July/August 2018

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What to expect at **Farnborough**

Widebody orders may remain scarce, but since the 2017 Paris air show oil prices have risen about $30, an increase that is likely to spur demand for new-technology narrowbodies, writes **Jack Dutton**.

As we approach the Farnborough air show, which takes place on 16-22 July, it will be interesting to see whether orders will match those announced at Paris last year and the previous Farnborough.

There are a number of factors to consider. One is oil price, which has crept up to about $70 a barrel from $45 a year ago. This has prompted the International Air Transport Association to alter its yearly profit forecast for the global airline industry to $33.8 billion, a 12% decrease from its December guidance.

As fuel and labour costs rise and eat into profits, airlines react. Although there is a lag, they eventually hike air fares and sometimes cut staff to save costs. They improve the operating economics of their fleets by retiring older aircraft and buying newer, more fuel-efficient equipment. As a result, we might expect to see more orders at this year's show than at Paris 2017, when fuel prices were lower.

However, air show orders do not always move in concert with fuel prices; much also depends on the behaviour and mentality of the original equipment manufacturers (OEMs).

In 2017, Airbus and Boeing announced most of their orders in November and December, rather than around the air shows, encouraging operators to make last minute orders before aircraft prices increased at the end of the year. Also, you don't have to be an industry insider to know that the lion's share of orders at air shows are not agreed at the shows themselves.

There are already rumours of several orders under negotiation that may be announced formally at Farnborough. For example, *Bloomberg* reported on 4 June that China Aircraft Leasing (CALC) is considering an order of up to 200 aircraft, with widebodies accounting for 20% of the order. CALC's chief executive officer, Mike Poon, said its decision will depend on the manufacturers' available delivery slots and pricing, but the company's board has approved an order.

Ryanair and Easyjet have not made large orders since 2014 and 2013, respectively (although Ryanair exercised 25 Boeing 737 Max 200 options in April), so they could produce new commitments. Apart from DAE Capital, most of the larger lessors have bulging backlogs, but there will inevitably be some top-up orders from some established players. It is also likely that some of the smaller lessors will consider significant orders to increase their scale.

With the Airbus/Bombardier CSeries deal closing on 1 July, there will undoubtedly be some CSeries announcements at the show, with the European OEM now having the wriggle room to step up its marketing for the aircraft. David Neeleman's new US airline, dubbed Moxy Airways, which will launch in 2020, may publicly announce its order for 60 CSeries aircraft – a story *Airfinance Journal* broke on 11 June.

However, it may not be a great air show for widebody orders, although there is usually a couple of widebody orders at air shows, often when airlines flock to buy last-off-the-line aircraft at lower prices. Oil prices at less than $80 may not be enough to spur more interest, with the industry having seen a widebody order slump over the past few years. However, a June 2018 order from Fedex for 24 Boeing 777 and 767 freighters shows there is significant cargo demand for widebodies and we may see more freight orders at the air show.

There will also be a lot of press around Boeing's New Midsize Airplane (NMA). Many industry sources believe a formal launch at the air show will be too soon, because Boeing's product development team still needs more feedback from airlines. Launching the NMA at the air show is not completely out of the question, though, as Boeing has plenty of ground to make up on the fast-selling Airbus A321neo. However, it needs to be careful not to cannibalise its shorter-haul 787 in the sub-300-seat category. If the NMA and its engine(s) are confirmed at the air show, firm orders may not arise immediately, but we may see some expressions of interest.

Farnborough orders also depend on the strategy of the teams selling the aircraft. It is hard to tell whether Eric Schulz, who took over from John Leahy as chief commercial officer, customers, at Airbus in January, will be as competitive as his predecessor about the air show order race. Will he want to make headlines or will he be more concerned about yearly figures? We shall see in July.

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GECAS promotes da Silva

GECAS has appointed Luis da Silva as manager of the Latin American and Caribbean region.

Da Silva will be responsible for developing and managing customer relationships in the region and will report to Declan Kelly, GECAS's chief commercial officer.

His professional career began at DHL Worldwide Network in Brussels as a network-planning analyst. He then spent 12 years at Airbus in marketing and then as sales director.

Da Silva joined GECAS in November 2008 as vice-president Latin America in São Paulo, Brazil, where he remains based.

Luis da Silva, manager of the Latin American and Caribbean region, **GECAS**

Buchholz to leave **Bombardier**

Nico Buchholz, Bombardier's senior vice-president, strategic alternatives, will retire later this summer.

Buchholz joined the Canadian original equipment manufacturer in 2015 as the group's chief procurement officer and to support several other key projects including the CSeries ramp-up. During his tenure, he achieved significant cost savings by establishing a more efficient and focused procurement organisation, and led numerous other strategic initiatives and restructurings across the businesses.

Before joining Bombardier, Buchholz was executive vice-president at Lufthansa Group fleet management for nearly 15 years. From 1998 to 2001, he worked at Rolls-Royce in Berlin, where he was responsible for marketing and sales contracts and customer service.

Earlier in his career, Buchholz worked in global product marketing at Airbus, in the department for technical and commercial aircraft evaluation and, subsequently, in marketing.

Meanwhile, Louis Véronneau has been made responsible for Bombardier's strategic planning process in addition to his current role overseeing Bombardier's partnerships, mergers, acquisitions and divestures as Bombardier's senior vice-president, strategy and corporate development.

"Louis spearheaded the negotiations for many of Bombardier's key strategic partnerships and divestitures, including the CSeries partnership with Airbus and Investissement Québec, CDPQ's investment in Bombardier Transportation and Bombardier's sale of the Downsview property," says Alain Bellemare, president and chief executive officer, Bombardier.

He adds: "With the company successfully derisked, Louis will work closely with me and the rest of the leadership team to identify and execute strategic moves that support long-term sustainable growth across our portfolio."

Rolls-Royce cuts 4,600 jobs for devolution project

Rolls-Royce has announced deeper-than-expected layoffs in a bid to improve its margins and cash flow.

The engine manufacturer will cut about 4,600 jobs over the next two years (analysts had predicted 4,000 jobs), with about 1,500 set to go before the end of this year.

Another major element of the restructuring is the elimination of overlap between Rolls-Royce's three main business units – civil aerospace, defence and power systems – with each becoming responsible for its own strategic and financial targets. These changes will also mean a significant reduction in the size of the company's corporate centre to remove complexity and duplication.

Rolls-Royce hopes to achieve annual savings of £400 million ($550 million) by the time the restructuring is complete in 2020. Most of the positions at risk are in the UK among Rolls-Royce's corporate, support and management functions.

"We have made progress in improving our day-to-day operations and strengthening our leadership, and are now turning to reduce the complexity that often slows us down and leads to duplication of effort," says Rolls-Royce chief executive officer Warren East.

The restructuring is expected to cost £500 million, which includes the cost of redundancies and required systems investments to facilitate the programme. These cash costs will be incurred across 2018, 2019 and 2020 and, given the one-off nature of the restructuring programme, will be reported below group underlying free cash flow.

Despite additional problems detected with its Trent 1000 engines, Rolls-Royce has left its free cash flow guidance for the year unchanged at £350 million to £550 million.

Rolls-Royce is targeting free cash flow of about £1 billion by 2020.

The company says none of the redundancies will affect its civil engine ramp-ups or the extra support it is offering to Trent 1000 operators.

Former Nok Air CFO joins **Stratos**

Brian Jeffery has joined aircraft investment specialist Stratos as head of marketing, Asia-Pacific, market sources indicate. He will be based in Bangkok, Thailand.

Jeffery was previously chief financial officer (CFO) of Nok Air. He also served as senior vice-president, corporate treasury, of Emirates.


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Avation's Garg decamps to **Castlelake**

Avation's vice-president of marketing Sankalp Garg has left the company to join Castlelake, *Airfinance Journal* understands.

Based in Singapore, Garg has joined the US lessor as vice-president of remarketing Asia. *Airfinance Journal* reported in June that Castlelake was preparing to launch an asset-backed securities transaction.

Virgin Australia CEO to quit in 2020

Virgin Australia Group's chief executive officer (CEO) and managing director John Borghetti will leave the company after 1 January 2020, according to a filing to the Australian Securities Exchange.

Borghetti has advised the company's board that he will not renew his contract after that date.

Virgin Australia says Borghetti has "signalled his desire to depart by this date to enable the group ample time to recruit an incoming CEO and allow for an appropriate transition".

Tigerair Australia, a subsidiary of Virgin Australia, appointed a new CEO in March.

Dunnachie leaves **Aerfin**

Mark Dunnachie has left his position as chief commercial officer of Aerfin. He joined the Wales-based company on 1 August 2017.

Dunnachie tells *Airfinance Journal* in a LinkedIn message that he is "actively looking for a new challenge".

Before Aerfin, he was based in Singapore as vice-president, Asia-Pacific, at Embraer Commercial Aviation. He relocated from Singapore to the UK and was based in Aerfin's London Gatwick offices.

In September 2017, Aerfin appointed Toby Steele and Francois-Xavier Rault as regional sales directors.

Aerfin's major projects include the intake of Saudia Arabian flag carrier Saudia's fleet of 15 Embraer E170 aircraft. *Airfinance Journal* reported on 5 June that Aerfin had taken delivery of the 10th of those aircraft.

Sisson and **Avi8 Air** team move to banking

Aviation veteran Ray Sisson has joined Credit Suisse to help expand the bank's foothold in the aviation market, according to sources at Chistat. He is based in New York, sources indicate.

In November 2016, Sisson and Ed Wegel formed a new operating lessor, AVi8 Air Capital, designed to take aircraft leasing to the "next level: through the development of a strong, value-delivering portfolio of aircraft assets and the unparalleled solutions we will deliver to our airline customers".

Another source adds that the entire Avi8 Air Capital team, which include Wegel, Raquel Brinkman and Mark Tender, also will join Credit Suisse "in the near future".

Sources would not be drawn on additional details of the involvement between Credit Suisse and Avi8 Air.

Sisson is also a member of the board of advisers for the transport investments of Hudson Structured Capital Management.

He was formerly president and chief executive officer of AWAS from 2010-2016. Sisson also served in several leadership positions at GECAS from 1995-2008.

Embraer appoints Baur as SVP strategy

Embraer has appointed Ron Baur as senior vice-president (SVP) strategy and Hussein Dabbas as general manager special projects for the Middle East and Africa.

Both executives will join the commercial aviation business unit to strengthen Embraer's global marketing sales team. They will report to Arjan Meijer, chief commercial officer.

Before joining Embraer, Baur held positions of increasing responsibility in operations and finance at Continental and United Airlines, culminating as the vice-president of fleet at United Airlines. During Baur's tenure, he managed a fleet of more than 1,200 mainline and regional aircraft and justified the acquisition of more than 750 new aircraft.

Baur was responsible for launching aircraft such as the Boeing 787, 737-900ER, 737 Max 10, Airbus A350-1000 and enhanced Embraer E175.

Dabbas brings 40 years' experience in aircraft and airline business, having held several global leadership positions, says Embraer. At Royal Jordanian Airlines as chief executive officer, president and board member, he managed all commercial and passenger activities, including marketing and sales, airport and inflight services, catering and product. As regional vice-president for Africa and the Middle East at the International Air Transport Association he helped to promote and protect the interest of the air transport industry.

He has been a board member and vice-chairman of the Arab Jordan Investment Bank.

Wings Capital appoints aircraft transactions VP

Wings Capital Partners has hired Nicolas Stable as vice-president (VP), legal and aircraft transactions.

Stable has a long track record of negotiating and structuring deals in the aviation industry. He brings "significant legal, financial and operational expertise having successfully completed challenging transactions while at GE Capital Aviation Services and, most recently, at CHC Helicopter, where he spearheaded a complex, multibillion-dollar restructuring and recapitalisation", says Wings.

Over a 16-year career, Stable has worked in a variety of aviation finance matters, including cross-border transactions, aircraft purchases, sales and leases, mergers and acquisitions, debt restructurings and capital market transactions.

Stable also frequently handled government relations initiatives and earned a certification in Six Sigma for championing various process improvement projects.

Wings states: "We are confident that with Nick's expertise and experience, he will immediately contribute to our efforts to strategically grow our aircraft portfolio."

Air New Zealand's COO resigns

Bruce Parton has resigned as chief operations officer (COO) of Air New Zealand, effective 28 September, according to a filing to the New Zealand Stock Exchange.

Parton joined Air New Zealand in 1996. He was appointed chief operations officer in January 2013.

"Bruce has decided to take a break from corporate life after a long and hugely successful leadership career at Air New Zealand," says the statement.

Airfinance Journal reported on 30 April that Air New Zealand could add narrowbody capacity to its fleet in the short term.

United names former FAA boss as chairman

United Continental Holdings' board has named former Federal Aviation Administration (FAA) administrator Jane Garvey as chairman, reports *Bloomberg*.

Garvey succeeds Robert Milton, a former Air Canada chief executive officer who led United's board for two years and announced plans in April to step down.

The newswire says Garvey, who joined United's board in 2009, guided the FAA through the aftermath of the September 11 terrorist attacks. She serves as North America chairman of investment firm Meridiam Infrastructure.

Airfinance Journal reported on 18 May that United had appointed senior vice-president finance Gerald Laderman as acting chief financial officer of the company, after the resignation of Andrew Levy.

AeroVision appoints new director of sales

US trader and part-out company AeroVision International has named Jim McHugh as senior director of sales.

Before joining AeroVision International, McHugh served as national business development manager in the healthcare industry, providing business development, sales training, strategic analysis and customer relationship management for organisations throughout the United States.

McHugh and his team will be responsible for the growth and expansion of AeroVision's parts, engines and aircraft segments. He will report to Pete Gibson, AeroVision's vice-president of sales and marketing.

Ryanair veteran becomes chief risk officer

Ryanair has appointed Carol Sharkey as chief risk officer, 23 years after she joined the airline.

"Carol has an encyclopedic knowledge of our business and how we deliver controlled growth safely, and her expertise particularly in the area of operations and safety will ensure she plays a key role in our future growth to some 600 aircraft and over 200 million customers per annum," says Ryanair chief executive officer Michael O'Leary.

Sharkey's previous experience at Ryanair includes roles in flight operations and the flight safety department, where she was most recently director of safety and security.

In her new position, she will assume responsibility for all of Ryanair's operational risk assessment and will report directly to O'Leary.

GECAS explores regional and mid-life opportunities

The US leasing giant is considering revisiting the regional sector, as its CRJ fleet retires. **Alex Derber** reports.

GECAS is considering options for its regional jet portfolio as many of its existing aircraft drift into retirement.

The US lessor does not have any orders for new-generation Embraer E2 or Bombardier CSeries aircraft, but has been encouraged by consolidation talk between Airbus and Bombardier and between Boeing and Embraer.

"Bombardier and Embraer are looking at an equation where one plus one equals three, and I think that if you are a buyer or a lessor or an operator you would come to the same conclusion: that it's a better value proposition than the previous setup," says Chris Damianos, GECAS's new senior vice-president and manager for the US.

About 20% of GECAS' portfolio by value is in the US, but around 40% by unit count – a large share relative to its peers.

This is largely because of its regional aircraft portfolio, which includes more than 175 Bombardier and Embraer aircraft with US operators such as Delta Air Lines, Mesa Airlines and Trans States Airlines, according to *Airfinance Journal*'s Fleet Tracker.

"We are probably going to revisit the [regional jet] sector," says Damianos, noting that many of the lessor's Bombardier CRJ200 aircraft are older than 20 years and on the verge of retirement.

Fleet Tracker shows that 436 of GECAS's 1,237 owned aircraft are based in the US. This compares with a global leased fleet of almost 12,000 aircraft, of which 1,896 – or 16% – are based in the US.

Mid-life rises

Damianos also observes increasing demand for mid-life aircraft from US operators, which enjoy lower lease rates and are seeking to fill capacity gaps during a strong period for passenger traffic.

"I wish I had a whole lot more mid-life 737NGs and A320s available out of my portfolio because we could place them with US airlines," he says, adding: "When you refresh the interior and the aircraft has the latest IFE [in-flight entertainment] and wi-fi, it's a very good value proposition for an airline."

Of GECAS's total narrowbody fleet, it classifies 36% as "mid-life" – or 10-16 years old – which says Damianos "matches up pretty tight" with the 30% of all US narrowbodies in the same age bracket.

"I wish I had a whole lot more mid-life 737NGs and A320s available out of my portfolio because we could place them with US airlines."

Chris Damianos, senior vice-president and manager for the US, GECAS

Nonetheless, demand is growing and Damianos has "not heard an overwhelming concern from our customers regarding the trajectory of oil prices", so GECAS is actively seeking more older aircraft.

"If an airline wants to shed 12-year-old narrowbodies to replace them with newer aircraft we would be very interested in picking up any well-maintained 737NG or Airbus-family aircraft," he says.

That said, GECAS has been a net seller of aircraft in the past three years and despite plans to return to net buyer status in 2018, Damianos predicts that its US fleet will be smaller at year-end.

Despite being smaller, though, the US fleet will probably be worth more as GECAS retires older CRJ aircraft and receives new Boeing 737 Max equipment.

Damianos adds that GECAS's smaller portfolio is not the result of a set strategy. "It's just taking advantage of opportunities," he says.

When GECAS does buy older equipment, it has reassurance about residual value from its subsidiary Asset Management Services, which supplies the booming market for used serviceable material.

"They tell me aircraft are staying in service too long and there's not enough end-of-life aircraft on the market to keep them satisfied... so all that is a positive for residual values of aircraft," says Damianos.

Another outlet for mature equipment is freighter conversion. GECAS is the world's biggest lessor of freighters, with 70 such aircraft in its portfolio.

New aircraft

GECAS has 402 aircraft on order, of which 366 are A320neo or 737 Max types, according to Fleet Tracker.

Damianos is keen to add more new aircraft through sale and leasebacks, and while no such deals are imminent in the current quarter, "we are talking to every treasurer and CFO at airlines and where there are opportunities to do sale-leasebacks with them we would be competing".

He adds that none of the lessor's US customers have been affected by delays to A320neo deliveries.

Another notable market dynamic is pricing pressure in the sale and leaseback market, which has depressed lease factors in certain areas.

Damianos agrees that GECAS "faces pricing pressure from very good competitors" but notes that his company also competes on availability and certainty of execution.

He cites an example: "We are taking five mid-life narrowbodies from one airline and putting them into another airline with a completely different specification and they have the confidence in us to completely reconfigure those aircraft."


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Airfinance Journal's 2017 deals of the year awards

Airfinace Journal reveal the winners of our prestigious annual Global Awards and China Awards, recognising the most innovative deals, individuals and teams in aviation finance.

Bank loan deal of the year: **DAE Capital 15xA320s – PDP financing**

Borrower/Issuer: DAE
Structure: Pre-delivery payment facility (PDP) for 15xA320s
Assets financed: A320 deliveries in 2017 and 2018
Lawyers (and role): Vedder Price (New York) acted for the lenders; Clifford Chance (New York) represented the lessor
Banks (and role): DVB Bank and Credit Agricole CIB acted as joint lead arrangers, underwriters and lenders. DVB Bank was security trustee; Credit Agricole CIB was facility agent
Export credit agency: Aircraft Finance Insurance Consortium (AFIC)
Date mandated: December 2016
Date closed: April 2017

Dubai-based DAE Capital scooped the bank loan deal of the year with a pre-delivery payment (PDP) financing structure covering 12 Airbus A320s.

The deal covered aircraft being delivered from October 2017 to December 2018 under AWAS's orderbook, and it provided strategic liquidity for DAE, which had previously financed pre-delivery payments largely from cash.

The transaction was significant because of the volume of aircraft, although a very liquid asset.

The long commitment period of the pre-delivery payments (estimated at 15 months) was also a deciding factor.

Efforts were made to protect each of the parties against unlikely credit, or potential operational, events, such as a liquidity squeeze or aircraft not delivered to initial lessees.

DVB Bank acted as joint lead arranger, underwriter, lender and security trustee in the transaction.

Credit Agricole CIB was the joint lead arranger, underwriter, lender and facility agent.

The facility was significant for the fact it was last of the line aircraft and that it was the PDP facility where DVB Bank covered the most number of aircraft in one facility. This in itself created a good level of complexity.

Vedder Price (New York) represented the lenders while Clifford Chance (New York) was counsel for the lessor.

ECA deal of the year: **LOT Polish Airlines 787s - UKEF financing**

Borrower/Issuer: Marzenie DAC
Structure: Loan to Irish borrower (a special purpose company)
Amount: $180 million
Assets financed: Two Boeing 787-8s
Lawyers (and role): Norton Rose Fullbright represented LOT Polish Airlines and Allen & Overy represented UK Export Finance
Banks (and role): Credit Agricole CIB as lender, facility agent, security trustee and mandated lead arranger
Export credit agency: UK Export Finance
Date mandated: March 2017
Date signed: June 2017
Date closed: July 2017

LOT Polish Airlines' UK Export Finance (UKEF)-backed financing of two Boeing 787-8 aircraft is the winner of *Airfinance Journal*'s export credit deal of the year award.

The transaction stood out because it was the first time UKEF had supported financing for Boeing aircraft.

"The success of this deal was in securing UK Export Finance support following a period during which the involvement of the (Airbus) European export agencies in aircraft finance transactions had come to a halt," says Norton Rose. "At the same time US Export-Import bank was also not able to finance Boeing aircraft delivered from the USA. For different reasons, ECA finance on both sides of the Atlantic was on hold." French bank Credit Agricole CIB acted as lender in the transaction.

UKEF could provide support because the engines installed on the aircraft were manufactured by Rolls-Royce, enabling the transaction to be categorised as a UK export.

Transaction documents were governed by English law. The mortgage was based on New York law and there was also a Polish law pledge agreement. Manufacturer documents were governed by Washington state law. Norton Rose Fulbright in London and Warsaw advised LOT Polish Airlines.

UKEF were advised by Allen & Overy. DVB Bank advised the airline on the transaction.

LOT ordered its 787s in 2005 and the first unit arrived in November 2012, making LOT the first European carrier to operate the type.

The **LOT deal** team, collecting their award from *AFJ's editor* **Jack Dutton**

Tax lease deal of the year: **THY 777Fs - AFIC/French lease financing**

Borrower/Issuer: Turkish Airlines

Structure: AFIC on the French tax lease of two Boeing 777 freighters leased to Turkish Airlines

Amount: Equivalent to $275 million

Assets financed: Two Boeing 777 freighters

Lawyers (and role): Norton Rose Fullbright acted for the lenders; Allen & Overy acted for AFIC; Pillsbury Winthrop Shaw Pittman represented Turkish Airlines

Banks (and role): Credit Agricole CIB as overall arranger French structured lease; Credit Agricole CIB and ING Bank as debt arrangers

Export credit agency: Aircraft Finance Insurance Consortium (AFIC)

Date mandated: October 2017

Date closed: November and December 2017

Turkish Airlines' Aircraft Finance Insurance Consortium (AFIC) financing combined with a 10-year French tax lease supporting two Boeing 777-200 freighter deliveries in the final quarter of 2017 won the tax lease deal of the year.

The Istanbul-based carrier approached the banking market for the financing of the two aircraft in February 2017 as part of a 13-aircraft request for proposals (RFP).

In addition to bank debt, Turkish Airlines looked at Japanese operating lease with call option (Jolco) financings with 12-year terms; sale-and-leaseback proposals with 10- or 12-year terms; and guaranteed financing proposals with the export credit agency of Italy (Sace), AFIC and US Ex-Im Bank.

The AFIC-French Lease winning deal was a very innovative product. It was the first French tax leverage lease to be combined with AFIC-guaranteed debt. The transaction was also the first AFIC-supported transaction involving a tax lease, and the first for freighter aircraft.

In this financing the tax leverage was achieved together with AFIC-guaranteed coverage, enabling Turkish Airlines to use the advantages of both export guarantee and tax leverage with a long financing term, leading to a decrease in the overall cost of financing for the subject aircraft.

Credit Agricole CIB was the overall arranger of the French structured lease.

Credit Agricole CIB and ING Bank were the debt arrangers.

The mandate letter was signed at the end of October 2017. Turkish Airlines received the first aircraft on 30 November, finalising the documentation, negotiation and delivery of the aircraft within just one month, thanks to the experience and quick response time of Turkish Airlines, Credit Agricole CIB and AFIC.

The second aircraft was delivered on 22 December. Norton Rose Fulbright acted for the lenders in the transaction while Allen & Overy acted for AFIC and Pillsbury Winthrop Shaw Pittman for Turkish Airlines.

Operating lease deal of the year: **DAE-Gulf Air 5x787s - PDP/purchase-and-leaseback financing**

Borrower/Issuer: Gulf Air, DAE Capital

Structure: Forward sale and leaseback and 100% pre-delivery payment financing

Amount: $1.4 billion at Boeing list's prices

Assets financed: Five Boeing 787-9s

Lawyers (and role): Allen & Overy acted for the lessor; Stephenson Hardwood represented the airline

Advisor: DVB Bank acted for the lessor

Date mandated: May 2017

Date closed: October 2017

DAE's purchase-and-leaseback transaction for Gulf Air highlights the Dubai-based lessor's desire to offer bespoke solutions for its customers.

Despite being the first transaction between the lessor and the airline, the deal size is significant ($1.4 billion at Boeing's list price) and includes a unique pre-delivery payments structure, financing 100% of the payments in advance.

The Boeing 787-9 aircraft are the first 787-9s to enter Gulf Air's fleet and are also the first 787-9s in DAE Capital's portfolio.

The 787-9s are under 15-year lease terms at the Bahraini flag carrier.

Gulf Air received the first aircraft in April. Another delivery was scheduled in May. The remaining three 787s will be delivered to Gulf Air in June, October and November 2018.

DAE chief executive officer Firoz Tarapore said: "Seeing this particular aircraft make a majestic preview presence during its fly-by at the Bahrain F1 Grand Prix was exhilarating, but seeing the first Dreamliner of this type now enter Gulf Air's active fleet makes us particularly pleased."

Gulf Air is set to receive two new aircraft types in 2018 under its 39-aircraft orderbook with Airbus and Boeing.

In addition to the five 787-9s, two Airbus A320neos will enter the airline's fleet before the end of the year.

The carrier's planned strategic growth for 2019-2023 will see it strengthening its regional base and then supplementing that with an expanded network.

Gulf Air has orders for 10 787-9s and 29 A320/A321neo aircraft.

L to R: *AFJ's Asia finance editor* **Michael Allen** and **DAE Capital** *president* **David Houlihan**

Equity deal of the year: **Azul's R$2bn ($644m) upsized IPO**

Borrower/Issuer: Azul

Structure: IPO

Amount: R$2 billion (circa $644 million)

Banks (and role): Citi, Itau BBA and Deutsche Bank (global co-ordinators); Banco do Brazil, Bradesco BBI, JP Morgan, Raymond James, Santander, Safr (passive bookrunners)

Azul's R$2 billion ($644 million) initial public offering (IPO) wins 2017's equity deal of the year. David Neeleman's Brazilian airline listed in Brazil and New York in April 2017.

The deal achieved several milestones: it was the first dual-listed Brazilian IPO since 2009; the largest Brazilian IPO since BB Seguridade in April 2013; the first airline IPO in Brazil since 2006; and the first US-listed aviation IPO since Virgin America in 2014.

