hong Kong, Ireland or Singapore, etc) before the final result can be concluded.

Double taxation agreements (DTAs) are bilateral agreements between companies that seek to eliminate the double taxation of income. DTAs are crucial to the aircraft leasing industry because aircraft are big-ticket assets and any taxes on importing/leasing aircraft into a jurisdiction can severely impact a lessor's profit and the lease rental it can offer to the airline.

Ireland, the world's biggest aircraft leasing hub, has 72 tax treaties, whereas Hong Kong has only 36.

"Only half of those countries in the world have withholding tax. The other half have no withholding tax so you're not relying on any double tax treaty. As a lessor, we just go to wherever the tax that you pay is the lowest," says Leung.

A source at one major Asian flag carrier tells *Airfinance Journal* that some carriers, including his own, have a withholding tax exemption for Hong Kong, and therefore would be happy to do business with a lessor that books its aircraft in Hong Kong.

Anti-avoidance

From a sustainable tax policy perspective, the proposed Hong Kong system may be considered more robust given many countries are now putting the OECD's Base Erosion and Profit Shifting (BEPS) initiatives into place as they reform their domestic tax legislation, says Leung.

Therefore, it is "vital" that the proposed new tax concessions in Hong Kong are BEPS-compliant in order to ensure that they are well received by the international tax community. A small amount of "cash tax" may be worth paying in this new post-BEPS environment, he says.

"Besides, it is anticipated that the proposed new tax regime will include anti-abuse features to prevent companies using the new rules for tax-avoidance purposes. The draft paper stipulates that companies should fulfil central management and control in Hong Kong in order to qualify for the concessionary tax rate," he says.

Leung adds that the Hong Kong government will likely try to prevent companies using the new rules for tax avoidance.

He says: "I think what they are trying to prevent is: ok, there's one business, it's nothing to do with aircraft leasing, it's very profitable, so they worry that if you put the aircraft leasing business into that business, any losses arising from the aircraft business can be used to shelter the other non-aircraft related business."

"As no depreciation allowances will be available to a qualifying aircraft lessor, broadly speaking, there should be no re-capture of any depreciation allowances on the disposal of the aircraft."

Clarence Leung, PWC

Problems mount for carriers

The political uncertainty in Turkey is having a negative impact on the returns of the country's carriers. **Joe Kavanagh** analyses the financial health of Turkish Airlines and Pegasus Airlines.

Turkey's political turmoil is taking its toll on the country's two largest carriers, Turkish Airlines (THY) and Pegasus Airlines. Both companies feature in the top 10 list of airlines whose fortunes have deteriorated the most over the past 12 months, according to *Airfinance Journal*'s Financial Ratings.

THY has slipped by 1.2 points, earning a rating of B for the third quarter of 2016, while Pegasus Airlines has dropped by 2.5 points – the biggest fall of any of the 180 airlines covered by Financial Ratings – receiving a rating of B-.

The ratings drop can largely be attributed to the spike in geopolitical risk that the country has endured since 2015. In September 2016, ratings agency Moody's cited the airline's operating environment as a reason for downgrading THY's corporate family rating to Ba3 from Ba2, with a negative outlook.

The impact of the geopolitical risk is twofold. Passenger revenues are down because tourists are less keen to travel to Turkey, while the airlines' deteriorating balance sheets and the country's political uncertainty have driven up financing costs. To make matters worse, the devaluation of the Turkish lira is driving up the relative price of the airlines' dollar-denominated costs.

Falling margins, rising costs

As the data shows, Turkey's two largest airlines suffered from declining yields and higher debt-to-earnings ratios last year.

THY's total revenues fell 6% to $7.6 billion for the first nine months of 2016, compared with the same period in 2015, mainly down to declining passenger yields. Meanwhile, total operating costs for the same period rose 2.7% to $7.4 billion.

Its Ebitdar margins (earnings before interest, tax, depreciation, amortisation and rent costs) have also taken a hit (see graph). For the third quarter of 2016, the last quarter for which financial results are available, THY's Ebitdar margin was 21.5%, compared with 31.3% in the third quarter of 2015.

Meanwhile, THY's adjusted net-debt-to-Ebitdar ratio at the end of the third quarter had risen to 4.7 times, compared with 2.3 times in the third quarter of 2015.

Pegasus Airlines' Ebitdar margins are also down. For the third quarter of 2016, they fell to 32.7% from 35.3% in the third quarter of 2015.

Although total operating costs slipped 1.2% to $908 million, total revenues also fell by 4.3% to $974 million.

Pegasus' own adjusted net-debt-to-Ebitdar ratio at the end of the third quarter had risen to 3.0 times from 2.3 times in the third quarter of 2015.

Financing and capacity

Naturally, both airlines have found it more difficult to finance their incoming aircraft, at least at the same rates as in 2015.

Pegasus Airlines recently admitted that it is paying higher financing costs than in the recent past.

"Is there a reflection in our cost of funding? Yes, for the time being," said the carrier's vice-president finance and strategic planning, Tamer Yuzuak, at *Airfinance Journal*'s 14th Annual Middle East Conference in Dubai last year.

Banking sources tell *Airfinance Journal* that THY has attempted to close a capital markets structure in the past few months, but was prevented from doing so when some investors withdrew because of their interpretation of the political risk. The airline is now seeking alternative sources of finance, such as Korean institutional investment, but it has not disclosed whether deals have closed successfully or at what price.

Meanwhile, the fall in passenger demand has forced the airlines to reassess their capacity plans.

Before the wave of terrorist attacks, both airlines were expecting traffic growth above the global average, because of Turkey's proximity to Europe and the Middle East.

The fall in passenger demand came at a particularly bad time for THY. With ambitious expansion plans, the carrier had placed a large number of orders with Boeing and Airbus: as of September 2016, its order book stood at 174 aircraft.

However, when demand for travel fell, the carrier was left with excess capacity. In response, it organised a massive restructuring with the two manufacturers. THY has delayed the delivery of 92 Airbus A321neos, 65 737 Max 8s and 10 737 Max 9s that were due to enter service between 2018 and 2022. Aircraft deliveries will now be 10 in 2018, 35 in 2019 and 42 in 2020.

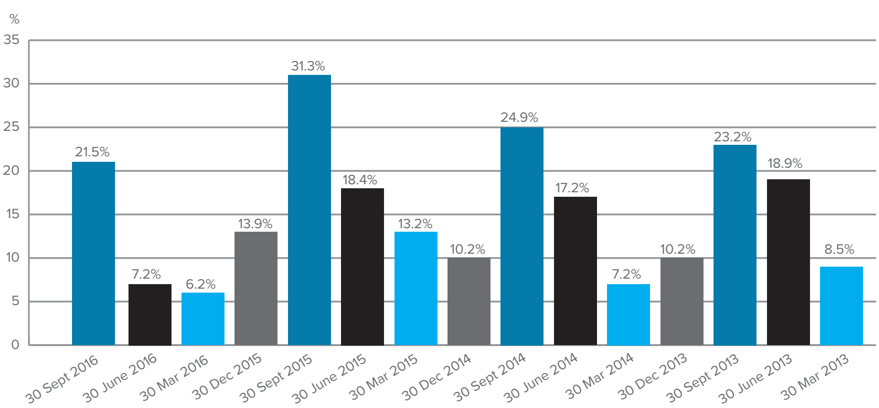
The airline is also reportedly seeking to sub-lease three A330s to Russian charter specialist Nordwind Airlines.