Completing such a deal was not simple. On 6 April 2017, the Brazilian securities commission suspended the IPO for up to 30 days, saying the airline gave information to investors that was not in the prospectus. Azul had planned to price the IPO on 6 April, looking to raise up to R$1.9 billion from the sale of 82.8 million common shares, including a greenshoe option.

Despite concerns the deal would not go ahead, Sao Paulo-based Azul overcame the regulatory challenges and finally launched IPO on its third attempt. Two previous attempts had failed due to structural and market reasons.

Azul priced the equivalent of 85.4 million preferred shares at R$21 each and its American depositary shares at $20.06, the midpoint of the suggested price range.

The underwriters – Citi, Deutsche Bank and Itau BBA – had put the target price between R$19 and R$23 per share. The other bookrunners included Banco do Brasil, Bradesco, JP Morgan, Raymond James and Santander.

Seventy percent of the IPO was placed in New York, with Brazil-based investors taking the rest. After a busy three-week roadshow, targeting accounts in the US, Latin America, Canada and Europe, the transaction saw strong interest from global institutional investors. The deal's orderbook was over seven times oversubscribed with over 180 institutional orders, leading the transaction to be upsized by 19%.

The bond showed strong aftermarket performance. Preferred shares and ADS (American depositary shares) were up 7% on the first day of trading.

M&A deal of the year: **GECAS sidecar vehicle**

Borrower/Issuer: Einn Volant Aircraft Leasing

Structure: Caisse de dépôt et placement du Québec (CDPQ) and GECAS created a $2 billion aircraft financing platform. CDPQ provided 90% of the equity, GECAS 10%

Amount: $2 billion

Asset financed: Airbus A320s and Boeing 737s

Lawyers (and role): A&L Goodbody, Irish counsel to GECAS. Clifford Chance, US counsel to GECAS. Milbank Tweed Hadley & McCloy, US counsel to CDPQ. Walkers, Dublin, Irish counsel to CDPQ

Advisors: Goldman Sachs and Bank of America Merrill Lynch advised GECAS on the transaction. E&Y provided tax advice

Date mandated: August 2016

Date closed: November 2017

GECAS' $2 billion sidecar vehicle, Einn Volant Aircraft Leasing (EVAL), a joint venture with Canada's second largest pension fund manager, Caisse de dépôt et placement du Québec (CDPQ), wins *Airfinance Journal*'s 2017 M&A deal of the year award.

The EVAL platform is an innovative venture that provides GECAS with the flexibility to finance future growth while serving as an entry point for CDPQ into the aircraft leasing and financing industry.

"This platform will provide financing solutions to airlines to help support the growth of their fleet and answer essential industry needs. The high-quality aircraft will be chosen for their ability to withstand short-term cyclicality in a sector underpinned by strong long-term growth drivers," said Michael Sabia, president and chief executive officer of CDPQ, when the deal first hit the market.

"Through this platform, CDPQ's stable capital and GECAS' extensive expertise and network will combine to identify the best opportunities globally. Working with world-class operators such as GE is a fundamental part of our investment strategy, and this announcement is yet another example of this strategy in action."

Goldman Sachs and Bank of America Merrill Lynch advised GECAS on the transaction.

EVAL will buy and lease back modern fuel-efficient aircraft from a diverse set of global airlines under long-term leases.

GECAS will source the transactions and, under certain conditions, will invest in aircraft ownership opportunities alongside the platform to further align its interests with those of EVAL. GECAS will also act as servicer for the platform.

Laura Mueller *AFJ's managing director* and The **GECAS** team, collecting their award

Capital markets deal of the year: **Goshawk $566.5m – unsecured private placement**

Borrower/Issuer: Goshawk Aviation

Structure: Unsecured private placement

Amount: $567 million

Assets financed: N/A

Lawyers (and role): O'Melveny & Myers (for Goshawk); Greenberg Traurig Maher (for the investors)

Banks (and role): Citi, Credit Agricole CIB, Natixis and HSBC (Joint lead arrangers); BNP Paribas (co-lead agent)

Date closed: 19 July 2017

The capital markets deal of the year was awarded to Goshawk Aviation, for its $566.5 million senior unsecured private placement, which closed in July 2017.

This transaction was a follow-on offering from the 2016's $231 million due 2021 and 2023. Net proceeds from the issuance were used to repay existing secured indebtedness, thereby adding additional aircraft to Goshawk's balance sheet and repaying the unsecured revolving credit facility to free up the lessor's liquidity.

The base deal of $100 million was over 6x oversubscribed, allowing Goshawk to upsize the deal to $566.5 million, making the deal the largest for an aircraft lessor in the private placement market in the past 10 years. This was an incredible achievement considering that Goshawk was only established in November 2013. With support from its shareholders, Chow Tai Fook Enterprises and NWS Holding, the Goshawk portfolio has grown to 120 committed aircraft since inception. It is one of the industry's success stories.

Citibank, Credit Agricole CIB, Natixis and HSBC were joint lead agents. BNP Paribas was a co-lead agent. O'Melveny & Myers acted as Goshawk's legal counsel while Greenberg Traurig Maher acted as the investors' legal counsel.

The banks managed to tighten seven-year pricing 10 basis points (bps) inside of the tighter-end of price guidance and the eight-year five bps inside of the tighter-end of price guidance. One of the agents, Citi, brought in 12 of the total 18 investors, including eight new investors to the credit. The US based-bank placed near 70% of the bonds and brought in the lead investor.

Anand Ramachandran, the chief financial officer of Goshawk at the time, said: "We achieved all our objectives with this transaction. Several new as well as a number of existing institutional investors participated which is important as we aim to continue to increase the number of reliable sources of capital for our business. The transaction is attractively priced and the debt term of over 8.5 years closely matches the company's average lease term."

Used deal of the year: **Altavair 2x777-200LRs - secured refinancing**

Borrower/Issuer: Altavair

Structure: Secured refinancing

Amount: Circa $100 million

Assets financed: Two Boeing 777-200LRs (2008/2009 vintage) on lease to Emirates

Lawyers (and role): Vedder Price (for the lenders); Stephenson Harwood (for the borrower)

Banks (and role): DVB (lead arranger)

Date mandated: September 2017

Date closed: December 2017

There were a number of strong used deals last year, showing an active market for second-hand aircraft and an investor demand for older assets.

One deal that stood out was Altavair's $100 million senior secured term financing for two 2008 and 2009 vintage Boeing 777-200LRs operating with UAE flag carrier Emirates Airline.

Although Emirates has financed many new Airbus A380s and 777-300ERs, this transaction involved a financing of two mid-life 777-200LRs, an aircraft type with superior range but with far fewer aircraft in service when compared to the -300ER model.

The -200LR has seen much fewer transactions particularly in the sale-and-leaseback space and the fact that the aircraft will be 16 years old at loan maturity meant less lenders considered the deal than a brand new aircraft transaction.

DVB, together with the support of its in-house asset management team, arranged and structured a senior secured term loan financing that matured with a bullet when the leases matured.

"A significant amount of time was spent on analysing and sensitising the redelivery conditions of the lease, and the expected value of the aircraft, engines and airframe at lease maturity. The value of the GE90 engines, coupled with the underlying credit of Emirates for the lease helped to support the financing for an otherwise relatively illiquid aircraft," said Beng Hoe Yip, senior vice president aviation finance at DVB Bank.

"The deal was structured to appeal to differing risk/reward appetites: an amortising tranche that relied on the Emirates credit to repay the tranche fully, and a pari-passu bullet tranche that was sized with reference to the expected value of the asset based on the projected end of lease payments and collateral value of the aircraft," he adds.

Vedder Price acted for the lenders and Stephenson Harwood acted for the borrower.

The **Altavair** deal team, collecting their award from *AFJ's editor* **Jack Dutton**

Innovative deal of the year: **Atlas/Titan Aviation/Amazon - $145.8m risk division**

Borrower/Issuer: Titan Aviation Leasing/Atlas Air Worldwide

Structure: Non-recourse private placement combined with asset-based tranche under a bank financing

Amount: $145.8 million

Assets financed: Six converted Boeing 767-300ER freighters

Lawyers (and role): Pillsbury (for Atlas/ Titan); Milbank (for Citi)

Banks (and role): Citi (mandated lead arranger and sole lender)

Adviser: SkyWorks (sole adviser to Atlas)

Date mandated: SkyWorks mandated in May, 2016; Citi mandated in Feb, 2017

Date closed: September 2017

This year's Innovative deal of the year came at the end of 2017, when Atlas Air Worldwide closed a $146.5 million hybrid financing facility that combined a private placement and a bank loan for the acquisition and conversion of six Boeing 767-300BCF/SFs for Amazon.

This transaction, which adopted a structure never used before in aviation finance, comprised $127.8 million of privately-placed A1 equipment notes that flowed through pass-through certificates and $18.7 million of institutionally-held A2 loans, with Citibank acting as initial lender.

The private placement notes were placed with four US investors. The notes priced at 2.93%, were rated 'A' by Kroll, have an expected tenor of 7.6 years and a weighted average life of four years.

The A2 term loans priced at +250 basis points (bps) and have an expected tenor and weighted average life of nine and 8.2 years, respectively.

In 2016 Atlas and its subsidiaries entered into agreements with a subsidiary of Amazon.com, Amazon Fulfillment, to own, lease, and operate 20 767-300 converted freighter aircraft for Amazon. The leases have 10-year tenors.

The six aircraft were delivered to Atlas between August and December 2017. Citibank was the sole structuring and placement agent. SkyWorks acted as advisor to Atlas during the transaction.

"What made this deal stand out was our structuring innovation wherein we split the underlying credit components by utilising the contracted Amazon lease cash flows to raise a $128 million tranche of debt based purely on the Amazon credit, and a second tranche of $19 million of debt based on the Atlas credit, secured by a first lien on the aircraft (at a very low LTV)," said Thomas Hollahan, managing director, transportation, global banking at Citi.

"The pricing on each tranche was very attractive for Atlas given the investor demand from two very different investor markets for these two very different pieces of paper," he adds.

"We think this transaction structure is replicable in any aircraft financing where the aircraft is on lease to a credit which is strong enough that lenders to that credit do not place much or any value on the aircraft collateral."

Milbank acted as legal counsel for Citi on the transaction. Pillsbury acted for Atlas/ Titan.

Overall deal of the year: **Korean Air 2x787s+1x747-8I - First AFIC transactions**

Borrower/Issuer: Korean Air

Structure: Aircraft Finance Insurance Consortium (AFIC) financing

Currency/Amount: Circa €139 million for 747; confidential for 787s

Assets financed: Two Boeing 787s and one 747-8I

Lawyers (and role): White & Case (for ING Capital); Norton Rose Fulbright (for SMBC, DBJ and SMBC Europe); Milbank (for Korean Air); Clifford Chance (for insurers)

Banks (and role): ING Capital (sole lead arranger, lender and agent for the 747-8I); SMBC and DBJ (lenders for the 787s); SMBC Europe (security trustee for 787s)

Date mandated: February 2017

Date closed: July 2017

Guarantors: Allianz; AXIS Capital; Fidelis; and Sompo International

In the last two years, both the US Export-Import Bank and European export credit agencies (ECAs) have been quiet. Despite previously playing a significant role in financing new aircraft deliveries, political considerations have constrained their activities. Spotting a gap in the market, US insurance company Marsh seized upon the opportunity to provide an attractive financing alternative for airlines. The insurance company formed a new financing structure, the Aviation Finance Insurance Consortium (AFIC), in which four insurance companies – Allianz, AXIS Capital, Fidelis and Sompo International (formerly Endurance) – guarantee aircraft finance transactions.

Marsh's first AFIC deal wins this year's Overall Deal of the Year for its innovation as well as its timing: during a period of plentiful liquidity. The deal guaranteed the financing of two Boeing 787s and one Boeing 747-8I for Korean Air. The lenders on the transaction were SMBC and DBJ. SMBC Europe was the security trustee.

The deal made aviation finance history because it tapped into billions of dollars of risk capital in the insurance market in order to support financiers' exposures to aviation borrowers. The insurers do not provide funding themselves, but they assume the risk of default by providing coverage to lenders, which rely on the strong credits of the insurers.

The insurers on the Korean deal were advised by Clifford Chance and Korean Air was advised by Milbank. Norton Rose Fulbright advised the security trustee, the agent and the lenders.

Since the Korean deal closed, AFIC has had a steady aircraft financing pipeline. As of 8 May, AFIC had closed financing for 16 Boeing aircraft, according to *Airfinance Journal* research. Other carriers have mulled the prospect of AFIC financing, including Ethiopian Airlines and TAAG Angolan Airlines. AFIC's success shows that insurance-guaranteed aircraft financing is here to stay.

Editors' deal of the year: **Aero Capital Solutions - $350m Stub leases**

Borrower/issuer: Aero Capital Solutions

Structure: Flexible limited recourse revolving warehouse facility to finance the acquisition of midlife commercial aircraft on stub leases, with the intention to manage aircraft through redelivery and the divestment of airframes and engines, including green time leasing of serviceable engines

Amount: $150m Day one commitment with a $350m accordion

Assets financed: A diverse range of in production and out of production commercial Boeing and Airbus including narrowbody, widebody, passenger and freighter of all vintages

Lawyers (and role): Milbank (for the lender); Vedder Price (for the borrower)

Banks (and role): Deutsche Bank – sole structuring agent

Date mandated: June 2017

Date closed: 7 September 2017

Last year saw many innovations in used aircraft financing. In a low-fuel-price environment, older aircraft are more economically attractive and in demand, making banks more willing to finance them.

Aero Capital Solutions' (ACS) $350 million stub lease facility was one of the most interesting used aircraft deals of 2017: it provided the Texas-based asset manager and parts trader with unmatched flexibility to suit its unique business model.

The deal allowed a diverse range of in- and out-of-production assets to be financed, including mid-life aircraft on stub leases. The aim was to manage aircraft through redelivery and divestment of airframes and engines, which might include green-time leasing of serviceable engines.

The facility, which was structured by Deutsche Bank, had a day one commitment of $150 million and a $350 million accordion feature. The facility maturity is six years. The deal offers many of the same benefits as a warehouse facility and asset backed securities to both the borrower and lender. It also ties in with ACS' strategy to sell and lease an aircraft's airframe and engines separately, and to focus on short-term leases.

The facility allows opportunistic asset sales throughout its term. Furthermore, asset sales are not restricted to complete aircraft but rather full components (airframes and complete engines), which can be sold separately.

The structure also allows the borrower to conduct engine swaps on assets and engine green-time leasing. It is structured to allow the borrower to acquire aircraft on stub leases, with typically to six to 36 months of the lease remaining.

The seed portfolio includes narrowbody and widebody passenger and freighter aircraft between 13 and 20 years old, with leases from eight months to six years. The full portfolio financed through this facility was partially identified at closing, meaning that the final portfolio has the potential to include assets that are no longer in production and are of low maintenance condition. These are atypical assets for senior loan financing given their short leases, age, in- and out-of-production aircraft types, and diverse range of lessees and jurisdictions.

"The financing was structured to meet ACS' fund horizon and investment mandate, allowing an aggregation warehouse facility with enough term (six years) to also harvest and repay the debt through asset liquidations (as opposed to a more standard portfolio refinancing)," stated Dominic Buncher, vice-president, structured credit, transportation in Deutsche Bank's London office.

"It was specifically tailored to ACS' business plan to allow them to opportunistically acquire a wide-range of aircraft types on short-, medium- and long-term leases; to manage them through to re-delivery including engines swaps and maintenance avoidance, green time leasing and sale of component assets," he adds.

"We were looking to give flexibility to ACS to meet their opportunistic and metal-focused investing abilities, while maintaining appropriate protections for the senior debt," adds Devan Cotterell, global markets associate, Deutsche Bank.

Editor's deal of the year Asia: **Cathay Pacific used aircraft - $350m revolving credit facility**

Borrower/Issuer: Cathay Pacific Airways
Structure: A three-year secured RCF (with two-year extension option) granted directly to the airline
Amount: $350 million
Assets financed: Flexible pool of vintage aircraft
Lawyers (and role): Allen & Overy acted for the airline; Clifford Chance represented the banks
Banks (and role): BNP Paribas (Singapore), Bank of China (Hong Kong) and Bank of China (Sydney) as mandated lead arranged and underwriters. 10 undisclosed financial institutions
Date mandated: 14 September 2017
Date closed: 28 December 2017

Cathay Pacific's revolving credit facility with two international banks, BNP Paribas and Bank of China, is the AFJ editor's deal of the year for Asia.

The standby facility provides Cathay Pacific with competitive contingent liquidity, available to draw at any time. It is backed by Cathay's currently unencumbered vintage aircraft.

The transaction was an impressive $350 million, but also stood out due to the age of the aircraft collateral and the flexibility in Cathay's pool of vintage aircraft. The average age of the targeted aircraft was approximately 22 years, making it one of the oldest average vintages of any pool of aircraft collateral.

Within the collateral are Airbus A330s and Boeing 777s. The term of the facility is three years with a two-year extension option. It is granted directly to the airline.

The transaction was the first secured revolving credit facility closed by an Asia-Pacific carrier. It also highlights Cathay Pacific's innovative approach to generating competitive contingent liquidity.

Structuring the revolving credit facility was a complex process. The syndication effort led by BNP Paribas raised close to $500 million in commitments from more than 10 financial institutions, predominantly Asian banks. The French bank's industry expertise, distribution capacity and customisation effort for this transaction were all noted in the market.

Airline treasury team of the year: **Gol Linhas Aereas**

Brazilian carrier Gol Linhas Aereas won the prize this year as investors bought into the company's turnaround story.

In July 2016, Gol carried out a distressed debt exchange under which investors holding $41 million of its 2022s agreed to swap their bonds for just $70 of cash and $380 of new 9.5% 2021s per $1,000 exchanged. Holders of other Gol bonds took similarly hefty haircuts, though the take-up on the exchange was low across the curve.

Eighteen months later, the Brazilian real had stabilised and the economy had exited its worst recession. Furthermore, Gol went through a restructuring that included cutting routes, negotiating with lessors to return 20 aircraft, and selling other jets.

With market conditions as strong as most bankers had seen, Gol – still rated Caa3/CCC+/B but with an upgrade from S&P imminent — was thus able to issue its largest-ever deal at its lowest-ever yield in December 2017.

Gol was looking to price at least $350 million of new bonds, but left open the option to increase the size. After receiving $1.35 billion of orders, the company was able to bring guidance in to 7.375% before launching a $500 million deal at 7.25%.

The transaction was followed by an additional $150 million issuance at 7% in January 2018.

Last year Gol was upgraded by all three major rating agencies.

Fitch and S&P raised its credit rating twice, ending the year at 'B', stable outlook, and 'B-', positive outlook, respectively. In December, Moody's upgraded Gol's corporate credit rating by four notches to 'B2', stable outlook.

L to R: **Julio Perotti**, *competitive strategy director* at **Gol** and *AFJTAA managing director* **Michael Duff**

This was clear evidence that the market begun to acknowledge Gol's improved credit profile.

Last December Gol also managed to buy back two-thirds of its 8.875% senior notes due in 2022.

By the offer's deadline on 6 December, subsidiary Gol Finance had received valid tenders for $185 million of the notes from an aggregate principal amount of almost $277 million. The tender offer was launched on 27 November, with note holders offered $1,065 for each $1,000 principal amount of notes, plus accrued interest.

Gol Finance engaged Credit Suisse Securities (USA); Merrill Lynch; Morgan Stanley; and BCP Securities to act as the dealer managers.

In 2017 Gol's Ebitdar margin was an impressive 23%, up from 21.7% in 2016.

The balance sheet continued to strengthen: adjusted net debt was 6x the last 12 months' Ebitdar in the fourth quarter of 2017, compared with 7.5x in 2016.

At 31 December 2017, total liquidity, including cash, financial investments, restricted cash and accounts receivable, totalled R$3.2 billion ($912 million), an increase of 66% from a year earlier.

Lessor treasury team of the year: **AerCap**

A year after being upgraded to investment grade rating by two rating agencies, operating lessor AerCap secured the third and final major rating agency, Moody's, as investment grade rating last year.

During 2017, the lessor continued its strategy to diversify financing and issued on the unsecured basis, via its subsidiaries, a total of $3 billion of new debt in three transactions with different terms.

The January $600 million five-year senior unsecured notes priced at 3.5% while the July 10-year $1 billion unsecured notes priced at 3.65%. Another 10-year transaction raised $400 million in new debt. In November another $800 million unsecured transaction priced at 3.5% with an eight-year term.

"We continue to lengthen the average tenor of our debt. Our last four unsecured bond deals raised $3 billion at attractive rates with a five-year, a seven-year and two 10-year maturities," said chief executive officer Aengus Kelly. AerCap also re-priced more favourably several deals in 2017.

It upsized and extended its $3 billion unsecured revolving credit facility. The new facility, which has an accordion feature permitting increases to a maximum size of $4 billion, totalled $3.75 billion in February and included a four-year revolving period to February 2021. The interest rate was reduced by 0.5 percentage points to a base rate of Libor plus a margin of 1.5%. That facility was again upsized to $3.895 billion in September.

In December 2017, the amount available under its AIG revolving credit facility was reduced to $200 million from $500 million and the maturity of the facility was extended by six months to October 2019.

During the year AerCap also extensively continued its shares repurchase programme with its board of directors approving more than $1.1 billion in share repurchases.

AerCap maintained a very strong liquidity position. At the end of the year, available liquidity totalled $9.6 billion and combined with the lessor's operating cash flows, total existing sources of liquidity stood at $12.8 billion. This represented 1.4 times AerCap's cash needs over the next 12 months and cover at least 1.2x of its debt maturities and contracted capital requirements for the next 12 months.

AerCap's debt was $28.4 billion as of 31 December, 2017 and its adjusted debt to equity ratio was 2.8 to 1.

The lessor's net spread was 9% for the year. In addition to the decrease in average age, the other factor that impacted its net spread for the full year was the increase in its average cost of debt from 3.7% to 3.9% as the lessor continued to issue new longer-term bonds that replaced expiring shorter-term ILFC notes.

2017 was another year of strong operating and financial performance for the company. It completed 402 aircraft transactions, more than one a day. AerCap improved the quality of its fleet by selling $2.4 billion of mid-life and older aircraft, and taking delivery of 58 new aircraft.

The Aercap treasury team was led by Paul Rofe, who retired on 31 December 2017.

"Paul has played a key role in the success of AerCap, including the ILFC acquisition and the raising of over $50 billion of funding during his tenure from a wide range of financial institutions and investors. We thank him for his outstanding service and wish him well in the future," said AerCap's chief executive officer Aengus Kelly.

Best airline of the year: **Delta Air Lines**

Delta Air Lines beat strong competition from its US competitors to win the Airline of the year award for 2017. The award was based on return on invested capital (ROIC) as recorded by The Airline Analyst (TAA). TAA includes financial data for more than 200 airlines, with more being added all the time.

As can be seen from the chart, the top four ROIC performers were all US airlines. Ryanair came fifth as the top non-US carrier, followed by British Airways and Japan Airlines.

Delta has worked towards ROIC goals for many years, using a disciplined cost structure and balanced capital deployment. The success of this strategy contributed to its investment grade rating in 2016. Delta has now returned $10 billion and repurchased approximately 16% of the outstanding shares of the company while reducing debt by $9 billion.

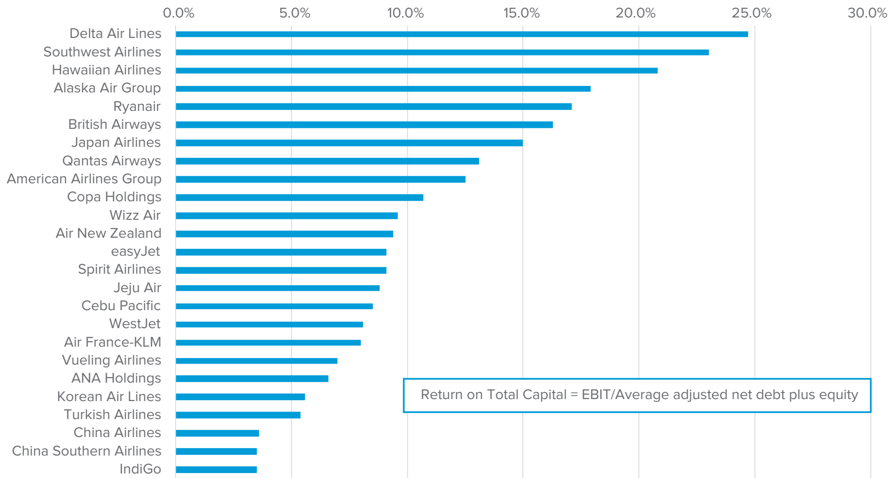
Ebit (earnings before interest and tax) margin in the meantime has doubled from 7.1% in 2012 to 14.2% in 2017.

The airlines in the chart represent the cream of the crop, although it is noticeable how fast airline returns drop away to single digits, which questions whether all of the top 25 – and the wider market – are earning returns in excess of their cost-of-capital.

Notably under-represented in the chart are airlines from the fast-growing Asia-Pacific market and from Latin America.

Nevertheless, Delta clearly generated positive shareholder value and is to be congratulated on an outstanding achievement. We will see if any of 2017's challengers can up their game and run Delta even closer in 2018.

Return on total capital 2017 - Top 25



Source: *The Airline Analyst*

News event of the year: **Airbus/Bombardier CSeries investment**

No-one saw this partnership coming. Bombardier had a reasonable orderbook for the CSeries but since the handover of the first aircraft, a CS100 to Swiss in July 2016, sales have disappointed.

On 16 October 2017, Airbus and Bombardier Aerospace announced a partnership on the CSeries programme, with the European manufacturer acquiring a 50.01% majority stake. Bombardier and Investissement Quebec are keeping approximately 31% and 19%, respectively.

Under the agreement, Airbus will provide procurement, sales and marketing, and customer support expertise to the CSeries Aircraft Limited Partnership (CSALP), the entity that manufactures and sells the CSeries.

Airbus did not pay for its share in the programme, nor did it assume any debt. Bombardier will continue with its current funding plan of CSALP and will fund, if required, the cash shortfalls of CSALP during the first year following the closing up to a maximum amount of $350 million. During the second and third years up to a maximum aggregate amount of $350 million over both years will be funded, if needed.

The European manufacturer insists that the company has no plan to buy out Bombardier's stake in the CSeries programme, and that Bombardier will remain a strategic partner after 2025.

CSALP's headquarters and primary assembly line and related functions will remain in Quebec, with Airbus' support. The European manufacturer's footprint will expand with the final assembly line in Canada and US customers will benefit from a second assembly line at Airbus's US manufacturing site in Mobile, Alabama.

Airbus says it expects "to strengthen and accelerate the CSeries' commercial momentum" and use its supply chain experience to generate "significant CSeries production cost savings".

Bombardier's president and chief executive officer, Alain Bellemare, recently said that the CSeries was a big venture for a company like Bombardier.

The **Airbus/Bombardier** team, collecting their award from *AFJ's editor* **Jack Dutton**

"We needed a partner. Airbus brings three things. They have an amazing customer reach with large scale and this will help accelerate CSeries sales. Airbus has a supply chain expertise and the scale with it. This will also benefit us. Finally, Airbus has one of the best aftermarket customer networks in the world," he said.

"We are on the verge of closing the partnership, which brings tremendous value for customers and shareholders," he adds.