Although Pegasus Airlines has chosen not to defer its orders with Airbus, it is looking to offload five of its 737-800s for sub-lease or sale.

Speaking on a panel at the 19th Annual Global Airfinance Conference in Dublin in January, Serhan Ulga, Pegasus' chief financial officer, said: "We have 100 Airbus orders, and have received nine aircraft so far. We have not deferred any of our Airbus orders – instead, we trying to advance them. We were the first airline to fly the CFM-powered Neo. In this rising fuel environment we thought it would be a good idea to have them as soon as possible."

Turkish Airlines - USD

EBITDAR Margin (EBITDAR/Total Revenue) (30 Sept 2016 - 31 Mar 2013)



Source: The Airline Analyst

Appetite for JoIs stays strong despite challenges

Demand for the Japanese operating lease (JoI) remains robust, though arrangers of the structure have raised concerns over declining used aircraft values and increased competition among market participants, reports **Michael Allen**.

To an outsider, the difference between Japanese operating lease with call option (Jolco) and Japanese operating lease (JoI) structures may be difficult to discern. Both rely on Japan's tax system to provide advantages to investors and customers, but each structure has its own specific advantage.

"In a Jolco, the airline is supposed to buy the aircraft so the equity investors don't face metal risk, which is the risk of price fluctuation of the aircraft at lease end (residual value)," says Bob Melson, a partner at K&L Gates Tokyo, a law firm that advises on JoI/Jolco transactions.

"JoI equity investors are taking aircraft residual value risk as they get the aircraft back at the end of the lease. Jolco investors don't get the aircraft back, as it is bought by the airline (or it is supposed to be at least), so they don't have the metal risk," he adds.

Because they are taking this residual value risk, JoI investors would be concerned if used aircraft values dropped.

"You can see that, year-after-year, the old generation aircraft values have dropped," says Thierry Pierson, co-founder and managing director at Asset Brok'Air, an independent Irish asset finance advisory firm.

He says that this is because of the introduction of new generation aircraft into the market and that market demand has not been high enough to keep prices up for the older generation aircraft.

This decrease in the value of older generation aircraft could pose a risk to companies that use the JoI market to finance aircraft. The JoI product relies on older vintage aircraft and so fluctuations in the price of these aircraft is a risk.

While Asset Brok'Air is not active in the JoI market because its four staff are already being engaged full-time on the Jolco structure, Pierson advises that it is important to know the value of and demand for the aircraft you want to invest in a JoI structure.

"The JoI market is driven by investors who are very keen to invest in assets, whereas Jolco is a transaction where investors are keener to invest on credit risk. That's the main driver and the main difference," he says.

> *"Often given the competitive nature of the market globally – with the Chinese jumping all over everything – it's very hard to get good pricing, so we probably will look at 30 aircraft before we find one that fits the pricing that we are looking for."*
>
> **Richard Ragains**, representative director at Aviation Management Services

Asset Brok'Air has mandates to arrange the Jolco financing of nine aircraft, including the A320, 737 and 787, for three airlines.

More liquidity is becoming available for the JoI from various sources, including Japan's regional banks and German banks (see box, Germany/Japan double-tax treaty), say market sources.

K&L Gates' Melson says he has witnessed traditional Jolco equity investors deploy their funds to the JoI product over the past year.

"These investors have tended to be larger companies that are comfortable with accepting the metal risk that is inherent in a JoI. Many of these deals have been arranged by the same Japanese leasing companies that have traditionally arranged Jolcos for Japanese equity investors. Based on strong Japanese equity demand for aircraft assets that can be depreciated, we expect this trend to continue in the coming years," he says.

Stiff competition

Along with a fall in used aircraft prices, the JoI market has also experienced increased competition on pricing.

Richard Ragains, representative director at Aviation Management Services, says that while high yields on JoIs are possible, investors may need to look at multiple deals before they can find the right one.

"Often given the competitive nature of the market globally – with the Chinese jumping all over everything – it's very hard to get good pricing, so we probably will look at 30 aircraft before we find one that fits the pricing that we are looking for," he says.

Another challenge, adds one Japanese equity arranger source, is selling the aircraft at the end of its lease term. If the structure involves only a single investor, this should not pose such a problem, but some companies arrange JoIs for multiple investors, in which case it can be more difficult to form a consensus on selling the aircraft.

"It's easy to place the equity, but there is some difficulty when the aircraft will be sold in the market," says the source.

"Some investors would like to sell the aircraft as soon as possible, while some would like to sell it for the best price. In the worst-case scenario, we need to request additional investment for remarketing costs, etc. Some investors can accept this, but some are not willing to invest additional amounts."

Paul Hirodo, executive officer, aircraft leasing department at Osaka-based Chishima Real Estate, says that the introduction of newer aircraft types such as the Neo and Max could drive down prices for the older variants.

Regional banks

Aviation Management Services' Ragains thinks the biggest trend at the moment in the JoI market is the increased participation from Japanese regional banks, and their increasing independence from reliance on the big arranger banks in Tokyo, to which they may need to pay hefty fees.

Airfinance Journal reported in February that Japanese regional banks are continuing to look to the aircraft finance market for an outlet for their excess liquidity.

"The regional banks are slowly becoming more and more attracted to doing deals on their own with their clients. I had a couple of clients coming to me who had typically gone to large Japanese lessors, but when they go through that structure they can't make much money because the fees are high," he says.

"Once you have done it 10 times, you know what you are doing. The banks are saying, 'We want to try this ourselves'. Right now, the factories are not really growing in the region outside Tokyo, so the banks have nothing to do with their money and aircraft have become one of the interesting places to look."

Chishima Real Estate's Hirodo says that regional banks need time to learn how to take a mortgage over an aircraft, and until that happens, they are likely to rely on participation of the bigger bank syndicates.

Ragains adds that everyone is rushing to get deals done before the end of March, which marks the close of the Japanese fiscal year.

He says: "Everyone was very, very patient last year and, now that they are coming up to the end of the fiscal year in March, they are taking a closer look at deals they passed up before. Lease rate factors are dropping this quarter."

Germany/Japan double-tax treaty

A new double-tax treaty (DTT) between Germany and Japan came into force on 1 January. According to a report by KPMG, a 15% withholding tax was previously charged on dividends, interest and royalty income.

The elimination of this withholding tax via the new DTT is a "massive movement" for German banks, says Thierry Pierson, co-founder and managing director at Asset Brok'Air.

"This will give the Jolco [Japanese operating lease with call option] market additional lending resources. Maybe the price will be lower or more aggressive or the market will probably have much more liquidity, which is really good news," he says.

A German banking source cautions, however, that there is still a question mark over whether German banks could arrange the deal and book the deal in Germany.

"There is some more to be done and, on top of that, it's not something that's beginning to be the next big thing. It's like how people were excited by Islamic financing. It will provide a bit more liquidity to the JoI/Jolco market, but not much more liquidity," says the source.

He adds that, realistically, this DTT will only benefit three German banks: DekaBank, Helaba and NordLB.

"Deutsche Bank and Commerzbank have a presence in Tokyo already so it doesn't really matter for them," he says.

He adds that for German banks whose business does not focus on top-tier names, there will not be too much excitement because the JoI/Jolco tends to be for the stronger names in the market.

"While it's something we are exploring, it's not something I'm too excited about. I'm not going to put too many resources into it," says the source, who is also sceptical of the significance of additional German capital in the market.

"Yes, BBAM, who arrange JoIs, would be able to tap into the German banks for the JoI, but has the lack of German bank participation prevented BBAM from doing deals in the past? I don't think so.

He adds: "I think there is something to be done there, but it's not like you are going to see two to three billion-worth of Jolcos being done by German banks."

FPG's trust structure

FPG, a Tokyo-based equity arranger on Japanese operating lease with call options (Jolcos), and FPG Amentum, an Ireland-based joint-venture focusing on the Japanese operating lease (JoI), have devised a new trust structure for the JoI product. FPG used to arrange the NK structure, but since December it has come up with this new structure that, it claims, is more attractive for investors.

"As far as I know, in the JoI market in Japan it was the first structure using a trust," an FPG executive tells *Airfinance Journal*.

In a normal transaction, if a bank required a mortgage over the aircraft directly, the lessee may not be comfortable in accepting this. In the trust structure, the lessor is the trust company, not each investor. FPG's trust company is a 100% subsidiary of FPG.

Airfinance Journal reported in December that FPG and FPG Amentum had completed the acquisition of one A320 for a JoI transaction, using this new trust structure. The aircraft was purchased from another lessor and is on lease to SilkAir.

"This is the first aircraft JoI transaction structured in a trust in the Japanese market and the first transaction in which FPG leverages its group capabilities to provide trust services in an aircraft acquisition. This innovative structure benefits JoI investors and airlines alike and will supplement FPG's offering of conventional JoI structures going forward," FPG said in a statement.

Thierry Pierson, co-founder and managing director at Asset Brok'Air, adds that the JoI product is not suitable for lessors, because it would not make sense for them to refinance an operating lease using another operating lease, "so the Japanese leases we will see in future for lessors will be the Jolco not JoI".

Source: SilkAir

MRO moves east

Asia will lead the way in global fleet growth over the next decade, resulting in a major shift in relative demand for maintenance, repair and overhaul (MRO) services. However, if capacity is constrained in the region, there will be opportunities for MRO providers outside of Asia.

Over the next 10 years, the world's airline fleet is forecast to grow from nearly 25,000 aircraft to more than 35,000. Most of this growth will be driven by Asia, particularly in China, as higher rates of population and economic growth spur passenger demand.

As a result, the maintenance, repair and overhaul (MRO) industry is also expected to undergo a major shift, as more and more demand for services is driven by Asian airlines.

The MRO industry – worth almost $68 billion a year, according to a recent report by ICF, the airline management consultancy – is responding to the changing demand by boosting its Asian capacity. However, there are a number of potential constraints in the region (labour, in particular) that might cause supply to lag behind demand. If this does happen, and Asian operators find that heavy maintenance slots are too few and far between, these airlines may travel further afield for MRO services, creating opportunities for MRO shops outside of Asia.

Asia leading the way

Over the next 10 years, Asia-Pacific, China, the Middle East and India are going to account for a much greater proportion of the global MRO spend. By 2027, the combined MRO spend of Asia-Pacific and China is expected to more than double that of North America (*see chart 1*).

Asia-Pacific already accounts for 30% out of the total $68 billion global MRO market. It is followed closely by North America (27%) and Europe (26%), according to the ICF report.

MRO growth is very closely tied to fleet growth, as operators tend to choose local MRO shops for heavy maintenance, especially for single-aisle aircraft, because it is uneconomical to fly them further afield without paying passengers on board. Asia-Pacific will require 15,130 new aircraft by 2035, according to Boeing's latest market outlook. The demand is far greater than that of any other region: in the same time frame, North America will require little over 8,000 and Europe will need about 7,500.

As a result, Asia will enjoy far higher levels of MRO growth than other regions. North America and western Europe will remain key drivers of demand, but their relative importance will decline as Asia accounts for more of the growth.

Gerald Steinhoff, vice-president of corporate sales Asia-Pacific, at Lufthansa Technik, is keenly focused on Asia. He says that the company "has a clear focus on APAC [Asia-Pacific and China] as the most important MRO growth area in the world".

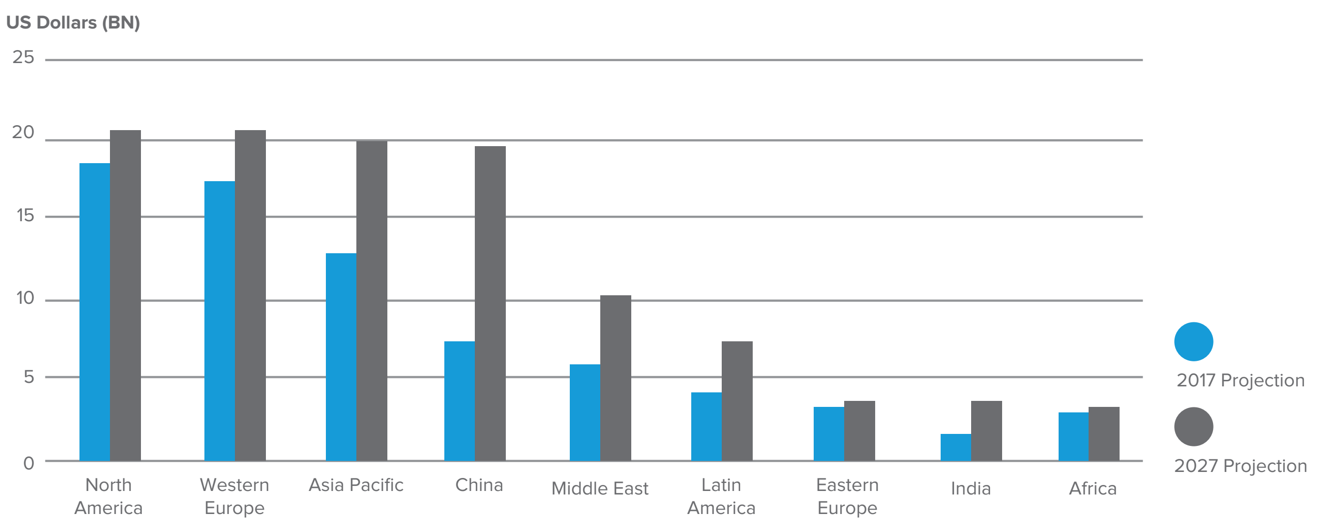
Lufthansa Technik is investing in facilities in the Philippines, China, Malaysia and India, and will announce further partnerships "very soon", he adds.

China will enjoy the highest level of MRO growth, according to Oliver Wyman, an international management consultancy firm. It forecasts 10.1% annual growth in China, leading to an increase in market size of 160% in 10 years' time – the largest net growth of any region.

In contrast, North American MRO spend is forecast to grow modestly from $18.7 billion in 2017 to $20.7 billion by 2027 – an average compound average growth rate of just 1%. European spending is also forecasted for flat growth, at 1.6% annually, while eastern Europe is expected to grow just 0.7% annually as the effects of economic sanctions on Russia take hold.

Latin America will also experience strong growth, at 5.1% annually, while the Middle East is expected to grow at 5.7% annually, adding nearly $4.4 billion in MRO demand and constituting 9% of the global MRO market by 2027. Africa, however, is expected to grow just 0.6% a year.