Aviation finance house of the year: **Citi**

This year marks the first time *Airfinance Journal* has recognised the aviation finance house of the year. The award is for the financier that has made the biggest contribution to the industry over the year. Several top-tier aviation banks submitted applications for the award and deciding on a winner was a difficult decision for the judges.

Citi wins this year for finding a spectrum of financing solutions for its clients and for being active in all the key aircraft financing markets. The US-based bank was involved in $65 billion of aviation sector transactions over the course of 2017, including $23.7 billion of bank debt, $32 billion of debt capital markets, EETCs ($3.5 billion), asset-backed securitisations ($2.4 billion), equity ($2.2 billion), and M&A ($708 million).

Not only did the bank support airlines, it also financed many leasing companies and airports, including a $4 billion financing for Mexico city airport.

"We are most proud of the depth and breadth of our business with the airlines and aircraft lessors around the world. Given our unique global footprint, with branches in over 100 countries, we have close client relationships locally," said Thomas Hollahan, managing director and Citigroup's global aviation industry head.

"Through these relationships, we offer our clients the full suite of debt and equity products as well as best-in-class strategic advisory services. In all of these markets Citi is ranked number one or close to number one."

Hollahan says this is the result of the bank's close client relationships and its strong product positioning in the $65 billion of financing Citi raised for the industry in 2017.

"We are very proud that we have now moved to number one in the league tables for EETCs, to go along with our historically dominant positions in other markets such as airline IPOs and airline and aircraft lessor unsecured public debt. We are also proud of our leadership position in arranging syndicated bank revolving credit agreements for airlines and airline lessors on a global basis, most recently with the Cathay deal," he says.

The $350 million Cathay used aircraft revolving credit facility (RCF) was the first secured RCF for an Asian carrier. Despite the average vintage of target aircraft being approximately 22 years, the deal was successfully distributed – with $500 million in commitments from over 10 financial institutions. The secured RCF structure has been used on a flexible pool of vintage aircraft for other airlines, including British Airways and Virgin Atlantic.

The **Citi** team, collecting their award

Lessor of the year: **Avolon**

Avolon has been a major player in the merger and acquisition field over the past few years and its $10.4 billion acquisition of CIT Aerospace propelled the HNA-owned lessor to the top of the leasing table.

CIT Aerospace also helped to balance Dublin-based Avolon's portfolio, 40% of which previously operated in Asia (not including China). Post-merger that share has dropped to 28%, while Avolon's North American allocation has risen to 19% from 9%.

The proportion of aircraft operating in Europe, Latin America and China remains broadly stable at 21%, 13% and 8%, respectively.

At closing of the merger (April 2017), the new entity served 149 customers in 62 countries with approximately one-third of in-service aircraft leased into each of the Americas, EMEA and Asia-Pacific regions, providing balanced geographic exposure.

The benefits of the acquisition of CIT's aircraft leasing business were reflected in Avolon's 2017 figures, which saw full-year net profit increase by almost 60% to $550 million. Avolon posted revenue of $2.37 billion for 2017, up from $1.04 billion in 2016.

By the end of 2017, Avolon's owned, managed and committed fleet had more than doubled to 908 aircraft. During the 12-month period, Avolon sold 44 aircraft and received 107 aircraft, including the delivery of 45 new aircraft.

"We are a stronger and more strategically relevant business than at any time in our history. We have the team, the balance sheet and the aircraft orderbook to deliver for our customers and all our stakeholders in 2018 and beyond," said Avolon's chief executive officer, Dómhnal Slattery, at the time.

Avolon raised $14.9 billion of total debt and equity capital, including $9.75 billion of debt raised in the public capital markets, during 2017. It had $15.7 billion future contracted rental cash flows at year-end.

The lessor closed the year with $5 billion in cash and undrawn credit to protect it from any fallout from its Chinese parent's difficulties.

Last year Avolon also secured an investment grade rating from Kroll Bond Rating Agency. The rating agency assigned an issuer rating of BBB+ and a senior unsecured debt rating of BBB to Avolon. The outlook on the ratings is stable.

The rating agency said the BBB+ issuer rating of Avolon reflects the strength of the company's leading market position, seasoned management team, young and in-demand fleet, focus on lowering and maintaining relatively low leverage, as well as a staggered and diversified funding profile.

The **Avolon** team, collecting their award

Aviation finance person of the year: **Bob Morin – Marsh**

The June 2017 departure of Robert Morin from Export-Import Bank of the United States (Ex-Im Bank) to join Marsh and work on the Aircraft Finance Insurance Consortium (AFIC) product was not surprising: Ex-Im had been shut since June 2015 and there was little hope that the bank would resume its activity for commercial aircraft transactions of more than $10 million.

Moreover, it also announced the return of Morin to his preferred activity: aircraft financing.

Having joined Ex-Im in December 1992 as transportation division (the predecessor of aircraft finance division) counsel, he was named vice-president in 1998 and attracted a skilled team of loan officers.

Morin has been involved in more aircraft financings than anyone else in the industry. During his time at Ex-Im, the bank provided over $100 billion of financing support for the export of more than 2,000 commercial aircraft, business aircraft and helicopters.

Morin, who served under five US presidents during his time at Ex-Im, was an architect of the government agency's aircraft financing programme.

He was instrumental in the design, development and implementation of many of Ex-Im Bank's most successful product and process innovations, some of which became industry standards. These include the Ex-Im Bank-guaranteed bond programme, which has enabled Ex-Im to access new sources of funding under its guaranteed financing programme.

Other innovative structures engineered by Morin include SOAR loans, jet-fuel indexed Ex-Im Bank-guaranteed loans, rupee/dollar swapped Ex-Im Bank Loans and certain capital markets structures.

"Bob Morin is one of the most knowledgeable, well-known and respected professionals within the aircraft finance industry," said Ex-Im Bank chairman and president Fred Hochberg in 2014.

His next challenge is to oversee the expansion of AFIC, an insurance-guaranteed product launched by Marsh and designed for bank and capital market investors that fund new aircraft purchases from Boeing.

AFIC provides an alternative financing product for new aircraft deliveries and is underwritten by four insurance companies: Allianz; AXIS Capital; Fidelis; and Sompo International (formerly Endurance). The insurance protects the lender's exposure to default for the duration of the loan. The terms of this insurance can be tailored to the individual purchase agreement made between Boeing, an airline, and its financiers.

Bob Morin and **Kostya Zolutusky**, *managing director at* **Boeing**

Morin is *Airfinance Journal*'s person of the year for closing more than $1 billion of AFIC guaranteed aircraft financings in its first year of operation.

After financing Boeing aircraft for most of his life, could Morin support Airbus aircraft soon?

Lifetime achievement award: **Scott Scherer**

Scott Scherer is the winner of *Airfinance Journal*'s lifetime achievement award for his dedication to the aviation finance sector and notably the Cape Town Treaty, which is intended to standardise transactions involving movable property on the international stage.

Scherer helped to found the Aviation Working Group (AWG), an international industry organisation dedicated to developing policies and regulations to facilitate advanced aviation financing. Under Scherer's leadership as co-chairman, the AWG led a successful effort to develop and ratify the Cape Town Treaty. The treaty seeks to reduce risks for creditors and, consequently, the borrowing costs for debtors, by reducing legal uncertainty.

Previously Scherer led an industry coalition in successful efforts to amend Section 1110 of the US Bankruptcy Code to improve the ability of US airlines to raise aircraft financing.

He also played a leading role in negotiating a new Aircraft Sector Understanding (ASU) agreement. This international agreement establishes the terms and conditions that export credit agencies offer in support of the sale of their respective countries' aircraft.

Scherer most recently served as the senior executive focused on policy and regulatory strategies associated with the aircraft financing mission of Boeing Capital Corporation (BCC). He was responsible for arranging, structuring and providing financing solutions to customers of Boeing products. He was appointed to this position in December 2009.

In the role, Scherer developed and oversaw BCC's interactions with industry and government stakeholders regarding the laws, rules, regulations and policies that shape aircraft financing's infrastructure.

Previously Scherer had served as vice-president and general manager for BCC's Aircraft Financial Services organisation, a position he held since early 2000, laying the groundwork for much of the company's current success with aircraft financing infrastructure matters.

Before that role, he was vice-president of customer financing for Boeing. Previously, he served as director - finance and business management for Boeing's 737/757 programmes and as assistant treasurer – customer financing. Scherer has worked in the customer financing sphere since 1977.

Scherer holds a bachelor's degree in economics from Texas A&M University.

Scott Scherer and **Kostya Zolutusky**

"Scherer helped to found the AWG, an international industry organisation dedicated to developing policies and regulations to facilitate advanced aviation financing."

He also participated in the business administration programme at Seattle University.

Best domestic chinese financing of the year 2017: **ICBC financial leasing and bank of China's four Boeing 737- 800 Tianjin FTZ outward remittance advance transaction**

Borrower/issuer: SPVs: Tianmeng (Tianjin) Aircraft Leasing and Tianlian (Tianjin) Aircraft Leasing

Structure: The aircraft are financed by an outward remittance advance to the SPVs with an option to be converted to a secured term loan. The maximum loan amount for aircraft was based on US dollars and was expected to be converted to the equivalent in RMB before delivery date

Amount: Rmb1.2 billion ($187.6m)

Assets financed: Four Boeing 737-800 aircraft

Lawyers (and role): Han Kun Law Offices on behalf of ICBC Financial Leasing

Banks (and role): Bank of China Tianjin Pilot Free Trade Zone Baoshui Branch (sole lender)

Date mandated: June 2017

Date closed: August 2017

ICBC Financial Leasing and Bank of China (BOC) completed a purchase-and-leaseback transaction in the free-trade zone for four Boeing 737-800 aircraft.

The aircraft, which were delivered new in July and August 2017, are financed by an outward remittance advance to two special purpose vehicles (SPVs) with an option to be converted into a secured term loan. The maximum loan amount for the aircraft was dollar-denominated and was expected to be converted to renminbi (RMB) before the delivery date.

In a trend of RMB financing for domestic airlines along with an extremely tight RMB financing market in both size and pricing, ICBC Leasing cooperated with BOC and innovatively adopted outward remittance advance plus senior loan structure to support the delivery and achieve the competitive financing price, says ICBC Financial Leasing in a statement.

ICBC Financial Leasing says documentation and credit approval were some of the challenges of completing the transaction, because it was the first-ever use of an outward remittance advance product to support aircraft financing.

Outward remittance advance is designed to meet the needs of short-term financing for SPVs as importers under outward remittance, and means that BOC pays for the imported aircraft on behalf of the importer against the valid vouchers and commercial documents under outward remittance.

The outward remittance advance supports the delivery financing with very attractive pricing in the market, says ICBC Financial Leasing.

ICBC Leasing held continuing discussions with both front desk and risk and compliance middle desk to gain better understanding of the aircraft delivery financing conditions precedent documents, given the existing risk and compliance requirements within BOC. The documents and credit approval were obtained to ensure the delivery financing for each aircraft.

The lessor says the deal means that in future lessors could import aircraft into the domestic market with bank funds to avoid disturbing working capital.

Best cross-border airline or lessor financing by a Chinese borrower/issuer of the year 2017: **cross-border A380 lease deal**

Borrower/issuer: Comsys Cayman No1 Aviation Lease Co Limited

Structure: Financing from CDB to Comsys, which then provided financing through a finance lease to Veling Group, which then used the financing to acquire/refinance an A380 aircraft with lease attached to Emirates Airline

Amount: $436.9 million (at list prices)

Assets financed: Airbus A380

Lawyers (and role): KWM, Hong Kong (English plus HK law counsel for Comsys), KWM, Beijing (special PRC law counsel), Mourant (Cayman counsel for Comsys), WFW (UAE counsel for Comsys), Hogan Lovells, Singapore (counsel for CDB), K&L Gates (English law counsel for Veling), Walkers, Dubai (Cayman counsel for Veling), Clifford Chance, Abu Dhabi (English law plus UAE counsel for DIB), Pillsbury (counsel for Emirates)

Banks (and role): China Development Bank, Tianjin Branch (lender)

Date mandated: August 2017

Date closed: December 2017

Mauritius-based lessor Veling has opened the door to additional future financings with one of China's biggest banks following this Airbus A380 refinancing.

Anuj Kathuria, then chief commercial officer, told *Airfinance Journal* in January 2018 that, while pricing was an attractive factor on the deal, the deal was more about opening new markets. "It's opening that new source of financing," he said, adding: "Emirates has so many aircraft coming in and many of the banks we talk to have a lot of Emirates risk on their balance sheet. Obviously, pricing is always a factor, but the reason for us to put in so much effort was the new financing opportunities from CDB."

To complete the transaction, Veling teamed up with Chinese lessor Comsys (Tianjin) Leasing, which acted as finance lessor and put security in the structure.

Lune Wang, Comsys deputy general manager, facilitated the relationship between Veling and CDB, using her bilingual abilities to expedite the deal between English-speaking Veling and Chinese-speaking CDB.

Wang tells *Airfinance Journal* that this is the first deal in which a Chinese privately owned leasing company closed an A380 transaction with Emirates Airline. She says the most difficult aspect of the deal was meeting CDB's internal approval procedures.

"The more we worked together we found we had to do more communication. A lot of the misunderstanding is about the lack of communication, not only between Comsys and Veling but also between the lawyers. A good arranger needs to figure out what people are thinking and try to match them up. It's even more important than the deal itself. It feels like two train tracks merging together and going to the same direction at the end."

She adds: "I do hope this deal can broaden Chinese lessors to start working with other investors and lessors in Europe."

The A380 has had negative press despite Emirates rescuing the programme with a new order in January. Kathuria admits the A380 is not the best asset purely from reading the press, but adds that the aircraft is "exactly where we would want it to be in terms of market perception".

He says: "We were able to propose a transaction to CDB with a large asset and a strong credit that has taken major commitments to operate a large number of A380s for many years to come."

Finance lease award of the year 2017: **finance lease under an orphan trust for Korean Air's Boeing 747-8I**

Borrower/issuer: Korean Air

Structure: Bocomm Leasing, cooperating with its parent bank's Tokyo branch, provided $157 million long-term Japanese yen financing using a Delaware orphan trust structure

Amount: ¥17.32 billion ($157m)

Assets financed: One Boeing 747-8I

Lawyers (and role): Milbank (Singapore) (advising Bocomm Leasing and Bocomm Tokyo Branch), Kim & Chang (advising Bocomm Leasing and Bocomm Tokyo branch), Lee & Ko (advising Korean Air)

Banks (and role): Bankcomm Tokyo (senior loan provider), NH Investment & Securities (junior loan provider)

Date mandated: March 2017

Date closed: June 2017

Korean Air took delivery of one Boeing 747-8I in June 2016. Originally, the Korean flag carrier wanted to use US export credit financing and set up an orphan trust in Delaware with a special purpose vehicle (SPV) under the trust, according to the Inaugural China Awards submission from Bocomm Leasing for the deal.

However, US Ex-Im financing was not forthcoming before expiration of the bridge loan for the aircraft, so Korean Air sought long-term Japanese yen financing to mitigate the currency risk of its income structure.

Bocomm Leasing cooperated with Bank of Communications Tokyo branch to accomplish this transaction. Bocomm Leasing coordinated the whole financing transaction and provided a put option to enhance the credit.

Bank of Communications Tokyo is entitled to all the security interest of the aircraft such as aircraft collateral and SPV mortgage rights, whereas Bocomm Leasing Ireland becomes the security trustee, which facilitates disposal of the aircraft on the lenders' behalf in case of default.

Bocomm Leasing is coordinating the whole transaction and provides a put option to the lender.

Total financing for the aircraft is $157 million. Two borrowers are involved: Bankcomm Tokyo and a fund under NH Investment & Securities.

Bankcomm Tokyo provided ¥15.3 billion ($137 million) as senior loan tranche and the fund provided $20 million as junior tranche. The two ranches are separated and the junior loan provider has the second mortgage right and related engine and airframe warranties.

By adopting this arrangement, the borrower achieved a relatively high loan to value (more than 80%) for this aircraft type. More importantly, the different tranches enabled the borrower to have a Japanese yen (JPY) and US dollar financing combination to mitigate its currency risk.

In an interview with *Airfinance Journal*, Bocomm Leasing's global head of aviation, Li Ling, says: "The carrier has JPY-denominated revenues so it can be a natural hedge for the currency. Also, the interest rate is low, so they can enjoy the good interest rate.

Operating lease award of the year 2017: **debut Hong Kong aircraft leasing structure – operating lease of one Boeing 787-9 to Korean Air Lines**

Borrower/issuer: ICBC Financial Leasing

Structure: Debut Hong Kong (tax concession) SPC structure – operating lease to Korean Air

Amount: $154 million

Assets financed: One Boeing 787-9

Lawyers (and role): Berwin Leighton Paisner Hong Kong (lead counsel for ICBC FL), Lee & Ko (lead counsel for KAL)

Banks (and role): N/A

Advisers (and role): PricewaterhouseCoopers (tax adviser for ICBC FL)

Date mandated: October 2017

Date closed: December 2017

ICBC Financial Leasing, which officially launched its Hong Kong leasing platform on 28 March, completed the first leasing transaction to take advantage of new Hong Kong legislation lowering the effective tax rate for lessors to 1.65%.

On 20 December 2017, the company delivered one new Boeing 787-9 to South Korean flag carrier Korean Air via a leasing entity in Hong Kong – Hong Kong Aircraft Leasing I – set up by the parent bank. The deal utilised a double-tax treaty agreement between Hong Kong and South Korea.

William Ho, a partner at Berwin Leighton Paisner who worked on the transaction, says that although Hong Kong's legislative council passed the new tax law on 7 July 2017, it was not until the Inland Revenue Department (IRD) issued Department Interpretation and Practice Notes No 54 that guidelines were set for the implementation of the new regime.

"Right after that, ICBC Leasing immediately identified and allocated its Boeing 787-9 to be leased to Korean Air for use under the new tax regime," says Ho. "As expected, initially Korean Air was reluctant to have a new lessor jurisdiction. Very quickly, we explained the working of the Hong Kong leasing structure to Korean Air. At the same time, ICBC Leasing quickly set up the leasing entity in Hong Kong for the transaction."

Ho says ICBC FL was able to get its Hong Kong tax residency certificate from the IRD within a few days

"At the same time, we entered into heavy negotiations with Korean Air on the leasing documentation, which contained heavily negotiated tax provisions to the leasing of aircraft under the new tax regime".

Ho adds that the Hong Kong structure is in fact "a simple structure", but because it is new, airlines understandably are reluctant to use it.

"The challenge was more about explaining to the airlines about the working of the Hong Kong leasing structure, and to provide more comfort to the airlines about the workings of the structure," says Ho.

"The deal gives a strong message to the market that Hong Kong is a credible lessor jurisdiction, and if you consider the time involved in closing this deal, it shows that the Hong Kong regime is a highly efficient regime and the Hong Kong IRD is also working very efficiently."

ICBC Financial Leasing's finance team says in a statement: "This is a landmark transaction which shows the smooth functioning and potential of Hong Kong's new tax regime, which could be leveraged by global aircraft leasing companies. The structure of this transaction has reference value for following similar deals and has become a valuable asset of the whole industry."

Best new chinese leasing entrant of the year 2017: **CMIG Aviation Capital**

CMIG Aviation Capital (CMIG AC), a subsidiary of China Minsheng Investment, impressed our judging panel with its rapid growth over a short period of time.

From the day its business licence was obtained in April 2017 until the end of 2017, CMIG AC's team had less than eight months to win mandates for more than 30 aircraft. At year-end, it had closed deals for 18 of them worth over $1.1 billion, according to the lessor's Inaugural China Awards application.

The company ended 2017 with a balance sheet of more than $1.4 billion, comprising mostly aircraft on operating lease via both offshore and onshore structures, the fastest-ever growth achieved by a new Chinese lessor. Its portfolio comprised 18 aircraft leased to 11 airlines in eight countries with an average age of 2.6 years, and with average effective lease term of over nine years.

Each of the 18 aircraft is financed by a combination of equity and third-party debt, with long-term debt accounting for more than 80%.

The lessor has been exploring new forms of financing, notably in the Korean market. In early 2018, CMIG Aviation Capital tapped two Korean banks for the financing of an Airbus A330-300 on lease to Sichuan Airlines, about $100 million.

CMIG Aviation Capital's chief executive officer, Peter Gao, says his company saw plenty of appetite in the Korean market and so decided to spend a significant amount of time last year working with Korean investors.

"We are talking to more Korean investors about how we can raise money for our aircraft deliveries," he says.

He adds that Korean investors typically choose top-tier names such as Emirates Airline or Singapore Airlines, but CMIG Aviation Capital won them over to Sichuan Airlines by doing a lot of work with them together to make them comfortable to accept the credit of Sichuan.

Gao says: "They felt happy about that, and the next step might be: are they willing to accept more different names in the Korean market? That's the main reason we go to Korea so often: because we believe they have appetite, they have money and they just need to learn more lessons, in a good way."

The **CMIG Aviation Capital** team, collecting their award

Chinese lessor of the year 2017: **CDB Aviation**

CDB Aviation has undergone a transformation since chief executive officer Peter Chang took the helm in January 2017.

The wholly owned Irish subsidiary of China Development Bank Financial Leasing is "built on a strong, secure and resourceful financial foundation", according to the company's submission for the Inaugural China Awards.

"CDB Aviation is a customer-centric, relationship-driven organisation where an industry-leading team understands an aircraft lease is not simply a single transaction of an airplane lease, [but] rather an engagement and understanding recognising airlines' fleet needs are specific and ever-changing."

In 2017, CDB Aviation executed transactions for 162 aircraft, including deliveries of 38 new aircraft to 15 airlines in nine countries. It sold 19 aircraft and placed orders for 105 new aircraft, including 45 Airbus A320neo-family aircraft, 52 Boeing 737 Max aircraft and eight 787s. At the end of 2017, its fleet comprised 215 owned and managed aircraft on operating or finance leases, as well as 184 committed aircraft in its forward orderbook with Airbus and Boeing.

Speaking to *Airfinance Journal* on 7 May, Chang said that, in January 2018, when he was last interviewed by *Airfinance Journal* everything was "conceptual".

"There were a lot of inspirations and visions and things without real material substance. It was just a hope and wish list. Since that time, we have now achieved almost all of the important pieces and have clear sight on our next objectives," he adds.

Chang says CDB Aviation's headcount has now reached 94, which includes senior executives appointed to head its Americas and Asia-Pacific teams. Its legal department has grown from one to seven lawyers.

Chang says that the goals of 2018 are "less tangible" than last year, and that 2017 was about "survival".

"It's kind of like Swiss Family Robinson. When they got stranded on the beach, the first order of the day is to build a house with a roof. So we've passed that: we have our roof, we have our team.

"The second year is not as tangible, but it's just as important, if not more important, and that has to do with making sure that we put the people with the right skill set in the right places. I've found that's tougher than it sounds. In the end, we will succeed because of our ingenuity and teamwork."

CDB Aviation boosted its operating lease business in 2017 vis-à-vis its finance lease business. A filing by the lessor's listed parent, CDB Leasing, shows finance lease income dropping 1.2% to Rmb224 million ($36 million) in 2017 from Rmb227 million in 2016. However, operating lease income for aircraft leasing rose 10.1% in 2017, with CDB Leasing reporting Rmb5.76 billion in operating lease income last year, compared with Rmb5.23 billion in 2016.

CDB Leasing says this is primarily because of an expansion of the scale of aircraft for operating lease in light of the expansion of aircraft leasing business by the group and the stable gross lease yield of aircraft leasing business".

Top rated Chinese airline of the year 2017: **Spring Airlines**

Spring Airlines, which has its headquarters in Shanghai, was the first low-cost carrier in China. It was launched in July 2005 and closed its initial public offering (IPO) in January 2015. As of 18 May 2018, the airline had a market capitalisation of Rmb33 billion ($4.3 billion). Its fleet size numbers 79 aircraft with an average age of 3.8 years. Load factor has been above 90% since at least 2011.

The airline also has a subsidiary in Japan. It partnered with Japanese investors in 2011 and established Spring Airlines Japan with a 33% stake. In 2013, Spring Airlines Japan received approval from Japanese aviation authorities and started operations in August 2014 with a fleet of four Boeing 737-800s. In December 2014, the airline increased its stake in Spring Airlines Japan to 48%. As of 31 December 2017, Spring Airlines held a 34% stake in Spring Airlines Japan. The current operating fleet comprises six 737-800s.

Spring Airlines is a 63% subsidiary of Shanghai Spring International Travel Service, the largest private travel company in China. Based at Hongqiao International airport, the airline provides services to more than 90 destinations in mainland China, Taiwan, South Korea, Thailand and Japan.

Last year was very successful for this airline. Revenue grew 30% to Rmb11 billion and earnings before interest, taxes, depreciation, amortisation, and restructuring or rent costs (Ebitdar) to Rmb2.4 billion. Ebitdar margin was a commendable 21.8%, though lower than the record level of 28.9% achieved in 2015.

Spring's fixed charge cover was 2.3 times. As of 31 December 2017, its unrestricted cash balance was Rmb4.3 billion, or 39% of the total revenues, enough to cover 5.5 months of Ebitdar expenses and aircraft rental. Leverage as measured by adjusted net debt to Ebitdar improved to 4.6 times from 5.3 times in fiscal year 2016. Net income was Rmb1.3 billion and return on equity was 16%.

Because of its high ratings across five key parameters – average fleet age, Ebitdar margin, fixed charge cover, liquidity and leverage – Spring Airlines is the highest-rated Chinese airline in *Airfinance Journal*'s Financial Ratings for 2017.

In an interview with *Airfinance Journal*, Spring Airlines deputy general manager, investment and finance department, Tian Chao, says a lot of factors contributed to these results.

Chao says that travel demand has been growing continually in recent years, noting that the THAAD (terminal high altitude area defence) dispute between South Korea and China, which reduced travel demand between the countries in 2016, got much better in 2017, especially in the second half.

Chao says Spring Airlines moved some aircraft from Asia-Pacific routes into the Chinese domestic market.

"Besides the traditionally hot flights from Beijing, Shanghai, Guangzhou, Shenzhen and Chengdu, also last year we developed a certain amount of flights in the middle and western parts of China. That covers quite a number of second- and third-tier cities," he says.

Chao says Spring Airlines continues to add aircraft. In March, the airline took delivery of a new Airbus A320 from DAE Capital, the first of three.

Spring Airlines chairman Wang Yu says this will help the airline capitalise on China's increasing domestic and regional demand for leisure and business air travel.

Aviation woman of the year 2017 in China: **Li Ling, Bocomm Leasing**

Bocomm Leasing's global head of aviation, Li Ling, was chosen as *Airfinance Journal*'s Aviation Woman of the Year in China based on voting by three industry judges.

Li, who is the first recipient of the award, graduated from Shanghai Jiaotong University in 2000 with a master's degree in management science and a dual-bachelor's degree in international finance and computer science. That year, she joined Shanghai Airlines and was later promoted to general manager of the airline's planning division, becoming the youngest general manager of fleet planning among Chinese airlines.

She describes her role at Shanghai Airlines as challenging because the planning division had numerous responsibilities.

"Normally, in Chinese airlines, the planning division is in charge of planning the type, number and schedule of aircraft introduction, purchasing aircraft, the operating lease of aircraft and getting governmental approval, and the finance division is in charge of the financing of aircraft and arranging hedging for interest and currency risk, so its split," she says.