Chart 1: Total MRO spend by region



Source: Oliver Wyman Global Fleet & MRO Markets Forecasts

New opportunities

Although the majority of MRO growth will occur in Asia-Pacific and China because of high fleet growth in those regions, there are still opportunities for MRO companies elsewhere to win more work if they position themselves correctly.

In particular, there will be opportunities to win maintenance work on widebody aircraft, says Rahul Shah, senior vice-president of strategic growth and business development for Asia-Pacific, Middle East and Africa, at AAR Corporation. He hopes that AAR will capture some of the new opportunities.

"Widebody maintenance requires more labour hours than narrowbodies. Increases in labour costs in south-east Asia and China will push widebody maintenance back to western shores," he argues.

AAR is preparing to cater to Asian operators, among others, by building a new MRO facility outside Chicago to accommodate next-generation widebodies, including the A380.

Abdol Moabery, chief executive officer of GA Telesis, the US MRO, says his company has already experienced a growth in demand from Asian carriers. He also thinks that a lack of skilled aviation labour, as well as a shortage of infrastructure in China, is a key reason for supply lagging behind in the region.

As labour costs rise in China, he says the attractiveness of investing in MRO capacity in the country is less certain: "the lower cost environment, once enjoyed by those that came to China for maintenance, is all but gone."

He adds: "When it comes to hourly rates, first-tier MROs in China and the rest of the Asia are catching up to par with other parts of the world, but they are still significantly lower than western Europe.

"There will be growing demand for more MROs in Asia, especially mainland China, but this is no easy task for foreign investors. The regulations and processes in many countries are difficult to navigate through and, ultimately, the question looms: is it worth it for the MRO margins?"

In its 10-year outlook, consulting firm Oliver Wyman also argues that Chinese airlines may have to look further afield for MRO services in the future. Rising labour costs, as well as infrastructure and capacity constraints, might force Chinese airlines to go south or east to fulfil their maintenance needs. These factors will create opportunities for non-Chinese MRO providers.

However, some MRO shops are choosing to expand their capacity in Asia. Lufthansa Technik has recently expanded its facilities in Manila in order to complete twin-aisle work. It has also just opened up a second location in Hong Kong, again for widebody work.

Nearly 30% of the world's widebody heavy airframe maintenance needs are already carried out in Asia-Pacific and China. MRO providers may soon find that they cannot keep pace as MRO demand from the airlines in these regions picks up. This means that MRO companies worldwide will be able to pick up the slack (*see chart 2*).

There will be an "inflection point", says Oliver Wyman, when capacity growth within Asia will lag behind MRO demand of its own countries plus that of foreign operators, particularly those in the mature North American and western European regions.

It adds: "As regional labour rates move toward global parity, MROs that invest in new widebody capabilities and can deliver a high-quality, on-time product will be positioned to capture market share from operators that get squeezed out of the Asia market."

However, winning widebody MRO work is not as simple as building a hangar and hiring some mechanics. With composite materials and longer maintenance intervals, some new-generation widebody aircraft represent challenges to MRO providers.

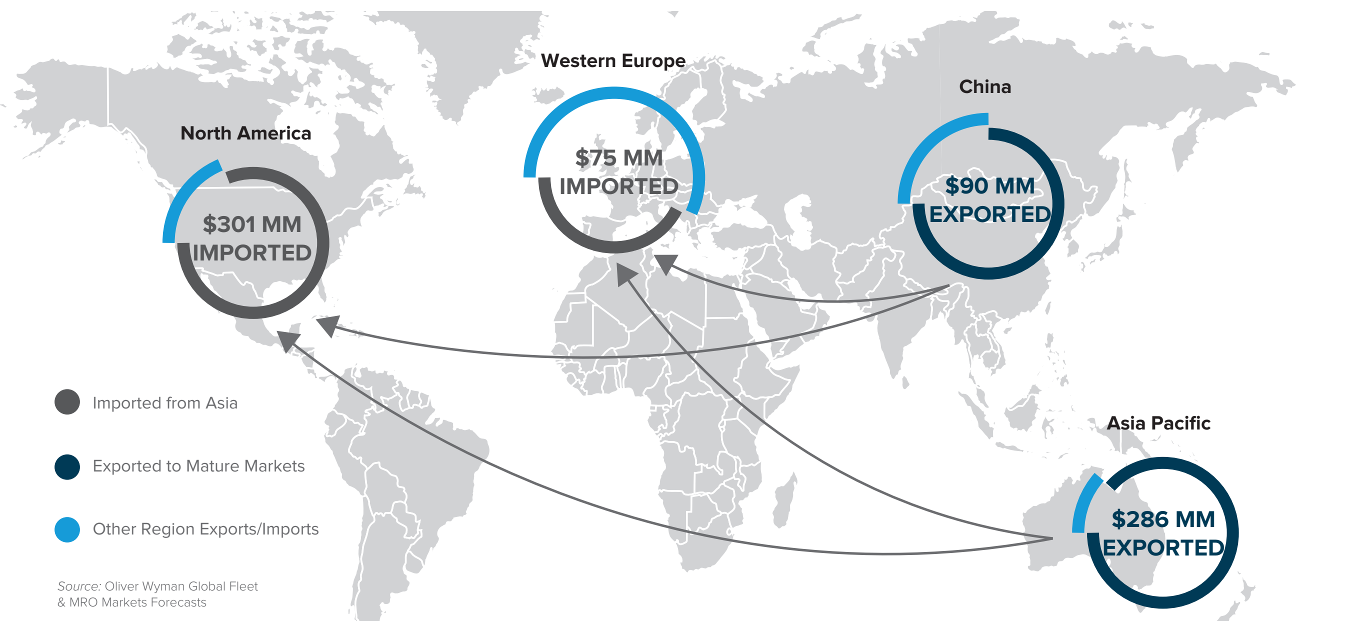
The higher costs associated with maintaining composite materials, for example, may prove a barrier to smaller MRO shops hoping to expand into this capital-intensive market. Larger MROs are expanding their spare parts warehouses to include next-generation engines such as the CFM Leap-1B on the 737 Max.

"MROs will be focusing a great deal of attention on effectively dealing with the new technology," notes AAR's Shah.

Another challenge posed by new-technology aircraft is that they require less maintenance than older models. Boeing's 787, for example, is designed to reduce maintenance costs by 30% once full check-interval escalations are complete. This is because of its composite structure, which makes up more than 50% of the airframe's weight.

While this is good news for operators, whose MRO spend is reduced as a result, it is not such good news for the maintenance shops. If widebody MRO work does start to flow out from Asian operators, the MRO shops receiving them will have to be prepared.

Chart 2: North America and Western Europe wide-body heavy airframe maintenance imported from Asia



Source: Oliver Wyman Global Fleet & MRO Markets Forecasts

ATR72-600 – lessors add to availability

Appraisers point to a variety of pressures on values for the 70-seat turboprop, but are generally positive about the aircraft's long-term prospects.

The ATR72 is a twin-engined turboprop developed from the ATR42 to provide capacity for 70 plus passengers, by stretching the fuselage, increasing the wingspan and upgrading to more powerful engines. The original ATR72-100 variant entered service in October 1989, but was soon superseded by the -200 model. The aircraft was developed with a series of upgrades to maximum take-off weight and engine power, culminating in the ATR72-212.

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

The ATR72-600 model replaces the -500 and is the current production standard. It offers further performance improvements and includes a redesigned cabin.

The latest development of the ATR72-600 is a high-density seating configuration, which can accommodate 78 passengers.

Market trends

The manufacturer's 20-year forecast indicates a market of 2,200 turboprop aircraft of the ATR72's size. Historically, turboprop aircraft have been avoided by the leasing community, but there has been a marked increase in interest from lessors typified by the recent activities of Dubai Aerospace Enterprise, (*See DAE increases ATR72-600 exposure, page 16*).

Istat appraisers' views

AVITAS

Martin O'Hanrahan, director asset valuations

There are around 320 ATR72-600 aircraft in service worldwide with a backlog of close to 500 orders and options. The type is flying with operators worldwide and has become by far the most successful variant within the ATR72 family, which first entered service in 1989. The ATR72-600 has been in service since 2011 and appears well positioned to become the dominant force in its size class in the turboprop market.

The direct competitor to the ATR72-600 is the DHC-8-Q400 from Bombardier, which has around 500 aircraft in service. Although the Q400 has been flying commercially since 1999, its backlog is dwindling and the ATR72-600 has now established almost the same number of operators. However, the Q400 is a faster aircraft and the manufacturer is now also offering a high-density 90-seat interior intended to make it even more competitive.

The large remaining ATR72-600 order backlog, as well as a high degree of commonality within a successful turboprop family, should help support demand for the turboprop and help it build on its strong market presence.

IBA

Mike Yeomans, head analyst, commercial aircraft & leasing

The market for the ATR72-600 has shown continued softness over the past two years and there are several factors that have contributed to this. In the pre-2014 high fuel cost environment, the ATR72 family flourished and values and lease rates were very buoyant. Lessors clambered to invest in the aircraft and there were a number of speculative orders placed by operating lessors such as Nordic Aviation Capital (NAC), Avation and Dubai Aerospace Enterprise (DAE). As fuel prices fell and demand for ATR72 aircraft weakened, lessors were forced to discount lease rates to secure placements for their aircraft.

> *"The large remaining order backlog as well as a high degree of commonality within a successful turboprop family should help support demand for the ATR 72-600."*
>
> **Martin O'Hanrahan**, director asset valuations, AVITAS

The low fuel cost has not only affected the newer ATR72-600 model, but also the previous generation ATR72-500. An excess of these aircraft in the market has dragged down values and lease rates of the newer model, as operators appear to have been disinclined to pay much of a premium for the newer technology aircraft.

Although the ATR72-600 has some clear benefits over its predecessor such as updated engine variants, a new interior and a modern glass cockpit avionics suite, there are some clear market interactions between -500 and -600 series aircraft.

AIRCRAFT CHARACTERISTICS

Seating/range

Max seating	78 at 30-inch pitch
Typical seating	70 at 30-inch pitch
Max range	825 nm (1,520km)

Technical characteristics

MTOW	22.8 tonnes (option 23 tonnes)
OEW	13.5 tonnes
MZFW	20.8 tonnes (option 21 tonnes)
Fuel capacity	6,350 litres
Engines	PW127M
Take-off power horsepower	2,475 shaft

Fuels and times

Block fuel 200 nautical miles	620kg
Block fuel 500 nautical miles	1,310kg
Bock time 200 nautical miles	56 minutes
Block time 500 nautical miles	124 minutes

Fleet data

Entry into service	2011
In service	320
Operators (current and planned)	66
In storage	37
On order	273
Built peak year (2015)	80
Planned 2017	100
Average age	2.4 years

Source: *Airfinance Journal* research

Indicative maintenance reserves

C-check reserve	\$35-\$40 per flight hour
Higher checks reserve	\$25-\$30/flight hour
Engine overhaul flight hour	\$100-\$105/engine
Engine LLP cycle	\$30-\$35/engine
Landing gear refurbishment	\$20-\$25/cycle
Wheels, brakes and tyres	\$35-\$40/cycle
Propeller	\$15-\$20/per hour
Component overhaul	\$125-\$130/flight hour

Source: *Airfinance Journal* research and analysis

Whilst we still see relatively healthy values and lease rates for new delivery aircraft in sale and leaseback transactions, the current market environment is such that even relatively new examples exhibit softer value and lease rates performance.

Current advertised availability in industry publications appears low, however, storage levels are high at over 9% of the total fleet. This a high rate for a relatively new aircraft model such as the ATR72-600. With the oldest models still less than six years old and with an average fleet age of around 2.5 years, the current parked fleet size points to a soft market.

Despite the current market circumstances, the ATR72-600 is a very capable aircraft. The model continues to lead its competitor, the Q400 in terms of market share and recent sales. The ATR72-600 is also an important aircraft in terms of public services and regional connectivity, particularly in emerging markets, enabling new route creation and access to airports that are not easily or efficiently served by regional jets.

ATR72 aircraft have historically exhibited long economic useful lives, with many of the earlier generation -200 models from the early 1990s still in service. The ATR72 also benefits from a successful freighter conversion programme that adds longevity to the aircraft life.

While IBA is seeing soft market conditions for the ATR72-600 at present, the long-term outlook for the aircraft is positive and the current environment could represent an opportunity for forward thinking investors to acquire very capable aircraft, with long terms prospects, at reduced prices. A rise in the cost of fuel would likely see increased demand for the ATR72-600, both from an operating cost perspective and through increased demand for the aircraft from oil producing economies.

MBA

Alex Cosaro, analyst, asset valuations

The ATR72-600, first certified in 2011, was delivered as an upgraded version of the ATR72-500 series aircraft, introducing upgraded avionics and the PW127M as the standard engine type. The aircraft has been especially popular with Asian carriers, with a large proportion of the fleet operating within the continent. The 70 plus seat ATR72-600 competes directly with the Q400. To compete with the high-density seating layouts offered on the Bombardier aircraft, a version of the ATR72-600 accommodating up to 78 seats was certified in 2015. The manufacturer also developed an option, branded as Cargo Flex, that allows easy reconfiguration from full passenger to combined cargo/passenger layouts. In all, there have been over 1,100 ATR72 family aircraft delivered compared to just over 500 of Bombardier's largest turboprop. As a new variant, values for the ATR72-600 have been relatively stable and are expected to remain so for the medium term, despite low fuel prices eroding the aircraft's advantage over competing 70-seaters. A geographically diverse operator base helps to support aircraft values. Lessors have responded favourably to the aircraft, as operators have been open to leasing the ATR72-600 as a financing option. Lease rates for the type have also remained stable, and are expected to perform consistent with the values of the aircraft in the near to medium term. The ATR72-600 has strong predecessors in the form of the ATR72-500 and the ATR72-200 with the latter forging a follow-on role as a freight-feeder and a mainstay of the express-delivery market.

Values ATR72-600

Current market value (\$m)

Build year	2011	2012	2013	2014	2015	2016	2017
AVITAS view	11.8	12.8	13.9	15.3	16.9	18.8	20.4
IBA view	12.6	13.4	14.3	15.3	16.7	18.5	20.6
MBA view	-	15.4	16.5	17.6	18.8	20.0	21.4

Values assume standard Istat criteria.

Indicative lease rates (\$000)

Build year	2011	2012	2013	2014	2015	2016	2017
AVITAS view	105-117	115-125	125-133	131-141	139-149	147-157	155-165
IBA view	141	145	149	154	162	172	180
MBA view	-	130-150	140-160	140-170	150-170	15-180	160-190

Too close to call between regional rivals

The competition between Embraer and Bombardier is at its fiercest in the 70- to 90-seat market. **Geoff Hearn** looks at how the manufacturers' respective models compare in terms of operating cost and market values.