"In Shanghai Airlines, our division was in charge of planning, getting approval, purchasing, leasing, configuring, financing and hedging. Everything needed to be arranged by us."

In 2010, Li joined Bocomm Leasing to lead the aviation division, which marked the beginning of the rapid development of the company's aviation leasing business. In the same year, Bocomm Leasing successfully operated the first aircraft-leasing project in the Shanghai Free Trade Zone (FTZ), and began operations in Ireland the following year.

Under Li's leadership, Bocomm Leasing's team has achieved a series of breakthroughs, including: the first aircraft leasing project in the Shanghai FTZ; the first operating leasing project from the Tianjin Airbus production line in the free-trade zone; the first domestic yen- and euro-denominated leasing project; aircraft delivery from its own orderbook; aircraft trade-out; vintage aircraft leasing; aircraft freighter conversion; third-party aircraft leasing; and US dollar and euro fundraising.

Li says that while China offers equal opportunities for women and men in aviation finance, sometimes women can utilise their unique skill sets.

"Introducing aircraft is a big deal with many, many details which can affect the final result, and sometimes women are more careful than men. I think that's why in the very early stage of my career I became seen by my leaders since I tried to understand more, always remembering everything and having good preparation for any emergency," says Li.

"Later, I was given more and more responsibilities, which increased my professionalism and leadership."

Asked for her advice for more junior Chinese women looking to succeed in the aviation finance industry, Li says not to put emphasis on gender differences.

"Just work hard, learn more and think more. It's a very interesting industry and you need to have passion," she says.

In a January 2018 interview with *Airfinance Journal* at the annual Dublin conference, Li acknowledged there were "many newcomers" to the Chinese leasing market, but noted that for "many of them the money comes from private companies and has requirement for high yield".

She adds: "Aircraft leasing may not meet their requirement, so some newcomers already quit the market. Maybe not formally announced, but they ceased to do new business."

Young person of the year 2017 in Chinese aviation finance: **Jason Jin Zhe, Grandall Law Firm (Beijing)**

Jin Zhe (Jason), a 35-year-old partner in the aviation group of Grandall Law Firm (Beijing), has participated in China's civil aviation sector for more than 13 years.

"Having unified the templates for insurance certificates, broker's letter of undertakings and acknowledgement of assignment of insurance in aircraft leasing transactions in the early 2000s, Jason greatly enhances the efficiency and convenience in the use of leasing documents in relation to aviation insurance matters, and he is still widely regarded as the most experienced aviation finance insurance expert in the nation," states Jin's award application.

As legal counsel to CAAC, he frequently advises on the drafting of civil aviation policies and regulations, including the amendment to the current civil aviation law of the People's Republic of China, in particular some fundamental changes to the aircraft leasing sections and the reform of registration of aircraft rights in 2017.

His aviation finance clients include Air China, China Eastern, Shandong Airlines, Xiamen Airlines, Shenzhen Airlines, Sichuan Airlines, Juneyao Airlines, China Cargo Airlines, Qingdao Airlines and West Air.

Young person of the year, **Jason Jin Zhe**

Lingfei Lu, deputy general manager in Air China's finance department, describes Jin as one of the most talented lawyers "I've ever met".

She says: "I certainly believe that a young person with such a gift in understanding aviation finance business and a determination to contribute to [the airline] industry deserves [this award]."

Jin represented Air China in a financial lease deal involving 16 Boeing and Airbus aircraft, 13 of which were delivered in 2017.

He is now studying a master's degree in law at Queen Mary University London. Speaking to *Airfinance Journal*, Jin says he first entered the aviation industry as an insurance broker 14 years ago.

"From that time I was quite interested in the aviation industry. We dealt with aviation insurance, and we had to deal with different parties like lessors and banks and gradually become interested in aviation finance," he says.

He joined Grandall five years ago, his first foray into aviation finance law.

"Aviation is quite fascinating for people like me because I really enjoy the technical terms and talking with aviation people," he says.

"I think this is an industry that needs legal expertise and I'm quite interested in legal aspects, so that's how I find the combination of aviation, legal and finance in the industry that I should invest myself in."

Unfortunately, Jin could not attend this year's awards ceremony because of his study commitments in London.

Asia finance editor's deal of the year 2017: **CCB Financial Leasing's Jolco structure for six Airbus A321s**

Borrower/issuer: CCB Financial Leasing's SPC set up in Dublin

Structure: Chinese lessor provides Japanese operating lease with call option for Wizz Air and Thomas Cook through its Dublin platform

Amount: $267 million

Assets financed: Six Airbus A321 aircraft

Lawyers (and role): White & Case Tokyo (English, New York and Japanese law), Lakatos, Koves es Tarsai (Hungarian law), Rui Bai Law Firm (Chinese law), Gorrissen Federspiel (Danish law), Matheson (Irish law), Berwin Leighton Paisner Hong Kong (debt provider's counsel), Nishimura & Asahi (equity provider's counsel), White & Case London, Dentons (airlines' counsel)

Banks (and role): The Bank of Tokyo-Mitsubishi UFJ, National Australia Bank, China Construction Bank (debt mandated lead arrangers)

Equity arranger: FPG AIM

Date mandated: September 2017

Date closed: November 2017

In 2017, CCB Financial Leasing closed its debut Japanese operating lease with call option (Jolco) transactions for three Airbus A321s, before finalising Jolcos for three more A321s in 2018.

FPG AIM is arranging the transaction and FPG is acting as equity underwriter, while BTMU, CCB Tokyo and NAB provided debt.

"The indisputable fact is that all parties overcame a great deal of difficulties, such as different credit cultures, time differences and complicated legal documentation, to close the deal," CCB Financial Leasing states in its Inaugural China Awards submission form.

It adds: "CCB will continually push aircraft finance with Jolco and other attractive structures on the domestic and foreign market."

Jackson Chow, a partner at Berwin Leighton Paisner, which acted for the borrower, says this was CCB Financial Leasing's debut Jolco transaction and the company was "very receptive to understanding and managing risks in exchange for rewards relating to Jolcos.

"Jolco financings are not unique to the Chinese market, but we are seeing a number of Chinese lessors wanting to take benefit of the 100% financing which is a key incentive of this structure," he adds.

"This transaction is unique given the number of aircraft being financed. This six-aircraft deal is possibly one of the largest Jolco transactions in the marketplace at the time."

Chow adds: "From the Japanese equity participant's perspective, they have an optimistic expectation that they would like the transaction to go full term. They don't want to encounter an early termination of the underlying operating lease agreement."

Commenting on the transaction, Hisanaga Tanimura, chief executive officer and founder of Financial Products Group, which part owns FPG, says: "It was a pleasure working with all parties to successfully close what was an innovative and exciting transaction.

"We would especially like to thank CCB Financial Leasing, China Construction Bank, MUFG Bank and National Australia Bank for their hard work and dedication and we hope to work with each of them again in the near future."

Gender diversity imperative in land of rising sun

Laura Mueller looks at what the aviation finance industry can learn from Japan's approach to gender diversity in the workplace.

L to R: Kathy Matsui, vice chair of Goldman Sachs Japan, co-head of macro research in Asia and chief Japan equity strategist, Tamao Sasada, co-head of Japan investment banking, Merrill Lynch Japan securities, Izumi Kobayashi, member of the board, ANA Holdings, Tsukiko Tsukahara, founder and president of Kaleidist K.K

For many years, low female employment was a fact of Japanese life, and for a variety of reasons – most of them cultural – the system appeared impossible to change. But fast forward to 2018, and now the topic of gender diversity is part of the country's growth strategy, Kathy Matsui, vice-chair of Goldman Sachs Japan, co-head of macro research in Asia and chief Japan equity strategist, told participants at the first Advancing Women in Aviation Roundtable (AWAR) Leaders luncheon in Tokyo.

The inaugural event, which took place during *Airfinance Journal*'s Tokyo Airfinance event, included speeches from Matsui, Tamao Sasada, co-head of Japan investment banking, Merrill Lynch Japan Securities, Izumi Kobayashi, member of the board, ANA Holdings, and Tsukiko Tsukahara, founder and president of Kaleidist KK.

AWAR is a grassroots initiative with a mission to engage with chief executive officers and other senior executives to build awareness and develop actionable strategies to promote the development and advancement of women leaders in the aviation industry. It was founded in 2015

> *"Japan stood out from its developed country peers with its pronounced M-curve of female employment, reflecting the fact that over 60% of Japanese women quit working after giving birth to their first child and typically stayed out of the workforce until their children were grown."*
>
> **Kathy Matsui**, vice-chair, Goldman Sachs Japan

by Amelia Anderson, managing director and assistant treasurer, American Airlines, and Dana Barta, executive director, capital markets, Morgan Stanley.

Since its inception, AWAR has grown rapidly, with its signature roundtable leaders luncheons held annually in Dublin and Hong Kong, and numerous other panels and roundtable events in New York.

AWAR is committed to the belief that engagement with senior male colleagues is critical to driving change for women in aviation finance.

In Japan, gender diversity has become an "economic and business imperative" as opposed to "a human rights or women's rights issue", explains Matsui.

She first proposed in 1999 that higher female participation in the workforce was part of the solution to Japan's demographic crisis. Female participation was only 57% of the labour force and, at the time, among the lowest in the developed world.

"Japan stood out from its developed country peers with its pronounced M-curve of female employment, reflecting the fact that over 60% of Japanese women quit working after giving birth to their first child and typically stayed out of the workforce until their children were grown," she says.

"Despite this, however, few paid any attention to this issue, and the term diversity was not part of the Japanese vernacular. The prevailing view was that low female employment was simply a fact of Japanese life," adds Matsui.

Today, there are more women working in Japan (as a share of working-age women) than in the United States.

In Matsui's 2014 report, *Womenomics 4.0: The Time is Now*, she argued that closing the gender employment gap could lift Japanese GDP by nearly 13 percentage points.

When prime minister Shinzo Abe first highlighted "Womenomics" — getting more women into leadership roles to boost the economy — as a core pillar of the nation's growth strategy in early 2013, many were deeply sceptical that top-down political pressure would lead to any meaningful change.

But in just over four years, Japanese female labour participation had risen sharply to a record high of 68%, compared with 65% in the USA.

Matsui notes Japan has seen a lot of women taking on part-time, not full-time, positions, so these women are "not on the career path to a leadership or career position".

She adds: "But it is better than nothing, in my opinion. At least we are seeing the numbers increase very meaningfully."

Among the factors driving higher female employment have been increased childcare capacity and childcare benefits.

In 2013, the government set a target of expanding daycare capacity to eliminate the 400,000 children on nationwide daycare waiting lists by 2019. During fiscal year 2013/14, daycare capacity was increased by 219,000 places, or about halfway toward the goal and, according to the updated plan, the 2019 goal has been raised to 500,000.

"While still insufficient, the government will likely target increased daycare services in its upcoming fiscal spending package," she adds. While there are more Japanese women working than ever before, there is still a dearth of females in leadership positions.

> *"Japan's single-most valuable resource is its people, but with its demographic clock rapidly ticking, more aggressive steps must be taken to promote gender diversity."*
>
> **Kathy Matsui**, vice-chair, Goldman Sachs Japan

To this end, a new law, the Female Employment Promotion Legislation, went into effect. It requires large private- and public-sector entities to disclose gender diversity targets, accompanied by specific action plans.

While critics argue that targets are not as effective as quotas because there is no retribution for non-compliance, Matsui regards this as a meaningful step forward because gender-related disclosures have been virtually absent, and this new legislation should improve transparency.

What more should be done?

Even with the progress seen since 2013, fierce demographic headwinds mean that the government, private sector and society must work together to take even bolder steps to accelerate female labour participation, says Matsui.

She recommends neutralising the tax and social security codes: the current system of spousal tax and social security deductions need to be amended so they stop discouraging married women from working full-time outside the home.

She also urges legislation stipulating equal pay for equal work and the introduction of more flexible labour contracts. Because of the unequal treatment of part-time versus full-time employees, the government should look to the "Dutch model" of "equal-pay-for-equal-work" in order to raise the incomes and status of part-time workers. Moreover, the government should consider the American Chamber of Commerce in Japan's proposal to create a new type of "regular employee" labour contract that encourages women to return to the workforce as regular employees and retain pay and promotion opportunities.

Reform working hours and create more flexible work environments, Matsui also suggests. Japan ranks second in the OECD for the longest number of hours worked annually. Much of this is caused by traditional seniority-based evaluation systems, she says. Employers should adopt objective- and performance-based evaluation plans and promote more flexible work arrangements (including job-sharing and telecommuting), she recommends.

Also, there needs to be a push to eliminate unconscious biases.

"Society needs to eliminate unconscious biases about gender diversity at work, schools and homes. Common myths about Womenomics, such as those that suggest higher female labour participation will further depress Japan's birth-rate, when empirical evidence proves the opposite is true, need to be overturned," says Matsui.

Since Japan's population is ageing and shrinking faster than any other in the G7, it has a unique opportunity to become a positive template for other nations facing similar challenges, she argues.

"Japan's single-most valuable resource is its people, but with its demographic clock rapidly ticking, more aggressive steps must be taken to promote gender diversity so that everyone has the chance to maximise their full potential. Diversity is no longer an option, but an economic imperative and the benefits of greater diversity will be enjoyed by all," adds Matsui.

Women in aviation

The discussion regarding Womenomics in Japan created a dialogue among luncheon attendees about the importance of gender diversity in aviation.

Olivier Trauchessec, managing director, head of transportation group, leasing and asset finance, Americas, MUFG, said at the luncheon that "the aviation industry is far behind many industries" when it comes not only to management positions for women but also simply representation.

He adds: "I want my daughter, and her female friends from high school and college, to feel confident that they have the opportunity to have successful careers in aviation. AWAR's initiatives are key to changing people's minds and to inspire young female leaders to join the sector."

Mahoko Hara, managing executive officer, Tokyo Century Corporation, said issues unique to the market were openly discussed, provoking new ideas at the Tokyo luncheon. "It was a refreshing experience. The keynote speech and the panel were brilliant. Already looking forward to the next event."

Jean-Pierre Stainnack, senior vice-president sales and marketing, Airbus Japan, was also in attendance at the luncheon and said: "The diversity journey is, unfortunately, a long one, but events such as this one make all of us in the aerospace industry, but also in the wider business community in Japan, realise that more efforts are needed to make diversity a success."

He adds: "It was a thought-provoking event with an inspiring speaker, great panellists and interesting discussions."

Nothing vanilla about **Peach merger**

Michael Allen examines the combination of Japanese low-cost carriers Vanilla Air and Peach and what it means for the Japanese airline market.

Osaka-based low-cost carrier Peach is at a key point in its operational history. Initially formed as a joint venture between All Nippon Airways (ANA) and Hong Kong-based First Eastern Investment in 2011, Peach has undergone several changes in its business structure since then.

In February 2017, ANA increased its stake in the company to a controlling 67% from 38.7%. To achieve this, ANA purchased 28.3% of Peach shares from other shareholders First Eastern Aviation and Innovation Network Corporation of Japan for ¥30.4 billion ($270 million).

At the time ANA said this was "the best way to accelerate the growth of Peach in its next phase of development" and that the shareholder restructuring would help by "leveraging Peach's corporate culture and brand with ANA's proven record of airline expansion".

Now the airline has hit another significant milestone, as ANA plans to merge Peach with fellow low-cost subsidiary Vanilla Air, a carrier that was created out of the failed first attempt to establish an Airasia-affiliated carrier in Japan. Low-cost carrier Airasia Japan operated between 2012 and 2013 as a joint venture between Airasia and ANA. Airasia withdrew from the joint venture in 2013 and the carrier was rebranded as Vanilla Air.

> *"We understand that in some cases the finance lease or the direct purchase may be cheaper than the operating lease, but we still think we don't want to have that kind of residual risk."*
>
> **Junya Okamura**, chief financial officer, Peach

Peach now operates 20 Airbus A320s and plans to add three more this year from Fuyo General Lease under sale and leaseback transactions, the carrier's chief financial officer, Junya Okamura, tells *Airfinance Journal*.

"We understand that in some cases the finance lease or the direct purchase may be cheaper than the operating lease, but we still think we don't want to have that kind of residual risk," he says.

"We want to avoid such complexity," Okamura continues, adding that Peach will probably stick to operating leases until 2020, although it is not "officially decided yet".

Asked what structures Peach might consider post-2020, Okamura says: "We haven't decided yet, but we will study other finance structures such as... finance lease, including the Jolco [Japanese operating lease with call option] tax lease, or maybe we will purchase and own the aircraft on our balance sheet, after 2021."

Vanilla Air, the merger partner, now has 15 aircraft – also A320s – in its fleet at the time of writing. The 15th aircraft joined the fleet in March on lease from DAE Capital.

Since all these aircraft are sub-leased to Vanilla from ANA, it would be simple to integrate them into Peach's fleet and Peach would be "entitled to use the aircraft on the same contract", says Okamura. However, Peach may not transfer all 15 Vanilla aircraft over to the Peach fleet.

"We haven't decided the number of aircraft Vanilla will transfer to us. I don't think all 15 will come to Peach. We don't know the plan for the remaining," says Okamura.

"We are using the same aircraft as Vanilla. That's a huge advantage for us to integrate. There is a minor modification we need, but it's not a significant modification – the cabin interior or livery or some parts of the cockpit, which is very minor.

"By the end of the 2020 fiscal year, we are planning to increase the total number of aircraft to around 50," he adds.

Peach plans to more than double its fleet by fiscal year 2020 to take advantage of Japan's relatively low low-cost carrier (LCC) penetration – something Okamura thinks Peach can help expand.

"Our basic understanding is the markets of LCCs in Japan or East Asia are still not matured, and in Japan the share of LCCs is still just over 10%. In other words, we can expect another 20% to 30% share, which is the same as in south-east Asian counties and Europe. We still have plenty of room to expand our business," he says.

He adds that Peach's load factors were about 87% in fiscal year 2017, showing there is "plenty of demand in the LCC market".

But Peach's expansion could be limited by its ability to recruit enough pilots to fly the aircraft, something Okamura describes as a "bottleneck" and "headache".

He says: "There is demand, we can see that, but we cannot easily expand our business because of the limitation of the number of pilots in this area. In other words, if we want to expand our business, we may consider the merger or integration of other carriers to secure or increase the number of cockpit crew on top of organic growth in Peach."

Okamura says the "beauty" of Peach and Vanilla's integration is that there is "no cannibalisation" between the companies because they only share three routes. The former is based in Kansai International Airport and the latter in Tokyo Narita.

"If we merge the two companies into one, we can save on the indirect costs like staffing," he says.

Regarding the management structure of the merged entity, Okamura, who has worked for Peach since launch, says this is a "very sensitive" subject and a decision is still to be made, including about his own position.

> *"Up to 2020, we expect more inbound tourists from outside into Japan and the government of Japan is also considering tourist promotion… so we can expect more demand as an LCC."*
>
> **Junya Okamura**, chief financial officer, Peach

However, he stresses that any future management will retain its independence from ANA.

"When we started the company, they were the minority shareholders and the reason why we are a successful LCC in Japan is because we are independent from the parent company," he says.

"We have seven years' history, and I believe that senior management of ANA Holdings are very sure… why we are successful, so there is no reason for them to change our business model."

Indeed, Peach achieved profitability relatively early for a low-cost carrier: in fiscal year 2013, within two years of starting operations.

Then, in fiscal year 2015, Peach recorded sales of ¥48 billion and operating profit of ¥6.1 billion, and eliminated its cumulative loss. It increased sales and operating profit for four consecutive fiscal years to 2016.

Asked how Peach could achieve this, Okamura says it is "quite simple. [According to] the basic business model of the LCC one of the most important KPIs [key performance indicators] is aircraft utilisation," he says, adding that Peach looks to the business models of other successful LCCs, such as Indonesia's Lion Air, for guidance.

He admits that Peach's cost per available seat kilometre could be lower and that the airline needs to improve more in terms of unit cost.

"That can be achieved by increasing the business volume to dilute the other indirect costs," he says.

Asked exactly how this will be done, Okamura demurs. "We have some idea at the moment," he says. "We cannot tell you the exact detail."

He adds: "Up to 2020, we expect more inbound tourists from outside into Japan and the government of Japan is also considering tourist promotion… so we can expect more demand as an LCC."

Okamura says that non-Japanese passengers and female passengers are two target groups for Peach, "which is completely opposite to the existing full-service carriers like Japan Airlines or ANA, so we don't cannibalise each other".

He says that "53% of our passengers are female in their 20s and 30s and 70% of the passengers on international flights are non-Japanese, so more females and foreigners use Peach".

In terms of competition from other types of public transport, Okamura is more afraid of long-distance buses than Japan's high-speed shinkansen rail network.

"I don't think we compete with the shinkansen because the average cost is extremely high compared to us," he says. "The competitor may be the long coach or bus transportation."

CRJ200 conversions could extend to other models

Aeronautical Engineers will deliver nine CRJ200SFs this year, but future plans could include CRJ700/900 freighter types.

Although the Bombardier CRJ200 freighter is a 10-year-old programme, it is attracting more interest from the industry.

In 2007, Cascade Aerospace cooperated with Bombardier to develop a small-door conversion programme for the CRJ100 and CRJ200 models. In the 10 years since, only nine units were delivered. Mexican carriers MCS Aerocarga and Estafeta Carga Aérea have received four and two converted aircraft, respectively. Another three were converted for West Atlantic.

The CRJ200 freighter programme was revived in February 2013 when Aeronautical Engineers (AEI), also working with Bombardier, began developing a large-door CRJ200 passenger-to-freighter.

The AEI CRJ200SF provides a payload of up to 14,574lbs (6,611kg), depending on the specific aircraft model. The conversion comes with a large 94" x 70" main cargo door and with an ANCRA cargo loading system capable of carrying eight 61.5" x 88" containers/pallets. This unique capability is achievable because of AEI's large main cargo door situated on the left side of the fuselage, and turning the main deck into a Class E cargo compartment.

In the all-cargo configuration, the CRJ200SF will have a cargo volume of 41.1 cubic metres.

The conversion price is $1.85 million. Senior vice-president, sales and marketing, Robert Convey says the feedstock aircraft coming into conversion are being purchased at between $1.5 million and $2.5 million, depending on the engine's condition.

AEI received the original FAA supplemental type certification at the end of 2016 and delivered the first CRJ200SF to launch customer IFL Group last year. To date, it has delivered five units and has 32 firm orders and commitments for the type.

The company has used Commercial Jet Services' Miami and Dothan conversion centres but is now focusing on the latter. "We are finishing our last CRJ in Miami and will focus on four lines of conversion in Dothan at Commercial Jet Services," says Convey.

There have been almost 1,000 passenger deliveries since Lufthansa took the first aircraft but this is a 26-year-old programme. Still, AEI forecasts about 100 conversions through the life of the programme.

"We are targeting freight operators that currently fly regional freighters," says Convey. "Given the hours/cycles we are seeing on the incoming aircraft, it is likely that the freighters will be flying for another 20-plus years," he adds.

AEI plans to deliver nine aircraft to customers this year.

The question arising from the potential success of the CRJ200 passenger-to-freighter programme is whether it can eat into turboprop freighter demand, especially in a low fuel price environment.

Convey says the CRJ200SF is best suited for routes of 500 nautical miles or greater. "Turboprops are best suited for 500 nautical miles or less. This is a simple way of looking at the capability but seems to hold true in most cases."

The eight-pallet aircraft has a speed advantage over its competitors on long routes.

It will fill a different niche, and most converted CRJ200s will be operated over long-range thin routes because of its jet speed and its 15,000lbs payload capability, says Convey.

AEI had originally expected that most large-door CRJ freighters would find work in the charter market, but it now appears that the majority will be operated in support of the express companies.

Early demand for the type has emerged from the Mexican market. Convey says Mexico is full of long thin routes that do not require a large freighter. "The CRJ200SF, with its 15,000lbs payload, is well suited for a large majority of the routes in Mexico," he says.

AEI received European Aviation Safety Agency approval for its passenger-to-freighter conversion in May.

"We are targeting regional freight operators that are currently flying the Saab 340 and ATR freighters. The CRJ will not be used on all routes but in cases where speed and time matter it is well suited," says Convey.

Asia applications will be next. "We are in discussions with several operators in South-East Asia at the moment and we expect to start deliveries in mid-2019," he adds.

AEI has a proven record with more than 475 cargo conversions performed. The firm has been involved in Boeing 727, MD80 and 737-300/-400 conversions and is about to extend its product range with the 737-800SF model. AEI plans to receive the supplemental type certificate for the type in the third quarter of this year.

The CRJ200SF model is the first foray into the regional market, but Convey says AEI could expand its offering with more regional aircraft. "We are currently studying the -700 and -900 models for conversion," he says.

GECAS sees appetite for 737-800 freighters

GECAS, the largest lessor in 737-800 cargo conversions, talks about express and e-cargo applications on domestic and short-haul routes

Having delivered its first converted Boeing 737-800 freighter to European cargo airline West Atlantic in April, GECAS sees a strong demand for this asset type.

"This freighter is an important complement to our cargo portfolio, as we support our customers across expanding air cargo markets," GECAS's senior vice-president and manager, cargo, Richard Greener tells *Airfinance Journal*.

"The additional capacity and efficiency offered by this new aircraft will deliver real benefit to our customers. With the -800NG converted freighter we expect improved reliability, lower aircraft operating costs and a better environmental footprint. We believe it will become an important express freighter for the 20- to 25-tonne air cargo market."

The lessor renewed its confidence in the programme last year by announcing its intent to convert 30 more 737-800s. This was on the back of a five-conversion order with Boeing through the Boeing Converted Freighter programme in the same year.

In 2015, GECAS announced up to 20 Boeing 737-800NG cargo conversion orders with AEI.

Currently, the lessor has three customers: ASL Group, West Atlantic Group and Ethiopian Airlines. All three customers are scheduled to take delivery of their first aircraft in 2018.

The 737-800 freighter will be equipped with CFM56-7B engines, carry up to 23.9 tonnes of cargo with 12 main deck positions over 2,000 nautical miles.

> *This freighter is an important complement to our cargo portfolio, as we support our customers across expanding air cargo markets.*
>
> **Richard Greener**, senior vice-president and manager, cargo, GECAS

The residual values of the now 20-year-old 737-800 aircraft can justify a cargo conversion but the lessor now has problems sourcing the aircraft. GECAS has more than 200 737-800s in its fleet on lease. "Some of these aircraft have been identified for cargo conversion," says Greener.

He explains that while it varies by asset and depends on aircraft condition, strong candidates for conversion are typically about 16 years of age. "We evaluate engine hours/cycles on an asset-by-asset basis," he adds.

Greener says Boeing forecasts a market for more than 1,000 narrowbody freighters in "the size of the 737", with China's domestic air freight carriers accounting for nearly one-third of the total market.

"Cargo traffic is expected to more than double in the next 20 years. Furthermore, forecasts show that the world standard-body freighter will double by 2035. It is anticipated that every delivery of standard-body freighters going forward will be converted passenger aircraft," he adds.

Greener says the 737-800 freighter will primarily be used to carry express and e-cargo on domestic, short-haul routes. "We expect it to be used primarily by express operators and the emerging e-commerce market. However, this will depend on the mission and needs of the operator," he says.