Comparison of the competing Embraer and Bombardier aircraft in the 70- to 90-seat range is made more difficult by the plethora of models and variants in the category.

The Bombardier CRJ700 comes in three versions: Series 700, Series 701 and Series 702. The Series 700 is limited to 68 passengers, the 701 to 70 passengers and the 702 to 78 passengers. The CRJ700 also has three fuel/weight options: standard, extended range (ER) and long range (LR). The -ER version has an increased fuel capacity, as well as a higher maximum take-off weight, which in turn increases its range. The -LR version increases those values further.

The CRJ900 is a stretched 76- to 90-seat version of the CRJ700 model. It is available in standard, -ER and -LR versions.

Despite what might be inferred from its nomenclature, the CRJ705 is a variant of the CRJ900, certificated with a reduced maximum seating capacity. The aircraft was designed in the context of the Air Canada Pilots Association agreement with the airline management that limited the maximum seating capacity of any jet aircraft at Air Canada Express to 75 seats.

Jazz Aviation, a subsidiary of Chorus Aviation, operates 16 CRJ705s on behalf of Air Canada and is currently the only operator of this version. However, this type of agreement (known as a scope clause)

has wider implications for aircraft in this market segment (see below).

The Embraer model range is also complicated by a number of options, with both the Embraer 170 and 175 available in standard, -LR and advanced-range (AR) variants.

Total sales of all the variants of the two CRJ types exceed those of the competing Embraer models, but this is to some extent explained by the earlier entry into service dates of the Bombardier aircraft.

The backlog for the Embraer aircraft appears healthier, albeit that it consists almost entirely of E175 orders. The prospects for the Bombardier models look less promising, with the CRJ700 having virtually no unfilled orders and the CRJ900 having an orderbook of fewer than 40 units.

Although the CRJ900 backlog is not large, Bombardier has continued to receive regular orders for the type and was given a boost in early 2017 when CityJet placed a firm order for six aircraft with an option for a further four of the type. The Irish carrier will wet-lease the aircraft to Scandinavian Airlines and the order is indicative of the CRJ900's wide geographical spread of operators.

In contrast, the CRJ700 is viewed by the market as a North American aircraft, with more than 80% of the fleet based in the region. Another plus for the larger Bombardier model is its technical reputation in the market. Several sources indicated to *Airfinance Journal* that they considered the CRJ900 to be a much-improved aircraft compared with the CRJ700, particularly in terms of maintenance costs.

Operating cost

The results of *Airfinance Journal*'s analysis

Leading characteristics of the 70- to 90-seat market

Model	Entry into service	MTOW (tonnes)	Engines	Maximum pax	Typical pax	Range (nm)	In service	On order	Customers
CRJ700	2001	33	2xCF34-8C5B1	78	70	1,220	335	2	26
CRJ900	2003	36.5	2xCF34-8C5B1	90	88	1,040	392	39	25
E170	2004	36	2xCF34-8E	80	70	2,100	195	2	27
E175	2005	37.5	2xCF34-8E	88	78	2,000	397	154	20

Source: *Airfinance Journal research based on manufacturers' published data*

Indicative relative direct cash operating costs for new single-aisle aircraft

	CRJ700	CRJ900	E170	E175
Relative trip cost	-5.2%	Base	+0.9%	+3.6%
Relative seat cost	+9.4%	Base	+13.6%	+5.9%

Assumptions: figures are based on *Airfinance Journal*'s interpretation of manufacturer claims and published data. Additional assumptions: 500-nautical mile sector, typical seating layouts.

indicate that the CRJ900 and E170 are very closely matched in terms of trip cost and that the Bombardier aircraft has an advantage of between 3% and 4% over the E175. The CRJ700 costs about 5% less in cash operating terms than its larger stablemate.

When cost per seat is considered, the CRJ900's advantage is increased significantly thanks to its typical configuration accommodating about 10 more passengers than even the larger of the Embraer models. The exact difference in capacity is, of course, a source of some debate between the manufacturers.

In North America, which is the key market for 70-seaters, the arguments around seating capacity and associated seat-mile cost are to some extent academic because the scope clauses in place between the major carriers and their pilot unions (similar to the example cited above for Air Canada) limit the size of aircraft that regionals can operate. The debate therefore centres on trip costs.

Sources that have been involved in placing aircraft with North American carriers tell *Airfinance Journal* that the major airlines typically credit the CRJ900 with a 5% cash operating cost advantage over the Embraer 175 – a slightly higher figure than that indicated by *Airfinance Journal*'s analysis.

The four-abreast cabin configuration of the Embraer aircraft is generally perceived as superior to the CRJ's three-abreast layout, but this is somewhat mitigated by the superior seat-pitch that the CRJ900 can offer in a 70-seat configuration.

The backlog for the E175 would suggest that Embraer has a competitive edge in the current market. The Brazilian company is, however, faced with a problem because the second-generation (E2) version of the E175 will not meet the requirements of the various pilot scope clauses in terms of maximum take-off weight. The manufacturer has mitigated the situation by planning for the E175-E2 to be the last of the family to enter service, but it is nonetheless banking on a relaxation of the limits.

However, given the relatively healthy state of the major carriers, it seems unlikely that their pilot unions will be in any hurry to concede ground. A related concern for operators of regional aircraft is that pilot shortages are driving up salaries, which removes a significant part of their cost advantage over the in-house operations of the major carriers.

Values and lease rates

Inputs from appraisers (see tables) suggest that the Embraer models have higher current market values for corresponding years of build and that their average lease rates are marginally higher than those of the Bombardier aircraft. Collateral Verifications values a new E175LR at about $4 million more than the competing CRJ900ER model. This is despite the equivalent list price for the CRJ900 being higher than that of the E175.

If list prices are used in the assumptions, *Airfinance Journal*'s analysis indicates that the total direct operating cost per trip of the CRJ900 and E175 are virtually the same. This is probably unsustainable for the Bombardier aircraft, particularly in the North American market where, as detailed above, it gains no advantage for its extra capacity. The views of appraisers on the higher values for the Embraer models are therefore in line with the results of *Airfinance Journal*'s analysis of operating costs.

Current market value ($m)

Build year	2009	2011	2013	2015	2017
CRJ700LR	13.15	14.85	17.75	–	–
CRJ900ER	14.10	16.24	19.65	21.73	25.60
E170LR	14.76	16.97	19.68	22.30	–
E175LR	16.19	18.13	21.56	25.09	29.74

Source: *Collateral Verifications, March 2017*

Indicative lease rates ($'000s/month)

Type	Lease rates range
CRJ700	150-228
CRJ900	180-233
E170	170-230
E175	190-245

Based on spread of inputs from appraisal firms for Air Investor 2017

Future values

Gueric Dechavanne, vice-president, commercial aviation services, Collateral Verifications, points out that the values of the Embraer and Bombardier models do not only depend on the competition between the two families.

"When looking at the CRJ700/900 and E170/175, the introduction of newer, more efficient aircraft, such as the Mitsubishi MRJ, Comac ARJ21 and Embraer's E2 models, may affect future values. I believe that these new entrants to the market will impact residual values should they show any signs of success.