GECAS has previously been involved in more than 45 737 Classic conversions and will leverage that knowledge with the 737-800 conversion programme, says Greener.

The lessor may have an interest in the Airbus A320/A321 cargo conversion market next. "GECAS can see a market for the A321-200P2F as a 757-200SF replacement, but it will really depend on the near-term availability of feedstock," says Greener.

The 737-700 conversion market may not attract such appetite. "The current and planned developments we are seeing in conversion programmes are encouraging. However, as a leasing business, our evaluation process for any type is heavily influenced by customer demand, which we are not seeing at present," he adds.

Doors open for **more ATR72Fs**

Philippe Archaud, head of asset management and freighters at ATR, talks about the impact of e-commerce in the five to nine tonnes payload market.

ATR unveiled the bulk freighter (tube version) and ULD freighter (large cargo door version) cargo conversion programmes at the 2002 Farnborough air show.

About 120 units have been converted with about half being for the ATR72-200/-210 models. Most conversions have been bulk freighters as the large cargo door remained a relatively expensive modification.

The ATR72 model is a 30-year-old aircraft. It was launched in 1986 and the first prototype flew in October 1988. The first delivery was to Finnair a year later.

About 200 ATR aircraft that were delivered before 1994 are still in service, says the manufacturer. With the oldest ATR72-500 delivering more than 20 years ago, some of the older aircraft are now becoming eligible for conversion.

The conversion market has been sluggish. This is because of the downturn in the cargo segment since the beginning of the decade combined with the number of aircraft available. But availability, especially for the ATR72-500 model, has increased over the past two years.

ATR created a leasing, asset management and freighter unit in June 2017 to support lessors and residual values.

Although there is an argument for high values for a conversion, the feedstock of ATR72-500 has helped values to enter the "conversion zone", especially for the structural tube options, which can be priced at between $500,000 and $680,000.

Head of asset management and freighters Philippe Archaud says the passenger-to-freighter conversion fills the manufacturer's goal to place ATR72-500s and manage their residual values.

"There are different ages of aircraft currently available, but the 10- to 15-year fleet is the candidate for the large cargo door conversion," he says.

IPR Invest, which provides the large cargo door option, has a $2 million tag price. "Converted ATR72-500s with the large cargo door can still be half price of a brand new ATR72-600 freighter," says IPR Invest.

Fedex placed an order for the ATR72-600F last November and launched the new-built freighter programme. Archaud says the US cargo carrier was also presented the ATR72-500 converted option but eventually opted for the new aircraft.

"There are different ages of aircraft currently available, but the 10- to 15-year fleet is the candidate for the large cargo door conversion."

Philippe Archaud, Head of asset management and freighters, ATR

"The ATR72-600 freighter has no window and is equipped with the structural tube and large cargo door," he explains. "It will be an optimised aircraft for Fedex," he adds.

The Franco-Italian manufacturer will use the IPR Invest licence for the structural tube and large cargo door.

The first delivery is expected for September 2020 and, in that same year, Fedex will take two units. The US carrier will then take six aircraft a year.

The ATR72-600F features the large cargo door at the front and the section fuselage can incorporate standard pallets and LD3 containers, offering the same volume of 75.5 cubic metres as the ATR72-500 converted version.

About 115 converted ATR freighters are in operation. In the five- to nine-tonne payload category, 300 aircraft are more than 20 years of age and will need to be replaced, says ATR.

Demand for conversion has historically been for the bulk version but ATR sees more appetite in the future for the large cargo door version.

"There is certainly an impact of e-commerce on freight," says Archaud. He is optimistic that more freighters will hit the market in the future.

By 2021, ATR will be delivering six new freighters a year to Fedex. The manufacturer's objective is to clinch more customers for the new freighter aircraft but also develop a second market for the converted models in parallel.

Archaud says 10 large cargo door conversions a year is not unrealistic. "There was one conversion last year and more are to be converted this year," he says.

That market is developing for Aelis Group, which is in a unique position of acquiring speculatively ATR72-500s for conversions.

In addition to five ATR72-200 conversions, the company has been involved in two bulk conversions using the AKKA Technologies licence.

Aelis Group chief executive officer Philippe Lienard says the large cargo door is justified for large operators, but demand is mainly for the bulk version because of the price of the large cargo door conversion.

"We see demand from Asia, including China and India, as well as Europe and Africa for freighter conversions," he says.

The ATR72-200/-210 conversions market faces an increasing availability problem, he says. Passenger aircraft candidates are now scarce and he sees a market shifting rapidly to the -500 conversion market.

One source says demand is now essentially for the ATR72-500 version, which is 10% more in capital costs than the ATR42-500 but provides 30% more volume and payload.

Pegasus bounces back

Mehmet Nane, chief executive officer of Pegasus Airlines, tells *Jack Dutton* about his carrier's turbulent journey through geopolitical and economic instability in its home market.

Despite his airline posting a seasonal loss of TL114 million ($24 million) for the first quarter of 2018, Mehmet Nane, the chief executive officer of Turkish carrier Pegasus Airlines, says the result went better than expected.

"We expected more of a loss due to the load factor and revenue decrease," says Nane. "Normally, first and fourth quarter are always a loss. What actually happened is that we actualised less costs compared to our budget."

The airline was expecting to make a loss of more than TL150 million for the first quarter, but managed to save money because CASK (cost per available kilometre) dropped by 8% year-on-year and revenues rose by 35% in the first three months of 2018.

In its full-year results for 2017, Pegasus reported a TL501 million net profit, reversing a TL136.2 million net loss in the previous year.

The airline's turnaround comes after a string of events that have damaged Turkey's tourism industry over the past three years. These include 14 terrorist attacks in the country through 2016 and 2017 and an unsuccessful coup d'état attempted by a faction in the Turkish army against the government in July 2016.

> *"After the attacks and the coup, we initiated a programme called 'three Cs': CASK, cash, capacity."*
>
> **Mehmet Nane**, chief executive officer, Pegasus Airlines

Nane says that after the attacks and the coup attempt, there was a substantial drop off in tourism coming from many of the western European countries, including Germany, the UK and the Netherlands.

"After the attacks and the coup, we initiated a programme called 'three Cs': CASK, cash, capacity," he says. "We want to be in cash, that's why we sold three aircraft. In 2017, we lowered our CASK by 3%, CASK non-fuel by 10%.

"We lowered our capacity by wet leasing six of our aircraft. We made money instead of grounding the aircraft. The change of the fleet to Neo starting from July 2016. We have more than 20 Neos in the fleet at the moment. These are fuel-efficient aircraft, so this also helped lower our CASK," adds Nane.

The airline also made its management structure leaner and increased its investment in digital platforms.

"We reviewed all possible contracts and tried to lower the costs. We reduced our foreign exchange risk. For fuel, we used hedging strategies, 43% and 20% discretionary."

Nane says that the biggest challenge after the attacks was to get the load factors back up.

"The biggest challenge was the load

factors – increasing the capacity and the yields – but we were very successful on the three-C initiative. In 2017, we increased load factors by 6.1%. The ancillary revenue was 41% up and our Ebitda [earnings before interest, taxes, depreciation and amortisation] margin was 24.4% – a record high."

The airline's total revenue for 2017 was up 44% compared with 2016, and its domestic market share improved by one percentage point to 31%.

Despite looking like the worst days are behind them, there are still a number of challenges for Pegasus, according to Nane.

"When you look at the current conditions, the main challenges are the high oil prices, exchange rates, duration of P&L [profit and loss] against the rest of Europe, geopolitical risk in our neighbourhood countries such as Syria, and the intention of the United States when it comes to Iran," he says.

Domestic interest rates

There have also been more recent domestic challenges with the Turkish economy. Although there has been a widening of the deficit and high levels of inflation, which have stoked concerns that the economy is overheating, Nane says he is not concerned.

"We are not overly concerned with the interest rate situation in Turkey. Why? Because the Turkish economy fundamentally has not changed compared to six months ago," he says. "This country has 7.4% growth in the last year and this was only six months ago – so there's no fundamental change."

However, Turkey's central bank has delivered two sharp interest rate hikes this year to stabilise the economy and the falling lira, which is down 23% against the dollar this year. The country's interest rate now stands at 17.75%, compared with 8% in mid-April.

In June, Recep Tayyip Erdogan, Turkey's president, said that he wanted to take control of setting interest rates, prompting a wide sell-off of the lira in response as investors switched their money out of emerging markets and into the United States. However, he was given welcome news ahead of the 24 June elections, with data showing the Turkish economy expanding by 7.4% in the first quarter of 2018.

"We believe that Turkey is strong enough on the financial and economic side to overcome this short-term issue," adds Nane. "After the election, when everything is settled, it will be back to normal in Turkey."

"There is no change in passenger appetite – we are in line with our growth ratios. We have seen no difference on the consumer expenses. I am optimistic that after the elections everything will be back to the factory levels. The customer confidence is there."

"After the election, when everything is settled, it will be back to normal in Turkey."

Mehmet Nane, chief executive officer, Pegasus Airlines

Consumer confidence returns

Fortunately for Nane, compared with 2016, interest in Turkey as a holiday destination has increased, with year-on-year tourist arrivals rising by 28% in 2017.

"There are several reasons for that. One being the devaluation of the Turkish lira," he says, because European visitors can spend less money when they are on holiday in Turkey.

Nane also points out that some of the Turkish holiday destinations on the Mediterranean coast, such as Bodrum, Kalkan and Oludeniz, are better developed than some competing Mediterranean tourist resorts in other countries.

"In Turkey, value for money is there and we have started to benefit again after two years in turmoil."

Fleet growth

The airline has a steady stream of deliveries to take advantage of Turkey's resurgence in popularity as a tourist destination. Pegasus is due to receive seven Airbus A320neos and three new Boeing 737-800s this year. "We plan to put these mainly on our balance sheet," says Nane.

The airline will take 14 aircraft in 2019, comprising seven A320neos and seven A321neos. At 1 January 2018, the airline's fleet stood at 76 aircraft. By the end of this year, Pegasus will have 81 aircraft, of which 34 will be Airbus aircraft and 47 Boeing aircraft.

Pegasus has taken delivery of five A320neos so far in 2018 (up to 19 June) and will take delivery of two A320neos in June and July. Three new 737-800 aircraft will also be delivered in July and these will be financed using the Aircraft Finance Consortium (AFIC) structure.

At the moment, the airline has 33 aircraft on finance lease, 41 aircraft on operating lease and four owned aircraft in its fleet. Pegasus's strategy is to have about a 50/50 split between financial and operating lease, with an average fleet age of 5.6 years old.

Nane says that the financing for this year has been secured. Asked how the airline is looking to finance the 2019 deliveries, he says: "It depends on the timing of the deliveries. Currently, we don't have any open RFPs [requests for proposals]. We will choose what's best for us based on cost."

In the past, the carrier has used operating leases, as well as bank financing. The airline has also closed Japanese operating leases with call options.

Nane says that Pegasus has no immediate plans for future orders, but it has 83 aircraft in its orderbook. The airline will take delivery of the remaining 35 A320neos and 43 A321s it has on order by the end of 2024.

He adds that Pegasus is not planning to go long haul for the time being. "We are planning to go inside our range; we do not have any long-haul flight planning at the moment. So far, we don't see any potential, but if there is a potential, we are ready to take advantage of it."

Among the 83 aircraft on order are 25 high-density A321neos that will deliver from the end of 2023. When it comes to financing those aircraft, Nane says: "It depends on the financing costs. We are looking for the best deals – we will see the offers of finance lease, operating lease and other structures and work out which one has the lowest cost."

Nane says that political instability in Turkey had increased the pricing it was getting on bank financing deals, but these effects were short lived and recovered by September 2016.

"It was not that high but a little bit higher after the coup and attacks because of the volatility and turmoil, but it was not for a long period of time," he says. "When the Turkish government and public stood up against the military coup and defended democracy everything went back to normal."

Labuan limitations for lessors

New rules for leasing through Malaysia's tax-efficient Labuan jurisdiction are creating hard work for lessors and their lawyers, but the final outcome could be a more mature offshore financial centre that gives more back to the local economy, reports **Michael Allen**.

"I think places like Jersey and Guernsey – if you arrive there and catch a lift from a taxi driver they will be able to tell you about the island being a financial centre. In Labuan, it's not like that," says Caroline Wong, senior director, client services, trust and corporate services, TMF Trust Labuan.

The Federal Territory of Labuan is made up of Labuan Island and six smaller islands, located off the east coast of the Malaysian state of Sabah. The capital, Victoria, is an offshore financial centre, although is perhaps less famous than other tax leasing jurisdictions such as Cayman and the British Virgin Islands.

"Previously, the [main] industry was the oil and gas industry, so you'd see a lot of people coming in and out in their overalls to the rigs," says Wong.

However, with the global downturn in the oil and gas industry, the financial services sector has begun to assume more prominence. Although it is not as well known as other tax-efficient jurisdictions such as Bermuda and the Cayman Islands, Labuan is a popular place from which lessors can lease aircraft.

However, lawyers and service providers which have worked on deals in the region caution that lessors with aircraft leases structured through Malaysia's tax-efficient Labuan jurisdiction need to take action sooner rather than later to prevent complications before the transition period for new substance requirements ends on 1 January 2019.

"Some lessors, particularly lessors in the aviation leasing industry, are concerned about the revised guidelines, and have sought further clarity."

Malaysian law firm Abdullah Chan

"The warning really for everyone is they can't just leave this and hope it gets swept under the carpet. They can't wait till later in the year; they need to start doing it now," says James Bradley, a partner in K&L Gates' Singapore office.

At the end of December 2017, the Labuan Financial Services Authority (Labuan FSA) released revised guidelines (*see box, 'New Labuan leasing guidelines'*) – replacing 2013 guidelines – on structuring leases through the island's Labuan International Business and Financial Centre (IBFC), a special economic zone set up in 1990. The guidelines took effect on 1 January 2018, but there is a transition period until 1 January 2019 to give companies time to comply.

While the guidelines are several pages long and can be read in full online, the key points are that lessors need to maintain an operational office in Labuan, carry out "core income generating activities" from their offices in Labuan, as well as employ full-time staff with relevant qualifications and experience in the leasing business.

"Some lessors, particularly lessors in the aviation leasing industry, are concerned about the revised guidelines, and have sought further clarity," says a 5 February 2018 briefing note from Malaysian law firm Abdullah Chan.

The background: OECD BEPS

The background to the new regulations is compliance with the Organisation for Economic Co-operation and Development's (OECD) base erosion and profit-shifting (BEPS) project. BEPS refers to tax-avoidance strategies that exploit gaps and mismatches in tax rules to shift profits artificially to low or no-tax locations, according to the OECD's website. Under the inclusive framework, more than 100 countries and jurisdictions are collaborating to implement the BEPS measures and tackle BEPS.

In June 2017, the OECD's Multilateral Convention to Implement Tax Treaty Related Measures was internationally endorsed with the objective of preventing BEPS, including cross-border tax avoidance and manipulation, according to an article on Labuan by law firm Holman Fenwick Willan.

"I think the important thing to note is the guidelines were not something that was done arbitrarily," says Shelina Razaly, a partner at Abdullah Chan.

She adds: "The guidelines will remain as they are, but the Labuan FSA [Financial Services Authority] regulator has been very open to discussions with industry in terms of what exactly amounts to substance requirements."

Razaly says that Labuan's authorities still take a business-friendly approach and are having to introduce these new regulations because Labuan could otherwise risk being put on an OECD blacklist. She says the Labuan authorities want to work with the lessors to help them get the benefit of Labuan's double-tax treatment, while at the same time complying with the substance requirements of OECD BEPS.

Time is right

Wong of TMF Trust Labuan thinks the new substance requirements have come at the right time. "I think this call for substance is quite timely because it brings more activity to the island," she says, referring to how the requirements will increase staffing levels in leasing companies there.

"There's still lots more to be done for the financial centre. Sufficient experience and knowledge to practice, for example, offshore banking and insurance; we often find ourselves having to source from outside the island: from KL [Kuala Lumpur] side, the peninsula. In terms of skill sets, there is still a need to improve from the local perspective," she says.

Wong, adds that the substance requirements for lessors should ensure the local community shares more of the benefits of the business-friendly jurisdiction. "The Labuan entities have already enjoyed so much in terms of tax incentives, but looking at the community as a whole, there's not much contributed to the local economy and people," she says.

According to a March 1994 article in the *South China Morning Post*, the Malaysian government made the first moves to make Labuan a tax haven in 1990 with a number of acts of parliament that freed up the banking sector and adjusted tax laws.

"Labuan was not designed just to benefit Malaysian lessees. Because we have such an extensive network of tax treaties in place, lessors can use Labuan to take advantage of other jurisdictions as well," says Abdullah Chan's Razaly.

April meeting offers clarity

On 18 April, the Labuan authorities held an invite-only briefing session in Labuan with stakeholders, including representatives from airlines, banks, lessors and law firms.

The purpose was to provide guidance on the new regulations, with the Labuan authorities giving a presentation about the new rules, followed by a Q&A session. This was the last formal meeting to be held between the Labuan authorities and the various stakeholders, *Airfinance Journal* understands.

That private meeting was preceded in March by a more public meeting: a conference in Malaysia's capital Kuala Lumpur called Labuan IBFC Asset Leasing Symposium 2018.

After those meetings, lessors which initially viewed the new requirements as "very inconvenient" started to understand better what they needed to do to continue to structure leases through Labuan, says Wong.

"After hearing where the authority is coming from and how things are moving globally – the entire landscape of the offshore industry – they are understanding it better and putting into action their plans; they are complying," she says.

K&L Gates' Bradley, who attended both meetings, says the "crux" of the matter is what "substantive entity" actually means.

He says it is clear that the leases signed between the outside world and Labuan need to be signed in Labuan, that the number of employees should be two (though until 2019 only one will be required), and that a bank account will have to be maintained in Labuan and have at least $50,000 expenditure by the Labuan company. The lessor will also need to have a "defined geographical presence", which can be an office in a corporate service provider, though it cannot be a post office box.

"It can be a desk, but it has to be closed off, so to speak, and has to have identifying imagery and what not. It has to be 'Joe Bloggs Labuan Company'; it has to have a big 'Joe Bloggs' plaque and look like it's the business," says Bradley.

Rhian Clayton-Payne, a senior associate at Holman Fenwick Willan, explains further.

"If you have an Avolon owner in Ireland, you would have an Avolon lessor in Labuan, and they lease down to the operator in Malaysia. Under the new guidelines, instead of those being empty SPVs [special purpose vehicles], they have to have employees, a registered office, and it can't just be just a pretend tax set up – a hollow vehicle – it has to be an actual company."

She adds: "They basically don't want people to take advantage of these tax structures, and be legitimate companies that deserve the benefits of the legislation and have not just been set up to cleverly benefit from them."

Bradley says that lessors found not to be in compliance risk losing their leasing licenses, which would automatically trigger an event of default under the lease.

"The risk is that there could be an event of default for a lessor under its loan and there could be an event of default for a lessee on the lease. That would be a fundamental problem because you lose your financing as a prepayment problem and you've got to do something about that asset," he says.

Wong says the deadline is set for 1 January 2019, but that the Labuan authorities will likely make office visits to check for compliance and, if there is non-compliance, give the leasing company some time to explain and rectify.

"But eventually, given time… I do believe the authority will have to take action and revoke certain licenses. That is why certain lessors are already starting to make plans and take action," says Wong.

Bradley says he is not aware of any further meetings scheduled between stakeholders and the Labuan authorities.

"The Labuan FSA have given all the guidance they can to the wider audience, and I think after the last meeting it was clear to me what they're looking for," he says.

"If you can't meet the requirements and you want to start a lobby, or whatever you want to do, or think it's unfair, then by all means any party is able to get in touch with them, but I don't think it's going to have an impact on their clarity on the guidance note.

"This will take time. People need to be on top of it. It's not a straightforward process. The parties will need to get going on this sooner rather than later."

New Labuan leasing guidelines

The "Guidelines on the Establishment and Operations of Labuan Leasing Business" set out new thresholds to evidence the "substance" of Labuan leasing companies.

The requirements include:

- maintaining an operational office in Labuan;
- carrying out "core income-generating activities" from its office in Labuan; and
- employing full-time staff with relevant qualifications and experience in the leasing business.

Source: Holman Fenwick Willan briefing document

Business intelligence – game changer for aircraft leasing

Zeevo Group explores how data-driven business and technology solutions are expected to impact and alter the competitive business landscape in the aircraft leasing industry in the near future.

Lessors are collecting a wealth of data nowadays. However, a myriad of tools and procedures hinder effective application of their data. Continued reliance on spreadsheets to manage their expanding data inhibits them from fully realising its potential value – missing out on the opportunities to maximise revenue, minimise costs, and improve customer understanding and satisfaction.

The rise of business intelligence (BI) solutions is changing the game. With BI, lessors are better positioned to analyse, employ and visualise their data in new ways, enabling them to retire outmoded spreadsheets and their inherent risks.

Spreadsheets – part of the past

Zeevo Group principal Karen Curtis contends that "it's about time lessors shunned ubiquitous spreadsheets and embraced advanced business intelligence and analytics tools" to enable rapid decision-making and attain a competitive advantage over peers.

To better understand the value of BI, it is helpful to recognise the disadvantages of relying on a spreadsheet approach to data, including:

- the sheer volume of data now available often exceeds the size and performance capabilities of spreadsheet tools;
- users lack the sophisticated skill sets needed to leverage the more advanced spreadsheet capabilities;
- data collection, cleansing, and preparation is often a very manual and unreliable exercise;
- data governance and regulatory compliance requirements are problematic in a spreadsheet environment;

- limitations in data exploration, predictive analysis and visualisation capabilities with spreadsheet tools;
- difficulties in scaling spreadsheets to meet evolving business requirements; and
- complex spreadsheet formulas are prone to error and difficult to rectify.

Some of these spreadsheet limitations have explicit financial ramifications – prone to inaccurate data entry and miscalculations, erroneous information may be used to drive decisions resulting in unnecessary expenses or combative relationships with lessees.

For example, if maintenance reserve claims are managed on manually controlled spreadsheets, technical employees may incorrectly calculate a higher top-up payment than required with little oversight. Similarly, in deal support, the use of spreadsheet tools can make it difficult to see the full picture and compare prospective deals. This can hinder a lessor in achieving the most financially beneficial deal when determining aircraft placement for upcoming returns, missing out on a deal that generates millions more in revenue.

Understanding business requirements is key

BI tools mitigate the risks associated with spreadsheets and open opportunities otherwise limited by their use. The implementation and efficacy of any BI solution is intrinsically tied to the quality of the source data. Understanding your business requirements and motivations will effectively improve the user experience and foster innovation on implementation.

"Organisations are looking to embrace technology, data governance and best practice principles to evolve as data-driven organisations rather than relying on gut instinct and problematic spreadsheet tools," explains Curtis.

There are a variety of BI solutions available, so before the selection of one, a detailed and clear understanding of business requirements is key. A prioritised list of features and functions helps facilitate this process.

From an information technology (IT) perspective considerations may include:
- the variety of supported data sources (eg, Excel, third party on-premise and in-cloud applications);
- the complexity of the organisation's security model;
- performance monitoring capabilities;
- ease of use for administrative functions and features;
- the ability to cache data to improve performance;
- scalability over time as business requirements evolve and the volume of data increases; and

"Organisations are looking to embrace technology, data governance and best practice principles to evolve as data-driven organisations rather than relying on gut instinct and problematic spreadsheet tools."

- the availability of robust documentation and training.

From a business perspective considerations may include:
- the types and robustness of supported visualisations;
- publication and export capabilities;
- self-service features including the ability to create and save custom calculations;
- support for dimension hierarchies to implement drilldown capability;
- end-user access options including the web and mobile;
- the ability to access data online;
- advance filter capabilities for both independent and interconnected data; and
- depth of storyboard functionality to analyse and discuss data from different perspectives.

Quality of source data

The adage "garage in, garbage out", the idea that incorrect or poor quality data inputs will always produce faulty outputs, particularly holds true for BI projects.

Business requirements and data integrity are cornerstones of the implementation process, but ultimately the success of implementing a BI solution is dependent on the people responsible.

Implementations will usually include:
- a comprehensive data quality and completeness assessment;
- data remediation; and
- the refinement of business processes to support data integrity on a go-forward basis.

The establishment of a data governance model is an important, but often overlooked, aspect of effective data management. Data governance is the management of the integrity, availability and security of data within an organisation. Typically, data governance includes a governing committee, a set of well-defined data definitions, and established data management procedures for master data and metadata.

The clear identification of master data is key to support transaction processes, reports and analysis. Master data is non-transactional data such as customers and employees.

Metadata, however, is key information about data. It includes information:
- about how, when and by whom data is collected;
- what the data is; and
- the format the data takes.

Having clean data limits time spent validating it and enables companies to spend more time extracting value from their visualisations and analysis.

Successful implementation

The planning of a BI and analytics implementation should include quantifying the skill sets of internal resources.

An assessment of external support requirements is also prudent for both the short- and long-term outlooks.

Careful attention must be paid to roles and responsibilities as an organisation evolves into a data-driven entity. Most often, IT owns the data access strategy, data access implementation and administrative support for the toolsets. The self-serve capabilities of more modern BI tools have allowed the interpretation of the data to shift from IT to the business, empowering the business to maximise their efficiency while reducing the dependency on IT organisations to support evolving business requirements.

Innovation can be enhanced by encouraging effective collaboration between IT and the business through a process of rapid iterative design, prototyping, implementation and testing. Collaborative efforts bring about new insights and instil a pioneering enthusiasm among a company's employees.

How to utilise BI for leasing platform

"By and large, the applications of BI solutions are only limited by your imagination," says Ethan Ross, Zeevo Group. With the ability to pull source data from multiple systems and establish repeatable calculations for enhanced analysis of their data, BI empowers aviation leasing companies to design custom reports – visualising key information for each sector of their operations.

Some illustrative examples of how BI can be utilised to benefit a leasing platform include workload planning, which is one of the most common and useful types of BI reports, aiding in:

- a thoughtful distribution of accounts;
- varied assignments to broaden skill sets;
- project management timelines; and
- historical snapshots so employees can learn from those that preceded them.

For example, the head of a technical department can review graphs such as pie charts that illustrate the distribution of the fleet among technical managers broken down by customer, geographic regions, aircraft models and any other metrics pertinent to the organisation.

One technical manager may be responsible for 25% of a fleet, while others are only responsible for 10%. BI reports can be leveraged to rectify this incongruity in accounts to establish a more even distribution, so that no one person is disproportionately responsible for a preponderance of aircraft. It is not ideal for one person at a table to have two prime-ribs while the other has only a house salad.

Drilling down further, heads of technical can review the customer and aircraft model breakdown by manager. This information can promote exposure to multiple customers while taking geographic location into account and aircraft models providing further utility and depth of knowledge down the road.

Historical snapshots can then be leveraged by managers to see previous owners of their accounts to seek insight from past experiences.

BI can also be used to visualise project timelines, so that a technical department is better equipped to understand availability of team members and resources when planning for upcoming redeliveries.

"An equitable and varied distribution of project ownership keeps employees engaged. Variety is the spice of life, but too much of any one spice overwhelms the palette," says Zeevo Group principal Joey Johnsen.

Deal support

BI reporting for deal support can contain any number of elements including:

- monthly rent and total revenue comparisons between prospective deals;
- how proposed rent values stack up to company benchmarks (either internal or industry standards per third-party sources);
- variances in deals over time and region to help identify trends; and
- tracking the progress of deals throughout negotiations.

With BI, any of this information can be filtered by numerous attributes (eg, aircraft model, manager and region) and can also be displayed in a variety of ways to suit your needs (eg, through tables, gauges and graphs).

“An equitable and varied distribution of project ownership keeps employees engaged. Variety is the spice of life, but too much of any one spice overwhelms the palette.”

Asset management

Asset management data is expansive and can be located within multiple systems for an aviation leasing company.

Asset management BI reports can display information such as:

- upcoming events (eg, aircraft redeliveries and impending shop visits) to plan for what lies ahead;
- spec data such as configuration, maximum takeover weight (MTOW) and thrust, which marketing can employ in
- asset placement; and
- engine-tracking and maintenance projections that enable greater insight for fleet planning, which assists in determining optimal engine configurations reducing unnecessary shop visits, limiting expenses and maximising revenue.

"It cannot be understated the value of having all of this information consolidated and easily accessible through BI.

It positions employees to make better judgments through streamlined environments," says Johnsen.

Going mobile

No matter where an employee is (eg, on-site with a client or maintenance, repair and overhaul company), BI makes the pertinent information available with minimal effort. Whether on a laptop, tablet, or mobile phone, employees can reference BI reports on the fly providing a competitive advantage even during "away games".

For example, marketing executives can find live spec data on an asset when on-site with a prospective lessee without the paper or locating digital files by drilling through folders on a share drive.

"There is a tangible confidence in knowing that, regardless of what's in my bag, most of the information I need is also on my phone," says Johnsen.

The sky is the limit for data visualisation possibilities

Once established, BI reporting solutions can offer an organisation the flexibility to revise existing reports continuously and develop new ones in-house and ad-hoc.

Particularly user-friendly BI tools are often intuitive enough to provide employees the opportunity to create their own custom reports without extensive training.

From the high-level executive reporting to granular data analysis, team members can explore new ways to view and analyse information specific to their needs without time-consuming third-party support. Given this, the sources of innovation at a company are broadened, democratising technology so that the next great idea can come from anywhere and anyone.

Are you ready to embrace BI and become more data-driven?

Zeevo Group is passionate about helping clients evolve into data-driven organisations through BI solutions, and we understand that each leasing platform's requirements are unique, because the road to an effective business intelligence and analytics solution can present several challenges:

- advocating a cultural shift from a gut-instinct to a data-driven approach in decision-making;
- the plethora of available technology solutions may feel overwhelming;
- data cleansing and validation may seem like an insurmountable task; and
- the path to instilling an innovative, self-serve mindset within the organisation may be daunting.

“Zeevo Group is passionate about helping clients evolve into data-driven organisations through BI solutions.”

Zeevo Group's suite of BI, analytics advisory and training services is well positioned to help take your organisation's data analysis to the next level; empowering your management team and staff to use data effectively for both strategic and operational decisions.

At day's end, it is about both the organisation and its people adopting a data-driven philosophy – incentivising professionals to make smarter decisions supported by data.

Are you ready to become more data-driven? Business intelligence can get you there.

A350-900 – a widebody for the future

Despite some adverse market conditions, appraisers see a healthy outlook for the most successful model of the A350 family.


Airbus A350-900

The Airbus A350-900 is a long-range, twin-engine, widebody aircraft. Although it was originally launched in 2004 with an improved A330 fuselage, comments from potential customers, especially lessors, persuaded Airbus to redesign and relaunch the A350 with a wider cabin cross-section. The manufacturer dubbed the redesigned models as XWB (extra wide body) variants.

The XWB family originally consisted of three variants, the A350-800, the A350-900 and the A350-1000. However, production of the A350-800 was cancelled as initial customers switched their orders to the larger A350-900, or the re-engined A330neo.

The A350-900 is designed to carry 325 passengers in a three-class cabin configuration with a maximum capacity of 440 in a single-class layout. The aircraft is powered by Rolls-Royce Trent XWB engines and has a range of about 8,100 nautical miles (15,000km).

The Airbus aircraft sits between Boeing's 787-9 and 787-10 in terms of capacity and competes with both aircraft.

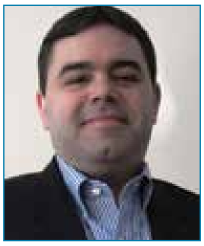
The first A350-900 was delivered to launch customer Qatar Airways at the end of 2014 and entered service in January 2015.

Developments

In late 2017, Airbus introduced an aerodynamic performance improvement package, which provides 400 nautical miles of additional range and 1% lower fuel burn. The package includes a slightly higher winglet and a slight wing twist to optimise performance.

Istat appraisers' views

Collateral Verifications (CV)



Gueric Dechavanne, vice-president, commercial aviation services

The current trends for the A350-900 have shown stability in its market value and lease rates, which are about $1 million to $1.1 million a month on average, for operating leases of new aircraft. CV expects these numbers to remain stable as the market demand for such aircraft continues.

Because of its efficiency and mission capabilities, the Airbus aircraft is an excellent candidate to replace many ageing widebody models, such as older A340s, some A330s and older Boeing 767s and 777s.

With more than 650 orders since its launch, the A350-900 has already shown great signs of success and it will continue to do so as the fleet grows and the aircraft proves itself. CV expects this variant to remain the most popular among operators and investors. However, with the 787-9 having also entered service, the A350-900 will face significant competition from the Boeing aircraft, which offers attractive performance and operating economics.

Both manufacturers claim that their aircraft offers better economics over the other, but CV feels that both models will do very well, given the level of demand for this type of aircraft from the global operator base. However, aircraft orders have been slow to materialise for all widebody aircraft in the past 12 months.

It is CV's opinion that this is partly because of the low fuel price environment and the increased availability of used parts for aircraft such as the A330s, 767s and 777s, which has meant existing fleets remain attractive to operate. Consequently, operators have extended leases for these older types rather than order new models such as the A350.

As the older models continue to age and become more expensive to operate, Airbus should once again see orders from new and existing operators. In any case, Airbus has a large enough backlog to continue building the A350 at normal production rates, which means that the current market trends should have very little impact on values and lease rates of the A350.

Overall, CV feels the A350 family of aircraft will continue to perform very well for many years to come and will remain one of the top aircraft choices by operators and investors.

IBA

Reina Akiya, aviation analyst

Airbus targeted the A350-900 not only as a successor for its own A340-600, but also for the Boeing 777-200/-200ER. The replacement of some A330-300s and A340-300s was also envisaged. The European manufacturer's strategy has had some success with a healthy number of orders for the XWB variants. As of the end of May, orders had been placed for 668 aircraft, of which 171 were in service.

The Asia-Pacific region is the largest market for the A350-900, with almost half of the entire fleet operated in the area. Launch customer Qatar Airways is the largest operator with 26 aircraft, followed by Cathay Pacific Airways (22) and Singapore Airlines (21).

The largest orders are from Singapore Airlines, which has 45 aircraft to be delivered and Etihad Airways, with 40 on order. The Singapore Airlines order includes seven of the URL (ultra long range) version, which can operate flights of up to 19 hours with a 9,700 nautical-mile (18,000km) range.

The Airbus A350-900 has a stable value profile because the type is still in the early

AIRCRAFT CHARACTERISTICS

Seating/range

Max seating	440
Typical seating	325
Maximum range	8,100 nautical miles (15,000km)

Technical characteristics

MTOW	268 tonnes
OEW	161 tonnes
MZFW	192 tonnes
Fuel capacity (standard model)	138,000 litres
Engines	Trent XWB
Thrust	84,000lbs (374kN)

Fuels and times

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

Fleet data (-600 models only)

Entry into service	2014
In service	171
Operators (current and planned)	42
In storage	2
On order	497
Planned production 2018	110
Average age	1.5 years

Source: *Airfinance Journal Fleet Tracker 30 May 2018*

Indicative maintenance reserves

C-check reserve	$105 to $110 per flight hour
Higher checks reserve	$95-$100/flight hour
Engine overhaul	$290-$295/engine flight hour
Engine LLP	$265-$270/engine cycle
Landing gear refurbishment	$150-$155/cycle
Wheels, brakes and tyres	$375-$380/cycle
APU	$105-$110/propeller hour
Component overhaul	$420-$425/flight hour

Source: *Airfinance Journal research/analysis*

The figures shown for fuels and times are Airfinance Journal's estimates based on published data. They are intended to reflect 100% passenger load-factors, international standard atmosphere (ISA) conditions en-route, zero winds and optimum flight levels.

stages of the product cycle. However, there can be no escaping the notably low lease-rate factors (LRF) that have been affecting the model. This phenomenon is, however, not confined to the Airbus aircraft – the Boeing 787-9 has also been displaying similar LRF performance. IBA has heard of new A350-900s leasing at $1 million a month. Set against a market value of $150 million, this equates to an LRF of 0.67%.

Despite the LRF values, the Airbus A350-900 has achieved good market penetration, with a strengthening operator base and strong lessor involvement. The minor weight, range and aerodynamic improvements that are being introduced should not hamper values of early aircraft. IBA would expect all A350-900 aircraft to show strong value performance.

Oriel

Olga Razzhivina, senior Istat appraiser

The A350 is the first aircraft from Airbus to be built primarily with carbon fibre fuselage and wings. The aircraft is equipped with Trent XWB engines from Rolls-Royce, which is the single-source powerplant supplier. Against the backdrop of troublesome entries into service by many new-technology engines, the Trent XWB has been remarkably problem-free.

The A350-900 is a part of a new generation of twin-aisles, which offer airlines a greater range with lower capacity than the older-generation 777s and A380s. Airlines are embracing the ability to fly long haul without having to carry additional seats.

The A350-900 is clearly in the sweet spot of size and range combination, with 42 airlines selecting the type. The larger A350-1000 is having much less success with fewer than 200 orders. Similarly, the ULR option is generating little interest, with the Singapore Airlines order the only one announced to date.

The competitors from Boeing are the 787-9 and 787-10. Both the 787 and A350 families offer the latest technology for long-haul widebody operators and will form the backbone of long-haul fleets for many decades to come.

However, very attractive lease rates and values of the used, older-generation twin-aisles are now affecting the new aircraft market. With fuel prices still relatively low compared with the 2008 peak, airlines are prepared to accept efficiency trade offs. More recent – although temporary – issues with new-technology engines on Boeing 787s are also driving airlines towards the older types.

In an environment of softer demand for new twin-aisles, we are likely to see an escalation of competitive behaviour from Boeing and Airbus. American Airlines, for example, has opted for the 787 and cancelled its 22-strong A350 order, which it had inherited through the US Airways merger.

Market values and lease rates have softened in the past two years. With the A350-900 and 787 replacing the 777-300ER as the most popular twin-aisles for sale and leaseback and sales with lease attached, lessors seem prepared to accept lower lease rates in order to acquire the new-technology assets. This popularity is likely to continue, with the A350 becoming one of the industry's workhorses with strong value retention in the short and medium term.

Values

Current market values ($m)

Build year	2015	2016	2017	2018 (new)
CV view	117.9	124.0	135.6	156.1
IBA view	120.4	128.7	140.0	150.0
Oriel view	113.0	117.0	131.6	148.2

Assuming standard Istat criteria.

Indicative lease rates ($000s/month)

Build year	2015	2016	2017	2018 (new)
CV view	850	925	1,000	1,100
IBA view	800-950	845-980	865–1,050	980-1,100
Oriel view	850	900	975	1,075

The battle **continues**

The sweet spot of the single-aisle market may be moving to larger models, but as the first variants of their respective new families, the competition between the A320neo and the 737 Max 8 is an important one for Airbus and Boeing.

Boeing and Airbus between them have sold well over 10,000 of their new-generation single-aisle models. You could be excused for thinking that would keep them both happy, but the two manufacturers continue to battle for market share.

The Airbus A320 versus the Boeing 737-800 contest has been at the centre of the competition between the manufacturing rivals. That rivalry is set to continue, because the replacements for these two models are the first members of the respective latest-generation families to enter service. Both the A320neo and the 737 Max 8 are in airline service, although the aircraft they replace continue to be built and ordered.

Airbus A320neo


Boeing 737 Max 8

Airbus A320neo

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

The respective engine manufacturers claim that their engines offer a fuel saving of about 15% compared with their equivalent predecessors. Airbus says the A320neo has 95% airframe commonality with the A320 and adds that this commonality is a key factor for customers and operators.

The first A320neo entered service at the beginning of 2016. In common with many modern aircraft programmes, the initial service experience has been troubled, not least because of issues with the Pratt & Whitney engine.

Key data: A320neo versus 737 Max 8

Model	A320neo	737 Max 8
Maximum seats	189	200
Typical seats	150	162
Range (nm/km)	3,750/6,950	3,510/6,510
Entry into service	January 2016	May 2017
List price ($m) 2018	108.4	112.4

Source: *Airfinance Journal research.*

737 Max 8

The 737 Max 8 replaces the next-generation (NG) 737-800. It is widely accepted in the industry that Boeing would have preferred to produce an all-new single-aisle design to replace the 737NG family, but the launch of the A320neo forced the US manufacturer to launch a re-engined development. As with the NG family, Boeing has opted to go with CFM as a single source engine supplier, selecting the Leap-1B engine as the sole powerplant option. The first 737 Max 8 entered service in May 2017.

The 737 Max 8 offers additional range of about 400 nautical miles (740km) compared with the 737-800. The Max-family aircraft are all equipped with Boeing's Sky Interior, which was introduced as an option on NG models in 2010.

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

Orders

The battle for market share in the current single-aisle market draws parallels between the 737-800 and the original A320. The original A320 had a decade head start, but the Boeing rival eventually outsold it. However, this is only part of the story because the larger A321 was replacing its smaller stablemate as the most popular Airbus single-aisle variant.

Like its predecessor, the 737 Max 8 has outsold its direct competitor since its launch (although it still remains behind in total sales). However, the success and importance of the A321 has increased with the arrival of the new-generation aircraft – giving the European manufacturer close to a 60% market share of the new-generation single-aisle market.

Total orders for Neo and Max families

Type	Orders	Type	Orders
A319neo	56	737 Max 7	60
A320neo	4,090	737 Max 8	3,575
A321neo	1,942	737 Max 200	110
		737 Max 9	483
		737 Max 10	284
Total Neo	**6,088**	**Total Max**	**4,512**

Source: *Airfinance Journal Fleet Tracker 31 May 2018*

Operating cost

Each manufacturer claims that its aircraft is the most cost-effective to operate and both are adept at providing figures to back-up their claims. Evaluating the competing claims can be difficult.

Oliver Stuart-Menteth, managing director, Fintech Aviation Services, suggests there is little to choose between the Max 8 and the A320neo in terms of operating costs. He says: "The A320neo and Max 8 are very close in operational efficiency and which one an airline chooses will be heavily influenced by their requirements for seating configurations and agreed pricing."

Boeing and Airbus have invested in maximising the seating capacity of their models. The Max 200, as the name suggests, will seat 200 passengers and Airbus has been incrementally adding to the maximum capacity of the A320. The European manufacturer has a 189-seat version already certificated, and there are reports that the company is seeking to push this to 195 seats. Whether this capacity is genuinely viable is open to question, but Airbus has said it expects that more than 50% of future A320neo deliveries will be aircraft equipped with more than 180 seats.

Although the Max 8 is unquestionably the larger aircraft, Stuart-Menteth believes the A320 cabin, with its larger exit doors, offers more flexibility and that the European manufacturer is adept at maximising its capacity.

Airfinance Journal has carried out its own analysis of operating costs based on information released by the manufacturers. For the purposes of this analysis, the generally accepted 12-seat advantage for the 737-800 over the A320 is maintained when comparing the A320neo with the Max 8. As cited above, this is vigorously debated.

The analysis confirms that the relative costs of the Max 8 and the A320neo are closely matched and follow a similar pattern to the differences that *Airfinance Journal* has previously found in comparisons between the 737-800 and A320. The Max 8 costs about 3% more per trip to operate than the A320neo, which equates to a seat-cost advantage of about 5% for the Boeing model.

The *Airfinance Journal* analysis consistently shows lower savings for the new-generation models over their predecessors, compared with the figures presented by the respective manufacturers. This difference is partly explained by a cautious approach to maintenance cost savings in the absence of in-service data to confirm manufacturer claims. It is reasonably clear that airframe costs have been reduced, largely because of increased maintenance intervals (particularly for higher checks); however, there is widespread scepticism in the industry that engine maintenance costs will be lower for the new engine models.

According to US consultancy MBA, the projected maintenance cost for the Max and the Neo are comparable in the mid to long run. However, because of a longer interval for the first heavy check on the Max, the A320neo has a higher maintenance cost for the first seven years.

A striking result from the cost analysis is that, at an assumed fuel price of $1.85 per US gallon, the new-generation A320neo barely betters the cash seat-mile cost of the 737-800. The new-generation aircraft will of course be much more competitive in the event of a return to the level of fuel prices that were prevalent at the time of its launch. However, a considerable fuel price hike would be required to justify the list-price differentials that both manufacturers are seeking for the new models.

And the winner is...

If the competition between the 737 Max 8 and the A320neo was the most critical contest in the single-aisle market, Boeing would arguably be in the strongest position. Unfortunately for the US manufacturer, the A321neo is the aircraft it needs to beat.

Indicative relative cash operating costs (COC)

	737-800	A320	A320neo	737 Max 8
Relative trip cost	101.7%	Base	93.9%	96.7%
Relative seat cost	94.2%	Base	93.9%	89.6%

Indicative relative total direct operating costs (DOC)

	737-800	A320	A320neo	737 Max 8
Relative trip cost	101.4%	Base	102%	106.7%
Relative seat cost	93.9%	Base	102%	98.8%

Assumptions: 500-nautical mile sector; fuel price $1.75 per US gallon.
Fuel consumption, speed, maintenance costs and typical seating layouts are as per Air Investor 2018.
Capital costs based on list prices.

Rating agency unsecured ratings

Airlines

	Fitch	Moody's	S&P
Aeroflot	BB-(stable)	-	-
Air Canada	BB-(pos)	Ba2(stable)	BB(pos)
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	B(stable)	-	B(stable)
British Airways	BBB-(stable)	Baa3(stable)	BBB-(stable)
Delta Air Lines	BBB-(stable)	Baa3(stable)	BBB-(stable)
Easyjet	-	Baa1(stable)	BBB+(stable)
Etihad Airways	A(stable)	-	-
GOL	B(stable)	B2(stable)	B-(pos)
Hawaiian Airlines	BB-(stable)	B1(stable)	BB-(stable)
Jetblue	BB(pos)	Ba1(stable)	BB(stable)
LATAM Airlines Group	B+(pos)	Ba3(stable)	BB-(stable)
Lufthansa Group	-	Baa3(stable)	BBB-(pos)
Qantas Airways	-	Baa2(stable)	BBB-(stable)
Ryanair	BBB+(stable)	-	BBB+(stable)
SAS	-	B1(stable)	B+(stable)
Southwest Airlines	BBB+(pos)	A3(stable)	BBB+(stable)
Spirit Airlines	BB+(neg)	-	BB-(stable)
Turkish Airlines	-	Ba3	BB-(neg)
United Continental Holdings	BB(stable)	Ba2(stable)	BB(stable)
Virgin Australia	-	B2(stable)	B+(stable)
Westjet	-	Baa3(neg)	BBB-(stable)
Wizz Air	BBB(stable)	Baa3(stable)	-

Source: Ratings Agencies - 14th June 2018

Lessors

	Fitch	Moody's	S&P	Kroll Bond Ratings
AerCap	BBB-(stable)	-	BBB-(stable)	-
Air Lease	BBB(stable)	-	BBB(stable)	A-(stable)
Aircastle	-	Ba1(stable)	BBB-(stable)	-
Avation	BB-(stable)	-	B+(pos)	-
Aviation Capital Group	BBB(stable)	-	A-(stable)	-
Avolon Holdings	BB(stable)	Ba2(stable)	BB+(stable)	BBB+(stable)
AWAS Aviation Capital	-	Ba3(stable)	BB(pos)	-
BOC Aviation	A-(stable)	-	A-(stable)	-
Dubai Aerospace Enterprise	-	Ba2(stable)	BB(pos)	-
Fly Leasing	-	Ba3(neg)	BB-(stable)	BBB(stable)
ILFC (Part of AerCap)	-	Baa3(stable)	-	-
Park Aerospace Holdings	BB(stable)	Ba3(stable)	-	-
SMBC Aviation Capital	A-(stable)	-	BBB+(stable)	-

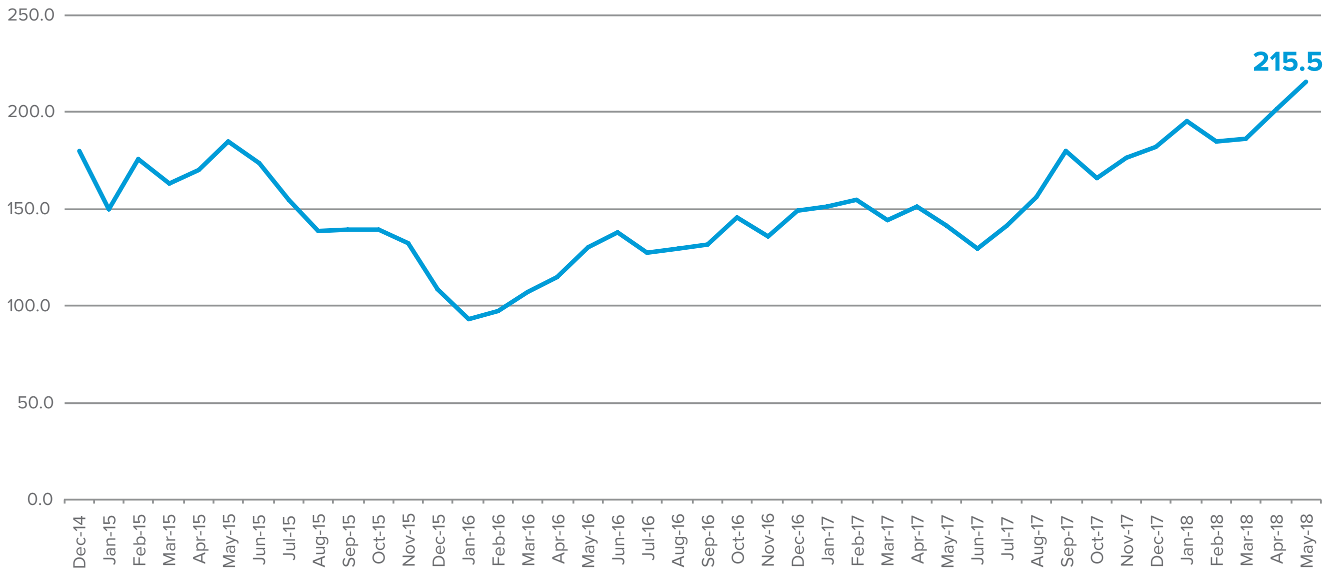
Source: Ratings Agencies - 14th June 2018

Manufacturers

	Fitch	Moody's	S&P
Airbus Group	A-(stable)	A2(stable)	A+(stable)
Boeing	A(stable)	A2(stable)	A(stable)
Bombardier	B(neg)	B3(neg)	B-(stable)
Embraer	BBB-(stable)	Ba1(stable)	BBB(stable)
Rolls-Royce	A-(stable)	A3(neg)	BBB+(stable)
United Technologies	-	A3	A-(neg)

Source: Ratings Agencies - 14th June 2018

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



Source: US Energy Information Administration

Recent commercial aircraft orders (April 2018-June 2018)

Customer	Country	Quantity/Type
Fedex	US	12x767F, 12x777F
Delta Air Lines	US	20xCRJ900
Air Baltic	Latvia	30xCS300
African Aero Trading	Angola	6xQ400
Swiss	Switzerland	2x777-300ER
Lufthansa	Germany	21xA320 family, 2x777F
American Airlines	US	15xCRJ900, 15xE175
Ryanair	Ireland	25x737 Max 8
Druk Air	Bhutan	1xA320neo
Lion Air	Indonesia	50x737 Max 10
SAS	Sweden	35xA320neo
ALC	US	8x737 Max 8
American Airlines	US	22x787-8; 25x787-9
Uzbekistan Airways	Uzbekistan	1x787-8
Ethiopian Airlines	Ethiopia	10xQ400
Southwest Airlines	US	40x737 Max 8
Allegiant	US	1xA320

Based on *Airfinance Journal* research up to 19 June 2018

Aircraft list prices - new models

Model	$ millions
Airbus (2018 prices)	
A319neo	99.5
A320neo	108.4
A321neo	127
A330-800neo	254.8
A330-900neo	290.6
A350-900	317.4
A350-1000	359.3
Boeing (2018)	
737 Max 7	92.2
737 Max 8	112.4
737 Max 9	119.2
777-8X	379.2
777-9X	408.8
787-10	312.8
Bombardier (2017)	
CS100	76.5
CS300	85.7
Embraer (2018)	
E175-E2	51.6
E190-E2	59.1
E195-E2	66.6

Current production aircraft prices and values ($ millions)

Model	List price	Current market value*
Airbus (2018)		
A319	92.3	35.6
A320	101	43.9
A320neo	110.6	48.5
A321	118.3	51.9
A330-200	238.5	87.5
A330-300	264.2	100.8
A350-900	317.4	147.9
A380	445.6	221.8
ATR (2016)		
ATR42-600	22.4	16.1
ATR72-600	26.8	20.4
Boeing (2018)		
737-700	85.8	36.3
737-800	102.2	46.4
737-900ER	108.4	48.2
737 Max 8	117.1	51.0
747-8 (passenger)	402.9	163.1
747-8 (freighter)	403.6	183.6
777-200F	339.2	160.9
777-300ER	361.5	157.1
787-8	239.0	118.5
787-9	281.6	142.2
Bombardier (2017)		
CRJ700	41.4	23.0
CRJ900	46.4	26.1
CRJ1000	49.5	28.3
CS100	79.5	32.5
CS300	89.5	37.1
Q400	32.2	21.7
Embraer (2018)		
E170	43.6	25.1
E175	46.9	28.6
E190	50.6	32.6
E195	53.5	34.6

*Based on Istat appraiser inputs for Air Investor 2018

Lease rates ($'000 per month)

Model	Low	High	Average
Airbus			
A319	225	275	250
A320	290	345	317.5
A320neo	330	390	360
A321	350	410	380
A321neo (ACF)	360	450	405
A330-200	600	750	675
A330-300	625	825	725
A350-900	950	1,150	1,050
A380	1,450	1,900	1,675
ATR			
ATR42-600	105	155	130
ATR72-600	145	180	162.5
Boeing			
737-700	220	275	247.5
737-800	310	375	342.5
737-900ER	330	380	355
737 Max 8	330	440	385
747-8 (passenger)	1,050	1,300	1,175
747-8 (freighter)	1,325	1,550	1,437.5
777-200F	1,150	1,350	1,250
777-300ER	1,050	1,350	1,200
787-8	850	975	912.5
787-9	950	1,100	1,025
Bombardier			
CRJ700	170	200	185
CRJ900	180	233	206.5
CRJ1000	190	255	222.5
CS100	230	280	255
CS300	280	310	295
Q400	170	200	185
Embraer			
E170	170	225	197.5
E175	190	250	220
E190 (AR)	230	280	255
E195 (AR)	240	280	260
Sukhoi			
SSJ100	165	210	187.5

Commercial aircraft orders by manufacturer

	Gross orders 2018	Cancellations 2018	Net orders 2018	Net orders 2017
Airbus (31 May)	161	50	111	1,109
Boeing (31 May)	376	70	306	912
Bombardier	61	0	61	70
Embraer	15	0	15	86
ATR	4	0	4	113

Based on *Airfinance Journal* research and manufacturer announcements until 20/06/2018

Sanctions, new world order and aviation – **a provocative view**

Withdrawal from the Iran nuclear deal, and the consequences for aviation, could reduce the US's influence in the world even further, writes Adam Pilarksi, senior vice-president at Avitas.