However, the delays in the MRJ and ARJ21 programmes are helping to stabilise values and lease rates of the current Embraer and Bombardier models until the new generation of aircraft become available in larger numbers. The next few years should determine what the 70-seat market requires, and some of these aircraft could become outdated with the introduction of new competitors and/or replacements. Until then, I feel that the existing fleet of aircraft should continue to be in demand from the current operator base along with new potential operators looking to grow and develop markets by replacing ageing 50-seat regional jets or 50-to 70-seat turboprops."

CRJ900 and E175 in demand

Airfinance Journal's analysis suggests there is little to choose between operating costs of the Bombardier and Embraer 70- to 90-seat families. The order backlogs suggest that the CRJ700 and E170 may be coming to the end of their production runs, but demand for new models of both the CRJ900 and the E175 looks set to continue, in part because of the delays to new-generation aircraft in this market niche. The E175, in particular, remains a popular aircraft with virtually no availability on the secondary market.

Rating Agency Unsecured Ratings

Airlines

Airline	Fitch	Moody's	S&P
Aeroflot	B+(stable)	-	-
Air Canada	B+(pos)	B1(pos)	BB-(stable)
Air New Zealand	-	Baa2(stable)	-
Alaska Air Group	BBB-(stable)	-	BB+(stable)
Allegiant Travel Company	-	Ba3(stable)	BB-(stable)
American Airlines Group	BB-(stable)	Ba3(stable)	BB-(stable)
Avianca Holdings - IFRS	B(neg)	-	B(stable)
British Airways	BBB-(stable)	Baa3(stable)	BB(pos)
Delta Air Lines	BBB-(stable)	Baa3(stable)	BB+(pos)
EasyJet	-	Baa1(stable)	BBB+(stable)
Etihad Airways	A(stable)	-	-
GOL	CCC	Caa3(neg)	CCC(neg)
Hawaiian Airlines	B+(stable)	B1(stable)	BB-(stable)
JetBlue	BB-(pos)	Ba3(stable)	BB-(stable)
LATAM Airlines Group	B+(stable)	B1(stable)	BB-(stable)
Lufthansa Group	-	Ba1(stable)	BBB-(neg)
Qantas Airways	-	Baa3(stable)	BBB-(stable)
Ryanair	BBB+(stable)	-	BBB+(stable)
SAS	-	B2(stable)	B(stable)
Southwest Airlines	BBB+(stable)	Baa1(pos)	BBB(stable)
Spirit Airlines	BB+(stable)	-	BB-(stable)
Turkish Airlines	-	Ba3(neg)	BB-(neg)
United Continental Holdings	BB(stable)	Ba2(stable)	BB-(pos)
US Airways Group	-	B1	-
Virgin Australia	-	B2(neg)	B+(neg)
WestJet	-	Baa2(stable)	BBB-(stable)

Source: Ratings Agencies - 3rd April 2017

Lessors

	Fitch	Moody's	S&P
AerCap	BBB-(stable)	-	BBB-(stable)
Air Lease Corp	BBB(stable)	-	BBB(stable)
Aircastle	-	Ba1(stable)	BB+(stable)
Avation PLC	B+(stable)	-	B+(stable)
Aviation Capital Group	BBB(stable)	-	A-(stable)
AWAS Aviation Capital Limited	-	Ba3(stable)	BB(stable)
BOC Aviation	A-(stable)	-	A-(stable)
CIT Group Inc	BB+(stable)	Ba3(stable)	BB+(stable)
DAE Aviation Holdings	-	B3(stable)	B-(stable)
Fly Leasing	-	B1(pos)	BB-(stable)
ILFC (Part of AerCap)	-	Baa3(stable)	-
SMBC Aviation Capital	BBB+(neg)	-	BBB+(stable)

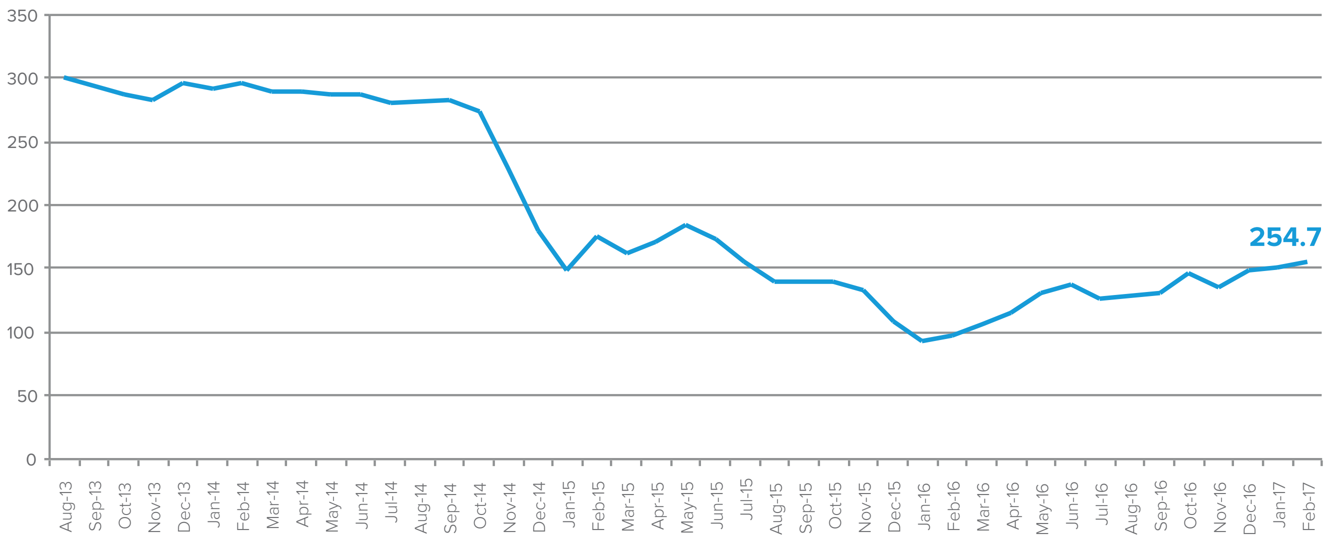
Source: Ratings Agencies - 3rd April 2017

Manufacturers

	Fitch	Moody's	S&P
Airbus Group	A-(stable)	A2(stable)	A+(stable)
Boeing	A(stable)	A2(stable)	A(stable)
Bombardier	B(neg)	B2(stable)	B-(stable)
Embraer	BBB-(stable)	Ba1(stable)	BBB(neg)
Rolls-Royce	A-(stable)	A3(neg)	BBB+(stable)
United Technologies	A-(stable)	A3(stable)	A-(stable)

Source: Ratings Agencies - 3rd April 2017

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



Source: US Energy Infromation Administration

Commercial aircraft orders by customer

Customer	Country	Quantity/Type
November 2016 to 31 March 2017		
Donghai Airlines	China	5x787-9
PNG Air	Papua New Guinea	5xATR72-600
Peach Aviation	Japan	10xA320neo, 3xA320
Fiji Airways	Fiji	5x737 Max 8
United Republic of Tanzania	Tanzania	2xCS300s, 1xQ400
Philippine Airlines	Phillipines	5xQ400s
United Republic of Tanzania	Tanzania	1x787-8
BOC Aviation	Singapore	5xA320
GECAS	USA	75x737 Max 8
ACG	USA	30xA320neo, 2xA320, 3xA321
SpiceJet	India	100x737 Max 8
Widerøe	Sweden	15xEmbraer E2
Flynas	Saudi Arabia	60xA320neo
CityJet	Ireland	10xCRJ900
KAIR Airlines	South Korea	8xA320
CDB Aviation	China	30x737 Max 8
BOC Aviation	Singapore	13x737 Max 8
CityJet	Ireland	4xCRJ900