The US's decision in May to withdraw from the nuclear deal signed with Iran in 2015 has an immediate impact on aviation. Pursuant to the signed deal Iran was allowed to purchase sorely needed new aircraft from Airbus and Boeing, and the US actions threaten the implementation of these contracts. Considering that Iran is probably the only large and undiscovered land of aircraft deliveries for the future (large population, rich country, dramatically underserved in aircraft), the loss of a couple hundred potential aircraft is significant for manufacturers.

The agreement signed in 2015 between most of the world (US, UK, Russia, China, France, Germany and the EU) and Iran was controversial but seen as the best possible deal, trading a halt in Iranian nuclear ambitions for the lifting of sanctions. After the US withdrawal a number of issues come to mind. The US action was not the result of Iran violating the signed agreement but rather a US change of mind and reneging on its own signature and ratification accomplished only a few years previously.

The questions are whether anybody can in the future trust an agreement signed by the US but also what is the logic of trying to renegotiate a concluded and signed agreement. The latter question has an actual precedent in US law specifically related to aviation, namely the famous chapter 11. This part of US law allows airlines to invalidate existing contracts signed years earlier on the grounds that realities have changed, necessitating a new contract.

Over the past few decades the importance of the US as a world leader has been declining. For 5% of the world's population, the US's share of world air traffic is still a respectable 20% but this is way down from having two-thirds of world traffic after World War Two. Similar relationships exist in world GDP (gross domestic product) and almost all other metrics (except maybe for gun ownership and school shootings).

So is the present policy of "America First" instead of the decades-long policy of US as world leader just cementing the reality which has been developing slowly over many years? The diminished role of the US in the world, as one example, is also manifested in the fact that Russia, Turkey, Iran and Saudi Arabia are determining the future of Syria without the input from the US, long the pivotal player in political developments in that region.

Our author at the 20th Global Annual Airfinance Conference in Dublin

> *"What if European governments declared that Airbus will deliver the ordered aircraft to Iran even if it means that the US market might be closed for its products for the time being."*

An interesting aspect of the situation is the international influence of US legal actions on the rest of the world. By sanctioning unilaterally, say, Iran, the US forces others to follow suit. Using Airbus as an example, the US is de facto forbidding Iran from buying its aircraft because of a different approach to the implementation of an existing agreement. This is because of the US content, which can be substantial when considering engines.

There are many interesting legal questions like what percent of US content forces the sanctions (answer – apparently 10% in the case for Iran, harsher than in the case of Cuban sanctions as one example), what is the status of the jointly US-French produced CFM engines and even the option that some Europeans are considering making compliance with US sanctions illegal for European firms. Poor Airbus – it would have to violate some law: either US law by trading with Iran or reneging on the signed deal with Iranian airlines and violating European law. The long-term consequences for the European manufacturer seem obvious: try to rely on non-US contractors, in the case of engines, Rolls-Royce.

But getting back to the Iran situation, it is interesting to consider a provocative, even if not highly likely, scenario. Assume for the moment that all the signatories to the Iran accord said that the agreement is still valid since it was not violated by any party. Hence, the supervision continues (*sans* US) but sanctions are not reimposed, except the US government mandating US firms not to deal with Iran. European, Chinese or Russian firms would continue trading with Iran. The US government could try to prohibit Airbus from delivering the sold aircraft to Iran. What if foreign firms with the encouragement of their governments decided to ignore US demands?

Such a doomsday scenario would be an extreme version of a total outright trade war. It is likely that the world will not be willing to call the US bluff. But what if it did? What if European governments declared that Airbus will deliver the ordered aircraft to Iran even if it means that the US market might be closed for its products for the time being? Not a high probability event and hopefully calmer heads on all sides will prevail from such an escalation. But aviation could under such scenario be the factor which finally hastens the demise of the US empire and status in the world.

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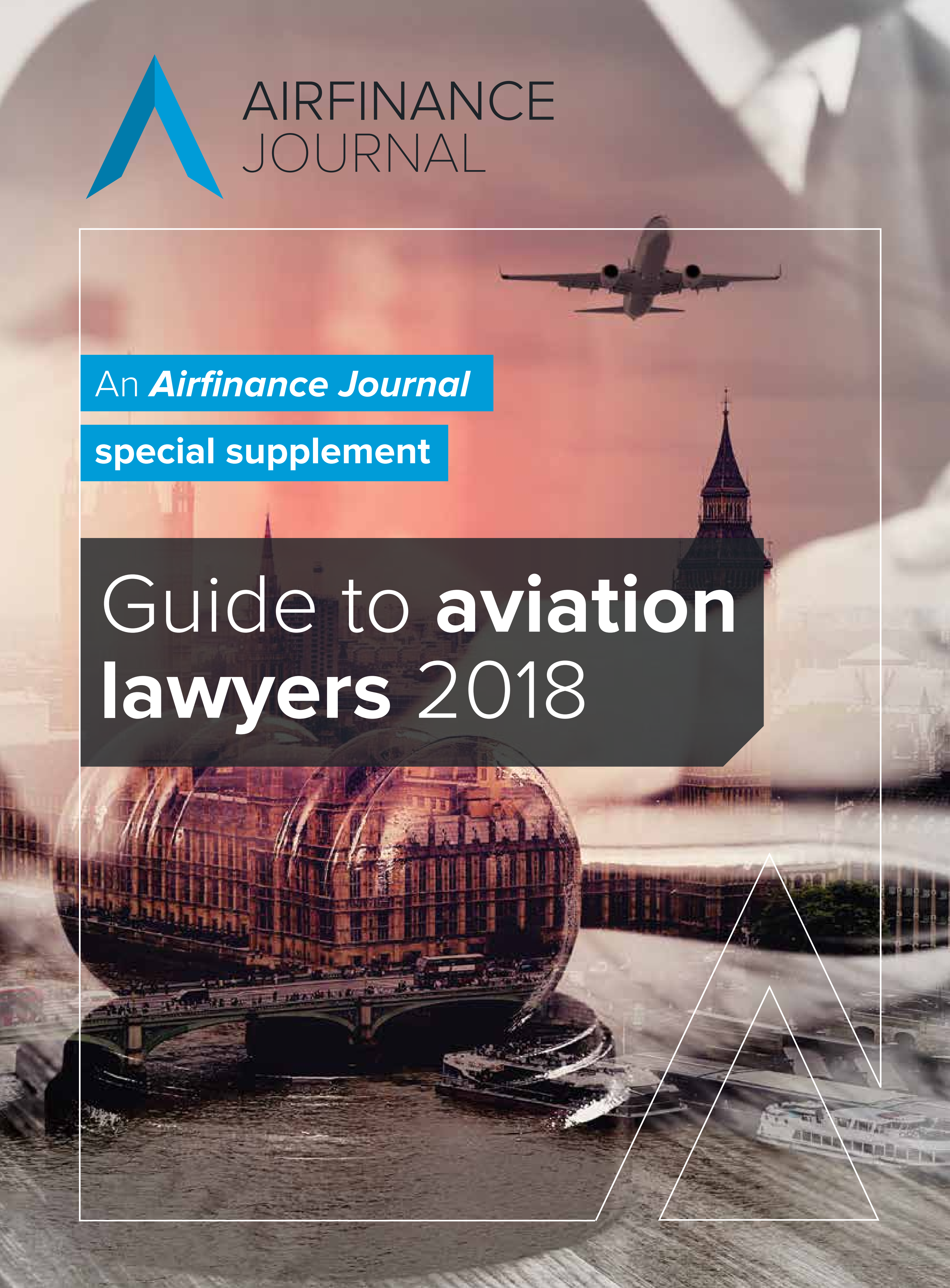


An *Airfinance Journal* special supplement

Guide to **aviation lawyers** 2018

Legal moves 2017-18

A&L Goodbody hires aviation finance partner

A&L Goodbody hired David Berkery as a partner in its New York offices.

Berkery trained and qualified with Irish firm McCann FitzGerald and subsequently worked for Milbank Tweed Hadley & McCloy for more than five years. Most recently, Berkery was an associate in Milbank's New York office.

He will initially work in A&L Goodbody's New York office before moving to the firm's office in Dublin.

Berkery has more than 12 years' experience in Dublin, London and New York. He has advised financial institutions, airlines, aircraft lessors, investment banks and private investors. Berkery regularly advises on the acquisition, leasing, financing and trading of aircraft, vessels and rolling stock. He has a particular focus on asset-backed securitisations (ABS), private placements, enhanced equipment trust certificate offerings, secured and unsecured lending, portfolio sales and industry-specific joint ventures, mergers and acquisitions.

Berkery has worked on deals including: Aergo's METAL 2017-1 ABS; Castlelake's CLAS 2014-1, CLAS 2015-1, CLAS 2016-1 and CLAS 2017-1 ABS; Aldus Trust Leasing Aircraft Securitisation; Latam Airlines $250 million Spare Engine; and Einn Volant Aircraft Leasing, a $2 billion joint venture between GECAS and CDPQ.

Berkery has written an article on the ABS market, which you can read on page 70.

James gets leading role at asb law

Daniel James, formerly of Stevens & Bolton, was appointed as partner and head of aviation at asb law.

James advises clients on commercial transactions, leases and the financing of aircraft and components, as well as on matters involving repossession, insurance claims and regulation.

He will lead asb law's aviation team, which is based primarily out of offices near London Gatwick airport. The team provides support to businesses across the aviation industry, as well as aviation insurers.

Alina Nosek, who stepped down as head of aviation in April, remains an active part of the team.

McCann FitzGerald senior associate moves to New York

Irish law firm McCann FitzGerald appointed Richard Gill as senior associate in its New York office.

Gill is a senior associate in the aviation and asset finance group at McCann FitzGerald, acting for operating lessors and financiers in the aviation industry, including AerCap, Nordic Aviation Capital, Orix Aviation, BOC Aviation and GTLK Europe.

Gill advises on a variety of aviation and asset finance matters, including cross-border aircraft portfolio financings, export credit agency-backed financings, aircraft sale-and-leaseback transactions, capital market transactions (including aircraft securitisations) and debt restructurings. He also has experience drafting and negotiating aircraft leasing, servicing, financing and security agreements, as well as advising clients in connection with the acquisition and disposal of operating leasing companies.

Transportation Partners brings in Airasia legal manager

Nikesh Chahal, Transportation Partners

Transportation Partners hired Nikesh Chahal as a legal counsel in Singapore. The Singapore-based captive lessor of Lion Group states Chahal has worked in both business and commercial aviation, most recently as a legal manager at Airasia in Malaysia.

The Canadian has also lived and worked in India, South Africa, the United Arab Emirates and the United Kingdom.

WFW team decamps to HSF

Rex Rosales, the global head of transport at Watson Farley & Williams (WFW), and three other asset finance partners at the firm left to join rival Herbert Smith Freehills (HSF).

Along with Rosales, Jahnavi Ramachandran will join the firm in London, while Siva Subramaniam and Samuel Kolehmainen will join in Singapore.

Rosales has 30 years' experience as an aviation finance lawyer. He joined WFW in 2010 as part of a defection of five transport lawyers from Reed Smith.

K&L Gates promotes Grieger to counsel

Eiko Grieger, K&L Gates

K&L Gates promoted Eiko Grieger, a member of the firm's banking and asset finance practice group in Tokyo, to the position of counsel.

Grieger's promotion comes after the addition of other new aviation finance lawyers over the past year, including Seattle counsel Misha Kovacevic, Singapore partner James Bradley and counsel Kamil Ahmed, London partners Philip Perrotta and Sidanth Rajagopal and Tokyo counsel Robert Snodgrass.

K&L Gates now has more than 60 attorneys, including 20 partners and counsel, around the globe advising on aircraft finance matters.

Roy joins **REN Legal**

REN Legal appointed Sulagna Roy as counsel, further increasing the strength and depth of the law firm's core asset finance team.

Roy joins from Berwin Leighton Paisner, having previously worked at Debevoise & Plimpton after qualifying at Freshfields Bruckhaus Deringer.

She advises borrowers, financiers, lessors and lessees on a variety of structured aircraft finance transactions, with an emphasis on cross-border aircraft leasing transactions. Roy has particular experience in operating and finance lease transactions, the acquisition and disposal of aircraft, engines and leasing companies, sale-and-leaseback transactions, export credit financings, Japanese operating lease financing, registration and security issues.

Chow moves in at **Mayer Brown**

Hallam Chow, Mayer Brown

Hallam Chow, a former White & Case lawyer, joined Mayer Brown JSM's Beijing office as head of projects, China, in the firm's banking and finance practice.

Airfinance Journal understands Chow will do some aviation finance work, though projects will be his main focus.

"We do see him continuing to do aircraft work but it's fair to say that's not his primary focus," says a source at the firm.

Chow is known for his track record of working on deals for lenders, equity investors and lessees, particularly those in China, Latin America and the Middle East, as well as on deals relating to project financing, acquisition financing, structured financing, aircraft leases, energy and infrastructure, and oil and gas joint ventures.

SGR appoints Fisher to global transport practice

Law practice Smith, Gambrell & Russell hired Shani Smith Fisher as counsel to the firm's global transport practice. She is based in its Los Angeles office.

This comes after the appointment of Josh Gentner as partner in Chicago and Chris Raymond, who joined the firm's Atlanta office as an associate.

Fisher has more than a decade of experience in commercial transactions, representing clients ranging from individuals to large multinational corporations across various industries. With a strong background in commercial aviation finance and leasing, Fisher has represented operating lessors, airlines, investors and financiers in connection with operating and finance leases, structured financings, sale and leasebacks, purchase and sale agreements and related transactions.

With these recent additions, SGR's global transport practice now has more than 20 lawyers globally. In January 2017, the firm opened offices in London and Southampton in the UK led by aviation industry veterans Ben Graham-Evans, Mark Turnbull and Gareth Hawes. The UK practice has since added Sam Chapman and will be bringing in another experienced aviation lawyer in the coming months.

Reed Smith adds White & Case's asset finance team

Reed Smith's finance group in Paris welcomed a team from White & Case, to increase its international finance capabilities.

The team comprises partner Victoria Westcott, who was head of White & Case's asset finance practice in Paris, as well as Florent Rigaud (counsel), Elaine Porter (senior associate) and Abdullahi Mohammed (mid-level associate).

Westcott's practice covers asset finance work on aircraft, shipping finance, equipment and other large assets, in west Europe, central and eastern Europe, Asia, the Middle East and Africa. Her finance practice has a particular focus on transportation and social infrastructure, as well as conventional and renewable energy and oil and gas. Her clients include multilateral financing institutions and commercial banks, industrial sponsors and financial investors.

Westcott's practice ties in with that of current finance partner Fernand Arsanios, "adding additional depth to an existing area of strength for our team".

K&L Gates Rising Star makes partner

Amanda Darling, K&L Gates

Former *Airfinance Journal* Rising Star Amanda Darling has made partner at K&L Gates.

Speaking to *Airfinance Journal* from Charleston, South Carolina, Darling says she will continue to work for Japanese clients on Japanese operating lease and Japanese operating lease with call option transactions. She will also explore opportunities to act for US manufacturer Boeing.

"Primarily, I still continue to support the Japanese market… but perhaps looking to expand to more US-based lessors," says Darling.

"I'm excited and terrified at the same time," she adds, describing her feeling about her promotion. She was previously an associate and foreign legal consultant at K&L Gates. Before this, she was an asset and project finance associate at White & Case.

K&L Gates Singapore brings in Bradley as partner

K&L Gates Singapore hired James Bradley as a partner in the transportation finance practice area.

Bradley joins the US law firm from Norton Rose Fulbright.

Bradley tells *Airfinance Journal* he will work on Japanese operating lease with call options, Japanese operating leases, bulk sales, leasing and financings, private jet matters and restructurings. He will be the main partner in Singapore covering aviation finance.

He will work closely with K&L Gates partner Robert Melson, a leader of the firm's aircraft finance practice, as well as a

James Bradley, K&L Gates

coordinator for its banking and finance practice group.

"James is a key addition to our global aircraft finance and leasing team who brings significant experience to the Asia region, especially in relation to airline restructurings," said Melson.

Tan rejoins **Stephenson Harwood**

Aviation lawyer Ethan Tan rejoined Stephenson Harwood as a senior associate in the firm's Singapore office after leaving in 2015 for a two-year stint at Allen & Overy.

Tan tells *Airfinance Journal* that he will focus on three areas in his new role: private equity firms looking to invest in aviation; structured finance transactions; and deals in the Chinese market.

"Private equity is always looking for places to put their money and aviation has shown in Asia over the past couple of years that it is growing and it is an opportunity for them to make a decent amount of returns with a reasonable amount of risk," says Tan.

He adds that he also expects South-East Asia to generate plenty of work.

"Lion Air and Airasia are two of our biggest clients, so we are always seeing a lot of activity in terms of sale and leaseback and lessors trading among themselves," he says.

Tan rejoined Stephenson Harwood Singapore in August 2017. His previous role was as a senior associate at Allen & Overy Singapore. He worked as an associate at Stephenson Harwood Singapore between 2012 and 2015.

Reed Smith appoints London partner

Law firm Reed Smith brought in Richard Hakes as an aviation and shipping finance partner in London.

Hakes was previously at Reed Smith as an associate in 2007 before moving to Allen & Overy, where he was a senior associate in ship and aviation finance.

Hakes joins Reed Smith's growing asset finance practice, which has recently seen the arrival of aviation and aerospace finance lawyers Liz Evans in New York and Del Smith in northern Virginia, in addition to William Veatch and Catherine Young Hagerty in San Francisco.

Hakes will lead the firm's aviation finance practice in London. He has worked on a variety of transactions, some of which have combined commercial debt together with conventional and Islamic-compliant note issuances.

He also has experience in a wide range of structured and large-scale asset finance transactions, including export credit, commercial debt finance, Islamic finance, tax leasing, operating leasing, asset and portfolio disposals and acquisitions, joint ventures, securitisations, capital markets products and restructurings. He advises parties including banks, funds, arrangers, export credit agencies, ship owners, charterers, lessors, airlines and manufacturers.

Vedder Price hires transportation finance partner

Vedder Price hired Bill Gibson as a partner in its global transportation finance group, working in the law firm's London office for a short period before moving to its new Singapore office.

Gibson will focus on commercial aviation, acting for financiers, lessors and airlines on a range of cross-border leasing and financing transactions.

He was previously a partner in the banking and finance practice in Dentons' London office. He covered a range of financings involving various asset types and equipment portfolios, albeit with a focus on commercial aviation and aircraft and engine manufacturers.

Vedder Price's office in Singapore, which opened in 2016, continues the growth of the firm's global transportation finance group.

And the **winners are**...

Airfinance Journal announces the victors in the sixth year of its legal survey, which recognises the most active law firms in 2017 by region and product type.

Airfinance Journal would like to thank all the law firms which participated in our sixth legal survey this year. For those unfamiliar with the survey, aviation finance deals are counted based on submissions from law firms and *Airfinance Journal*'s Deal Tracker, and are subsequently aggregated to create the winners.

This year *Airfinance Journal* compiled 1,722 deals overall. Using both Deal Tracker and submissions gives us a more accurate picture of the activity of the law firms in 2017 even if they were not able to submit. Of course, the numbers of those which did submit will take into account all of the deals the firm closed last year, thus more accurately reflecting their activity in different aviation finance markets.

The survey revealed several main trends in aviation financing. Last year continued to see the steady growth of emerging markets and a good amount of commercial lending. Although there was a notable drop in financing involving the export credit agencies (ECAs), arrangers created innovative structures that have incorporated less traditional air finance players, such as pension and insurance companies. The Aircraft Finance Insurance Consortium (AFIC) is a good example of using insurance capital to provide alternative financing options to borrowers.

The leasing environment remained extremely competitive, with some lease rate factors on the newer technology aircraft dropping to as low as the 0.5s.

With relatively low fuel prices, carriers and lessors also had ample opportunity to close second-hand aircraft deals and trade portfolios. This is why we introduced the Sale & Purchase category last year, which covers deals that entail a transfer of legal and/or beneficial ownership of an aircraft with no new financing involved.

Although this survey focuses purely on aircraft deals, it is worth noting that many law firms were involved with complex restructurings and aircraft repossessions in 2017. In addition, the significant leasing and legal consolidation occurring in the past few years has kept many firms busy too. *Airfinance Journal* recognises that we do not award firms points based on the size of the deal, but we thought it would be more appropriate to award points based on quantity of deals and activity in a given market.

Methodology

Aviation law firms are invited to submit deals to be included in Deal Tracker. The team then reviews the different deals and selects those eligible for Deal Tracker. This list is then used to select the most active law firms, which are then selected by region and product type.

The legal survey reviews deals from 2017 only. Markets change, as do law firms; however, this was the only way to offer an accurate snapshot of total global legal activity.

Our aim is to be transparent and impartial. All of the deals used to judge the winners are eventually loaded into Deal Tracker and can be reviewed by our readers. In this sense, our survey is unique. *Airfinance Journal* analysts assess each deal to verify them and to avoid double counting.

The benefit of using Deal Tracker is that it can offer a granular presentation of law firm activity by both product type and region. Of course, there are limitations to the survey. *Airfinance Journal* recognises that client confidentiality is an issue for law firms when submitting deals and some firms choose not to submit. As a consequence, the survey does not necessarily represent all of the deals in the market. But it remains the most comprehensive survey of its type, and crucially offers real insight into the aviation market. The survey gives a strong indication of which law firms are most favoured for certain deal types and for certain regions.

Overall rankings

Like last year, the survey records the overall number of deals for each law firm.
A deal, as defined by the survey, represents one mandate and can contain multiple aircraft. In addition to presenting the most active law firms by product and region, the survey also aggregates how law firms have performed to produce an overall ranking.

Law firms secure points based on where they are placed for each region, product and category. A law firm that tops Middle East, for instance, or Operating Lease, receives five points and the second receives four points, and so on.

We would like to extend our appreciation to all the law firms which submitted deals and worked with us this year for the legal survey. We look forward to continuing to work with you.

Clifford Chance comes out on top

The legal survey is split by product type, category and region. In addition to summarising the most active law firm by the number of deals, *Airfinance Journal* have also aggregated the results awarding points to firms based on how they place in each respective region and product type. We have produced overall rankings based on these results.

This year's overall winner is Clifford Chance, scoring 57 points. The firm came top in the Asia-Pacific, Europe, Latin America, Middle East, North America, Export Credit, Commercial Loan and Sale & Purchase categories.

Reflecting on the market over the past year, Clifford Chance partner and global head of asset finance, William Glaister, says: "The aviation finance industry continues to perform well, with high levels of trading of aircraft and operating lease portfolios and continued interest from investors and financiers, as shown by the active ABS [asset-backed securitisation] market and commercial debt financings, as well as by the growth in innovative fund platforms and structured financings.

"Pricing across these products has remained competitive, although the steady increase in jet fuel price and US-led interest rate rises may start to impact certain borrowers and airlines," adds Glaister.

Sustained regulatory and industry change, including the potential Libor transition, Basel IV proposals and IAS changes for lease accounting and financial instruments, will give rise to new challenges and opportunities for market participants."

US-based law firm Milbank came second in the survey, scoring 32 points.

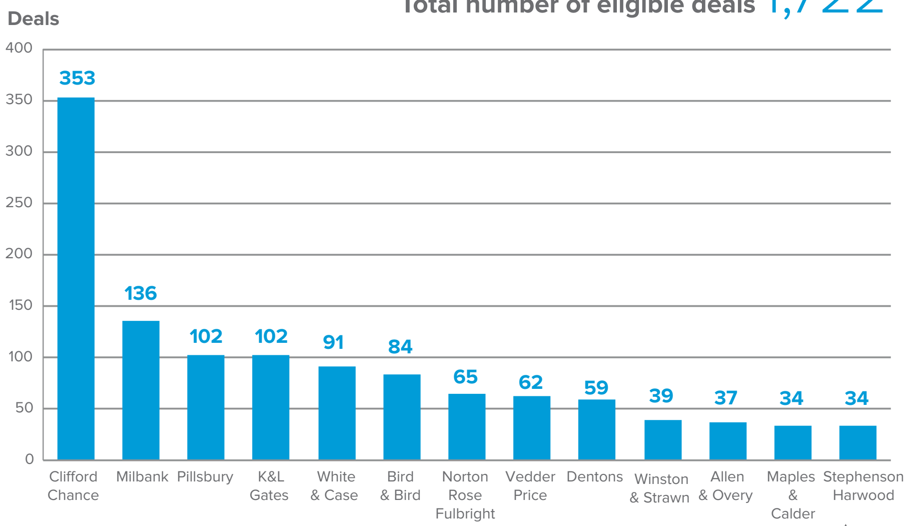
White & Case and Pillsbury were ranked joint third overall, scoring 25 points each. Justin Benson, a partner in White & Case's London office, says: "The aircraft finance market was very robust with continued strong performance from airlines globally (notwithstanding a few exceptions, such as Monarch, Air Berlin and Alitalia) and from operating lessors. There was plentiful liquidity on the debt side from both the banks and capital markets and from equity investors, notably in the Jolco [Japanese operating lease with call option] market, with investors willing to invest in new regions and airlines."

Top 10 law firms by score

Rank	Firm	Score
1	Clifford Chance	57
2	Milbank	32
3	White & Case	25
3=	Pillsbury	25
5	K&L Gates	19
6	Bird & Bird	17
7	Dentons	11
8	Vedder Price	8
8=	Allen & Overy	8
8=	Norton Rose Fulbright	8

Top 10 law firms by number of deals

Total number of eligible deals 1,722



Africa

The African market continued to grow over 2017, albeit at a slower rate than other parts of the world such as Asia-Pacific and the Middle East.

South African banks such as Nedbank and Investec remained active in the region, providing financing for carriers, including Air Cote D'Ivoire and Ethiopian Airlines.

Foreign lenders which have established themselves in Africa, such as Standard Chartered, continued to lend to local carriers, while African lenders which had not been typically active in aviation, such as State Bank of Mauritius, made a splash in the market financing UAE carrier Emirates for the first time.

There continued to be a strong interest for turboprops to serve the untapped regional markets in Africa during the year. For example, pan-African carrier Fastjet secured a letter of intent (LoI) to operate three ATR72-600 aircraft for a period of 10 years. In November, Cemair became a new operator of the Q400, through the acquisition and lease of three new and pre-owned Q400 turboprops.