Based on *Airfinance Journal* research and manufacturer announcements as of 2nd February

Aircraft list prices - new models

Model	$ millions
Airbus (2017 prices)	
A319neo	99.5
A320neo	108.4
A321neo	127
A330-800neo	254.8
A330-900neo	290.6
A350-800	275.1
A350-1000	359.3
Boeing (2016)	
737 Max7	90.2
737 Max8	110.0
737 Max9	116.6
777-8X	371.0
777-9X	400.0
787-10	306.1
Bombardier (2016)	
CS100	76.5
CS300	85.7
Embraer (2017)	
E175-E2	51.6
E190-E2	59.1
E195-E2	66.6

Current production aircraft prices and values ($m)

Model	List price	Current market value*
Airbus (2017 price)		
A319	90.5	35.6
A320	99.0	43.7
A321	116.0	51.6
A330-200	233.8	90.4
A330-300	259.0	102.1
A350-900	311.2	143.5
A380	436.9	220.3
ATR (2016)		
ATR42-600	22.4	16.1
ATR72-600	26.8	20.4
Boeing (2016)		
737-700	80.6	36.1
737-800	96.0	46.8
737-900ER	101.9	49.0
747-8 (passenger)	378.5	162.6
777-200LR	313.8	N/A
777-300ER	339.6	156.9
787-8	224.6	117.3
787-9	264.6	137.1
Bombardier (2016)		
CRJ700	41.4	23.6
CRJ900	46.5	26.0
CRJ1000	49.5	27.9
CS100	76.5	32.4
CS300	85.7	37.2
Q400	31.9	21.4
Embraer (2017)		
E170	42.4	25.8
E175	45.7	28.5
E190	50.6	32.5
E195	53.5	34.5

*Based on Istat appraiser inputs for Air Investor 2017

Lease rates ($m)

Model	Low	High	Average
Airbus			
A319	230	310	270
A320	285	370	328
A320neo	300	400	350
A321	340	420	380
A330-200	400	830	615
A330-300	500	900	700
A350-900	900	1,200	1,050
A380	1,500	2,000	1,750
ATR			
ATR42-600	110	155	133
ATR72-600	150	200	175
Boeing			
737-700	240	310	275
737-800	295	400	348
737-900ER	320	400	360
747-8 (passenger)	1,050	1,440	1,245
777-300ER	1,100	1,450	1,275
787-8	850	1,050	950
787-9	950	1,150	1,050
Bombardier			
CRJ700	150	228	189
CRJ900	180	233	207
CRJ1000	190	255	223
CS100	215	300	258
CS300	255	330	293
Q400	161	200	181
Embraer			
E170	170	230	200
E175	190	245	218
E190	230	285	258
E195	240	290	265

Commercial aircraft orders by manufacturer

	Gross orders 2017	Cancellations 2017	Net orders 2017	Net orders 2016
Airbus (28 February)	16	12	4	731
Boeing (28 March)	138	28	110	668
Bombardier	10	0	10	161
Embraer	33	0	33	55
ATR	0	0	0	36

Based on *Airfinance Journal* research and manufacturer announcements as of 31st March unless stated

Old formulae still work fine, **thank you**

The trusted method of forecasting continues to give a more accurate global picture of future traffic levels, writes **Adam Pilarski**, senior vice-president at Avitas.

Recently, the well-accepted belief of a strong positive relationship between the world economy as measured by gross domestic product (GDP) and world levels of traffic has fallen into disrepute. This was reinforced by a recent study by the German development bank, KfW, which concludes that the historical and widely accepted multiple between growth in GDP and passenger traffic is no longer at a ratio of 1.5. This is very important because if such a relationship is solid, it can be relied on to predict with reasonable accuracy future traffic levels.

GDP forecasts are readily accessible to most and, while they often miss turning points, their general accuracy is pretty good. If we are interested in predicting the numbers of passengers in the next decade this will let manufacturers estimate how many aircraft to produce in the future. Same for lessors which do not need to know exactly which carrier in which country on which continent will need specific aircraft they have and are interested in leasing out. While it would be great if they could get such detailed predictions, they only need to know the overall numbers to reserve their fleet.

The KfW study led a well-known journalist to conclude that: "Passenger numbers are very unlikely to grow 1.5 times GDP... the most accurate way of forecasting air travel is still using a monkey to throw darts."

It may be worthwhile to examine this issue more closely because it is pivotal to aviation planning and especially relevant to leasing companies and manufacturers. Such a statement challenges the established methods of forecasting critical variables in aviation and warrants a closer examination of the facts.

First, the 1.5 multiple conflicts with the traditional multiple of about two used as a rule of thumb for some time. This is easily explained because the ratio of two talks about traffic measured in revenue passenger kilometres (RPKs) while the KfW study examines numbers of passengers. Since stage length is continuingly increasing (each passenger on average flies longer distances) such a conflict is a non-issue. Looking at historical series of world GDP and RPKs going back to 1970 shows a non-surprising fact that both series continuously grow over time. Hence, a positive relationship is what should be expected, the only question being the relative growth rates of the two variables examined.

Our author at the 19th Global Annual Airfinance Conference in Dublin.

> *"Passenger numbers are very unlikely to grow 1.5 times GDP... the most accurate way of forecasting air travel is still using a monkey to throw darts."*
>
> **Adam Pilarski**, senior vice-president, Avitas

Here are some facts pointed out by the KfW study: "Despite the world average of 1.5 some continents show large variability, with Middle East, Europe and Latin America being way above average and North America, Africa and Asia-Pacific having ratios below 1.0." These ratios are also different depending on which time period is investigated. The study points out significant differences between different countries, with Finland having more than double the ratio in the UK, as one example.

Investigating traffic – not passenger – data going back to 1970 shows a lot of variability. It fluctuates substantially across time, with the ratio of GDP and RPK growth having some negative values as in the case of 2001 when the world economy grew while world traffic registered a decline because of the 9/11 events. Also, the variability across continents is much bigger than for the world as a whole, with ratios ranging from less than one to more than 400 for North America, over 200 for Latin America and of 36 for Europe. The European example is for 2013 when the economy barely grew while traffic slowed down to "only" 3.8% after a few years of rates registering over 6% annually because of the growing traffic liberalisation and spread of low-cost carriers. The ratio for the world as a whole, though, varied from less than one to only about seven in the same period.

So does this mean we should not use the old rule of two when looking at the future relationship of traffic and economy? Despite the evidence of diverse results from the rule of thumb, world averages across different years or continents should not sway us to abandon the old and true method of forecasting. We should remember the reason for using the rule: it is to get a world average. The more we disaggregate the world, the more variance we will have. The more globally we look, the less variability exists and the more confidence we have in the old rule.

Using that rule to forecast demand for a given country or specific airline is dangerous because many individual circumstances will interfere with the results. On a global scale, such circumstances cancel each other out and the overall ratio for the world for 1970 to 2016 is 1.9, remarkably close to the old rule of thumb of two. So the results confirm that the old formula is still very robust and useful, thank you.