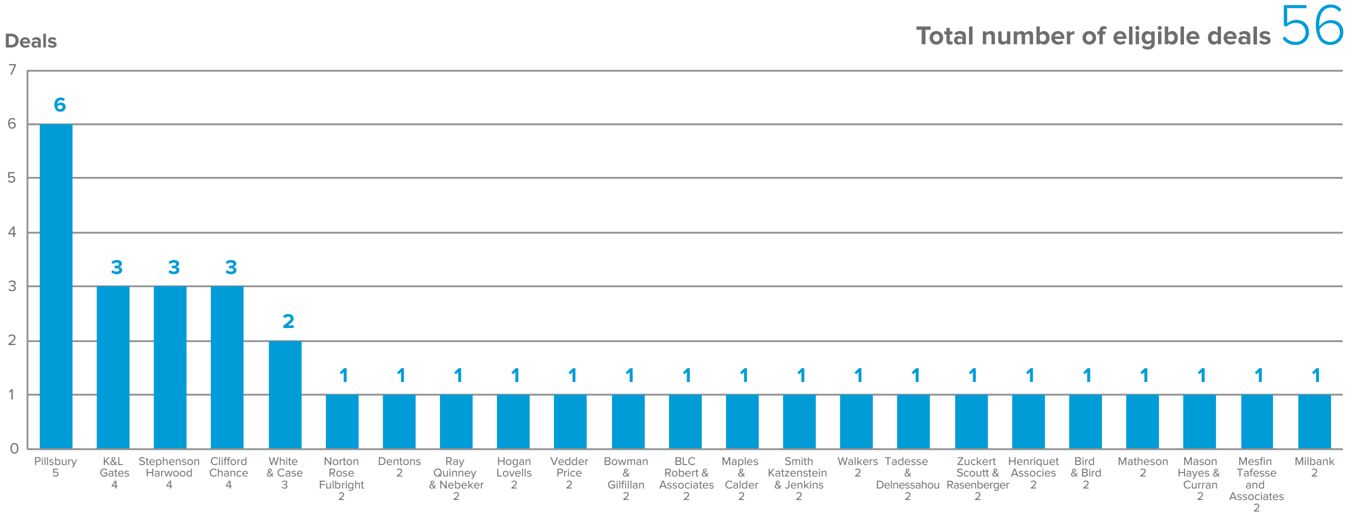
Paul Jebely, a partner at Pillsbury, the firm which came first in this category, says: "In aviation, Africa continues to rise, slowly but surely. We are in the privileged position of representing long-established players like Ethiopian Airlines, Investec and Nedbank, and we are now beginning to see the emergence of new sources of capital, both from Africa and elsewhere, to meet some growing demand (including from emerging carriers).

"In terms of the big picture, the most notable development in the African market for the past year was the new launch of the Single African Air Transport Market [SAATM] by the African Union in an attempt open African skies," adds Jebely.

SAATM looks to increase the continent's global share of the aviation industry. Although the continent accounts for 17% of the world's population, its proportion of air travel passengers hovers between 2% and 4%, according to a paper from International Air Transportation Association (Iata).

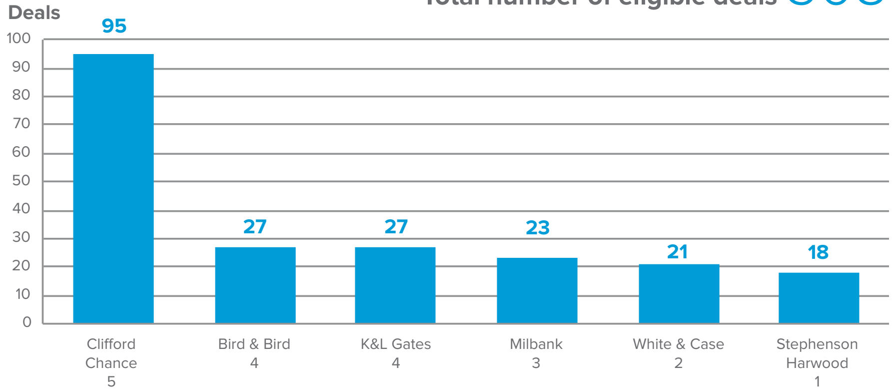
K&L Gates came joint second in this category. Sidanth Rajagopal, partner in K&L Gates' London office, says: "Throughout 2017, our London-based team represented lessors with the placement of aircraft into various LCCs [low-cost carriers] within Africa and we were also engaged to assist financiers who are actively funding lessors on their Africa-related leases. Outbound from Africa, we have worked with a leading South African bank while acting for the borrower in financing aircraft into Russia."

Total number of eligible deals 56



Asia-Pacific

Total number of eligible deals 508



Asia-Pacific continues to be the fastest-growing region in the aviation finance and leasing industry. The fast pace of middle-class growth in the region is driving demand for flights, with some of the larger airlines, such as China Southern Airlines and Indigo Airlines, taking delivery of several aircraft a month.

In 2017, the Jolco market continued to be popular for Asian carriers and lessors, some of which are first-time issuers. One first-time lessor issuer was China-based CMB Leasing, which closed its first Jolco for three Airbus A321s in December. FPG AIM arranged the transaction and FPG acted as equity underwriter. BTMU, CCB Tokyo and NAB provided debt.

Asian lenders continued to increase their presence in the global aviation finance market. Clifford Chance came first in this year's survey, closing 95 deals in the region. Bird & Bird and K&L Gates were joint second, closing 27 deals each in 2017.

Fergus Evans, partner at Clifford Chance, says: "Asia continues to be a source of new equity for the aviation market with continued investor appetite from the PRC [People's Republic of China], Korea and Japan seen on single aircraft deals, portfolio acquisitions and the Jol/Jolco market."

Simon Briscoe, from Clifford Chance Singapore, adds: "With highly liquid capital markets and a very competitive commercial debt market there is still sustained downward pressure on bank pricing."

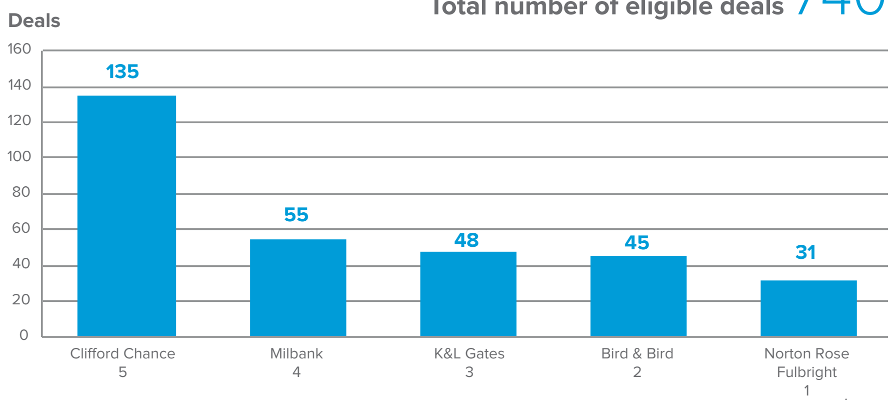
Leo Fattorini, partner in Bird & Bird's Singapore office, says: "Asian airlines continue to add to their fleets to meet ever-increasing passenger demands, and Chinese investment into aircraft leasing continues to drive the market forward. As focus has continued to shift towards Asia, we have been fortunate to work on a significant number of the transactions happening in the region.

"A lot of the Asia lessors are trying to grow in any way they can – some of them, like CALC, have massive orders of their own," adds Fattorini. "Many are acquiring used aircraft in the market from other lessors as well."

Last year also saw a number of joint ventures and equity deals in the Asia-Pacific market, including Tokyo Century's agreement to buy a 20% stake in US lessor Aviation Capital Group (ACG) and the establishment of SDH Wings. SDH Wings, which was established by Standard Chartered and Sichuan Development, aims to have a portfolio of 65 aircraft by 2020, with Pembroke, the leasing arm of Standard Chartered, acting as a servicer.

Europe

Total number of eligible deals 740



Europe remains the most active part of the world for aircraft lessors, with Dublin seen as the global centre for aircraft leasing because of its low corporation tax, extensive network of tax treaties and history of aviation finance expertise.

Throughout 2017, the more established lessors with European bases, such as AerCap and Avolon, repeatedly issued paper on the capital markets to get access to cheap capital.

Last year also saw a number of new entrants on both the airline side and asset manager side. Air France's Joon and IAG's Level marked the arrival of low-cost long-haul airlines in the European market. Airborne Capital, a Dublin-based asset manager, which aims to have $5 billion of assets under management within the next five years, also launched in 2017.

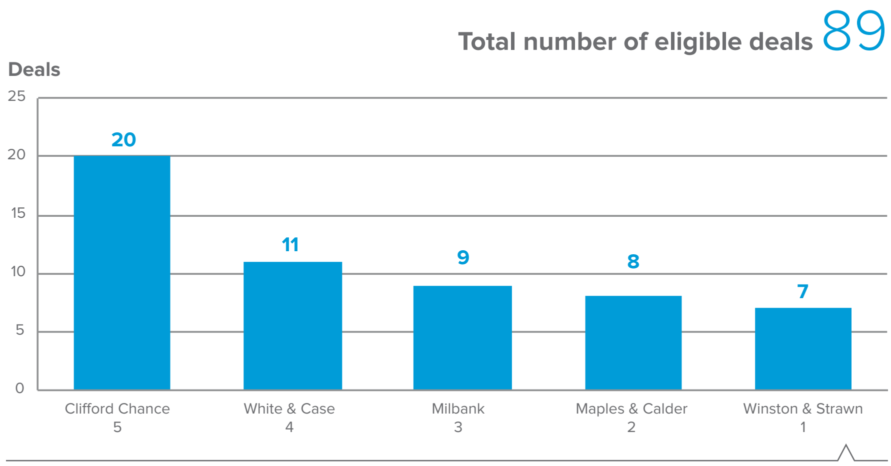
The still-crowded European airline market had a number of insolvencies during 2017, including Air Berlin, Alitalia and Monarch. After filing for insolvency, Air Berlin was divided into two parts and acquired by Lufthansa and Easyjet. The continent's five largest airline groups – Ryanair, Easyjet, Air France KLM, IAG and Lufthansa – look likely to dominate a sector that, in the future, will continue to face disruptions from the development of the long-haul low-cost model, consolidation, increasing competition and Brexit.

Jim Cameron, co-head of Milbank's European transportation finance group, says: "Twenty-seventeen was a busy year for Milbank in terms of European-related deals. The team has worked on many of the key deals in the sector. There has been a large volume of trading of aircraft portfolios involving European-based operating lessors with which we have been involved, as well as M&A activity, including Terra Firma's disposal of AWAS to DAE Capital, on which Milbank advised Terra Firma."

Nick Swinburne, co-head of Milbank's European transportation finance group, adds: "On the debt side, we have seen a number of warehouse and term loan portfolio financings led by the European banks for established Irish-based leasing companies, as well as new platforms.

"Borrowers have increasingly been able to negotiate more flexible covenant packages on bank debt deals, taking advantage of favourable market conditions. We have also seen more unsecured loan and bond issuances, including innovative structures such as German schuldschein [a loan instrument] issuances for operating lessors."

Latin America



"Latin America continues to focus on economic growth, and this free-market approach has redesigned the industry's landscape," says Zarrar Sehgal, partner and global head of transport and logistics at Clifford Chance, the firm that came first in this category. "With economic reforms, new competition and increased consumer demands, the Latin American aviation market is expected to grow at a higher-than-global average annual rate of 6% over the next 20 years, and we believe equity investment in the aircraft finance space will be a new market opportunity."

Out of 89 eligible deals in the region over the year, Clifford Chance worked on 20 of them. White & Case came second, closing 11 Latin American deals and Milbank was third, closing nine.

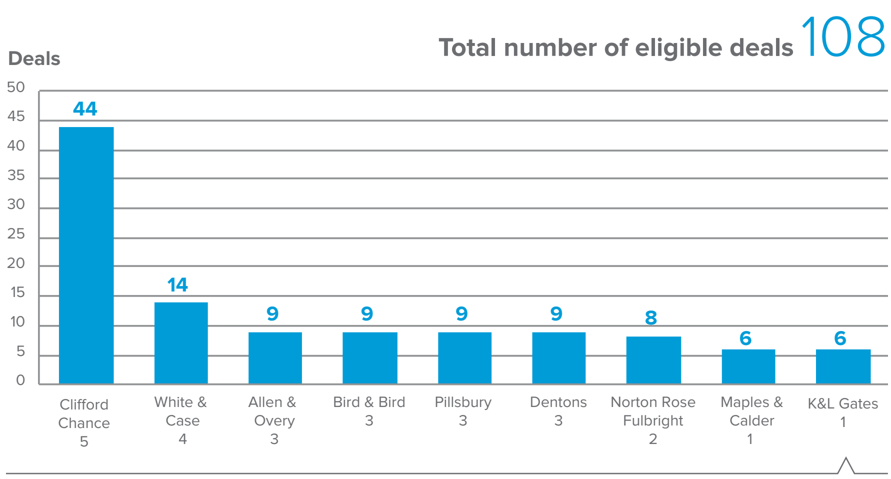
"There have been additional efforts by Latin American carriers to access the US capital markets through private placements and EETCs [enhanced equipment trust certificates], and we are also seeing an increase in the Jolco market by Latin American airlines," adds Sehgal. "In addition, Chinese lessors seem to be targeting the Latin American market as well."

Such Chinese lessors include Ping An Leasing, which last year closed a sale and leaseback deal for four Airbus A321s with Latam.

White & Case advised Colombian airline Avianca to access the Jolco market to finance a series of aircraft, including two A320neos and one Boeing 787-8 aircraft, each registered with the US Federal Aviation Administration. The firm developed an innovative head lease/sublease structure, which achieved desired regulatory and tax treatment in each of Japan, Colombia and the US.

Chris Hansen, who heads up White & Case's Latin American aircraft finance practice, says: "In Latin America in 2017 we saw many airlines in the region begin to convert their large new aircraft orders from earlier in the decade to deliveries. In recent years, there had been some concern about whether the commercial markets would be able to close entirely the potential void left by the absence of US Ex-Im and the European ECAs to provide financing for Latin American airlines."

Middle East



The Middle Eastern airlines experienced many headwinds in 2017. The big three Middle Eastern carriers – Etihad Airways, Emirates Airline and Qatar Airways – had a challenging year in 2017 because of a number of factors, including increasing competition, overcapacity, a rise in fuel price and political obstacles.

Dubai-based Emirates noted in November that fuel price accounted for 26% of its operating costs. However, the airline still managed to post a profit of Dh2.8 billion ($760 million) for the financial year ending 31 March 2018, a 24% increase from 2016/17.

Emirates was not the only Middle Eastern carrier which had to rethink its strategy. After posting an eye-watering loss of $1.8 billion for the year 2016, Etihad had to review its equity partnerships and sold its stake in Darwin Airline, one of its equity partners. It also had to manage the insolvencies of equity partners Air Berlin and Alitalia, as well as a $1 billion write down on its fleet.

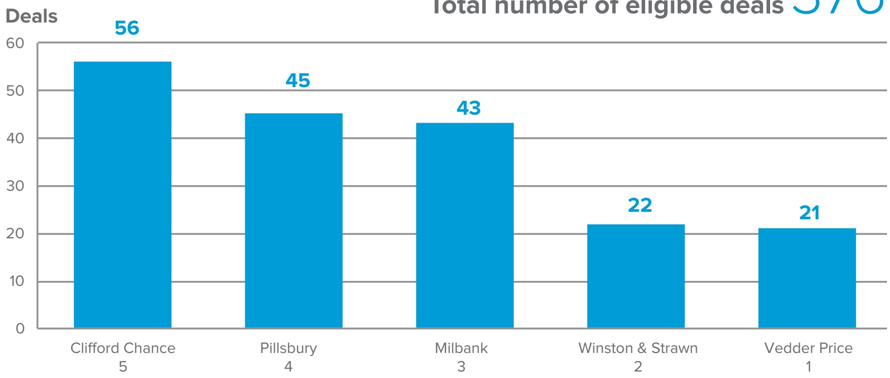
Qatar Airways faced its own difficulties after Saudi Arabia, Bahrain, Egypt, the United Arab Emirates, Yemen, Libya and the Maldives all severed diplomatic ties with Qatar in June 2017. They accused Qatar of supporting Islamist groups, including some backed by Iran. Despite proving challenging for the carrier, it has not defaulted on its lease payments.

With their diversified portfolios, the Middle Eastern lessors had an easier year than the airlines in the region. Dubai-based DAE Capital became a major leasing player after acquiring Irish lessor AWAS in August. Like AerCap in its 2014 acquisition of ILFC, DAE acquired a larger rival, tripling its fleet to 332 aircraft. The deal catapulted DAE from the 24th-largest lessor by aircraft count to the seventh, sandwiched between BBAM (395 aircraft) and BOC Aviation (327 aircraft). Since then, the lessor has been public about wanting to make a substantially large narrowbody order or acquire another leasing business to fund further growth.

Last year also saw an emerging demand from Middle Eastern investors for used aircraft. In December, Peregrine Aviation Topco – a company managed by NCB Capital, a bank based in Saudi Arabia – acquired an $800 million portfolio of 21 aircraft from AerCap. The portfolio consists of a mix of widebody and narrowbody aircraft. As part of the sale, AerCap provides lease management services to Peregrine and will retain an equity interest in the entity.

North America

Total number of eligible deals 376



North America continued to dominate in the capital markets category, making up 21.8% of deals in 2017. The North American airlines regularly tapped the capital markets to fund their fleets, with American Airlines being the main issuer. American carriers issued five out of six of the EETCs that came to market in 2017. The overall EETC market was not quite high as some previous years, perhaps because of the attractiveness of the sale-and-leaseback market.

"We have seen several market changes and trends affecting the industry in North America and Latin America. After over a decade of restructurings and mergers, North America is growing steadily, and Clifford Chance has seen new entrants into the lessor market, pension funds and insurance companies as new players and an increase in ABS, EETC, acquisition financings for lessor M&A transactions and lessor-investor joint-venture deals," says Sehgal.

He adds: "In particular, we are seeing more Chinese, Korean and Japanese lenders enter the North American market, and we are seeing a growing number of financings by way of private placements. Private placements can be a lower cost alternative to larger capital markets transactions, with similar pricing benefits as they attract the same kinds of investors."

Clifford Chance came first in this region, acting on 56 deals out of the 376 North American deals overall. Pillsbury came second with 45 deals and Milbank was a close third with 43 deals.

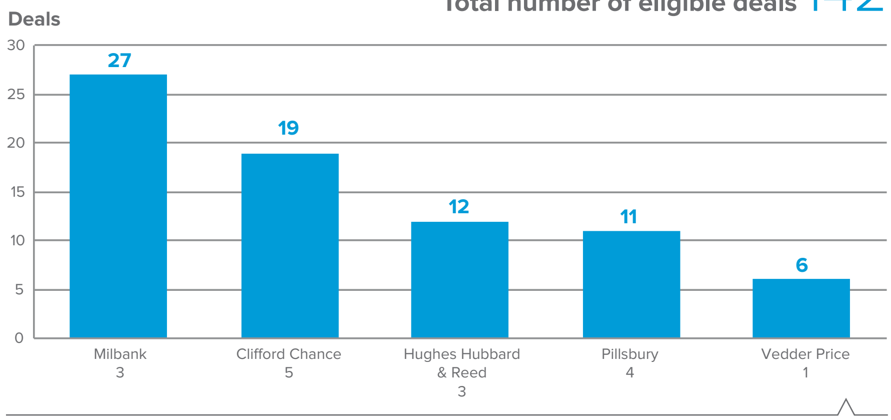
Mark Lessard, partner at Pillsbury, says: "Unsecured funding has remained attractive for the highest-rated lessors (though some of them have recently begun to diversify their capital structures with a measure of secured funding). As in prior years, these factors have made it difficult for many banks to compete for lessor business on a balance sheet basis, pushing margins to lower and lower levels.

"Private equity investors are taking advantage of the available debt funding and continuing to show significant appetite for mid-life assets. Some of them are buying into E-note issuances, while others are looking to set up sidecars, funds or joint ventures with their leasing company partners, who in turn have been taking advantage of the opportunity to derisk and to increase their fee-based income. Warehouse facility terms remain accommodating, though certain financial covenants appear to be tightening slightly when it comes to non-recourse transactions."

He adds: "US airline credits continue to shine for the most part, striking excellent terms in the sale-leaseback markets which, in contrast to prior years, has taken up a lot of the aircraft collateral that might have typically been financed with mortgage debt. This last year also saw the first US Jolco structure, which was undertaken by CA-CIB [Crédit Agricole Corporate and Investment Bank] and American."

Capital Markets

Total number of eligible deals 142



In 2017, the volume and demand of the capital markets in aviation was high, resulting in attractive pricing. Capital market deals accounted for 26% of the financing for all Boeing deliveries to December, according to the US manufacturer's latest Current Aircraft Financing Market Outlook.

Taking advantage of record low coupons, airlines and leasing companies had raised more than $61 billion in the capital markets in 2017.

The aircraft ABS market had its most active year post-financial crisis, with 14 deals closing in 2017. Capital markets sources anticipate there being a similar level of activity this year, with a mixture of existing and first-time issuers. ABS markets are attractive to aircraft lessors for several reasons. Some use the product as an equity sale of assets, where they retain the right to manage the assets as a servicer but sell the equity to new investors. Other lessors use the structure for portfolio refinancing, where the lessor retains the equity in the aircraft. The E-note market continues to develop with new investors and a better understanding of the potential and limits of the product.

The enhanced equipment trust certificate (EETC) market had an increase in non-US investors participating, as well as ongoing demand from several airlines. EETCs for airlines outside the US price much wider than US airline EETCs. Often, non-US airlines can access cheaper financing than EETCs through Jolcos, tax leases, sale and leasebacks and bank loans.

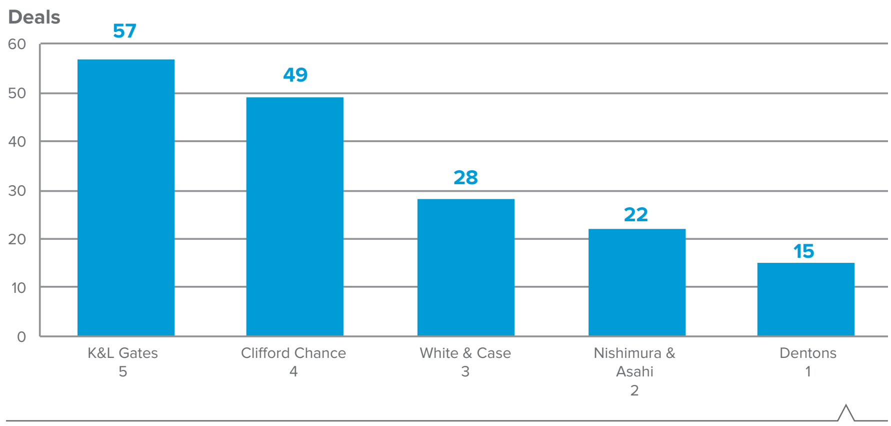
The unsecured bond market has also remained a popular financing source for lessors and airlines. The majority of the top 10 lessors took advantage of the low interest rate environment and locked in low-priced unsecured funding in 2017. Deals were used to fund aircraft acquisitions, for general corporate purposes and to help acquire other leasing companies in M&A transactions.

Milbank came first in this category, helping to execute 27 deals over the course of 2017.

Drew Fine, global head of Milbank's transportation finance group, says: "Milbank was particularly strong in capital markets issuances in 2017. There were a record 14 aircraft ABS issuances in 2017 and Milbank had a leading role on 13 of these deals. Likewise, Milbank had a dominant position in EETC offerings and other capital markets issuances. It's hard to imagine there ever being a better aviation capital markets year than 2017, but 2018 has continued at the same pace that 2017 left off."

Structured Lease

Total number of eligible deals 125



Some 125 structured lease deals closed in 2017, comprising 13.77% of all the deals accounted for during the year.

The Jolco market continued to be a popular source of financing among carriers, with a growth of Japanese equity coming into aviation in the search for higher yield. Jolco investors used only to look at new aircraft deliveries with top-tier credits; now the market has matured and is starting to see deals close for used assets and weaker-credit carriers in new jurisdictions.

Established Jolco players such as Air France, Lufthansa, Emirates and Flydubai continued to close transactions for new-technology aircraft, such as 787 and 737 Max models. New entrants into this market in 2017 included American Airlines, Nordic Aviation Capital and CMIG.

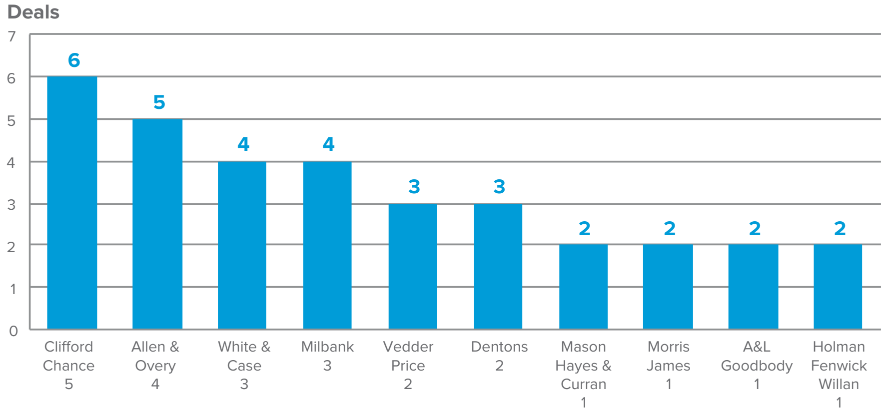
The American Airlines transaction, which closed in March 2017 to help fund one A321, overcame a significant hurdle. It was the first Jolco to close for a US carrier. The viability of US-Japan Jolcos rests on an ambiguous clause in the Protocol to the US-Japan Income Tax Treaty signed more than a decade ago, in November 2003, meaning that deals have historically been difficult to close. The tax lease remained popular with airlines and was sometimes used in conjunction with other structures. One example of this was Turkish Airlines, which in December closed a French tax lease combined with an AFIC product to fund two 777 freighters.

K&L Gates came first in this category, working on 57 deals over the course of 2017. Clifford Chance came second with 49 deals and White & Case third with 28 deals.

Sebastian Smith, partner in K&L Gates' Tokyo office, says: "The global appetite for aircraft financing and leasing has led to a corresponding interest by airlines, lessors and banks for new financing products – by way of example we have seen new lessee entrants into the Jolco market as well as a vibrant mezzanine lending in Jolco structures by our bank and non-bank financial institution clients. As a firm, K&L Gates continues to be highly invested in this market."

Export Credit

Total number of eligible deals 27



In 2017, the US and European export credit agencies (ECAs) remained limited in the work they could do because of political obstacles. To compensate for this, ECAs had to think outside the box when closing deals, and look at more innovative ways of financing aircraft.

UK Export Finance (UKEF) closed one of the most innovative transactions of 2017, guaranteeing financing for two Boeing 787-8 aircraft operating with LOT Polish Airlines. The transaction stood out because it was the first time UKEF had supported financing for Boeing aircraft, and not just the engines, in more than 20 years. UKEF could provide support because the engines installed on the aircraft were manufactured by Rolls-Royce, enabling the transaction to be categorised as a UK export.

Similarly, Italian export credit agency SACE managed to finance aircraft through non-typical means when it provided financing for three 737-800s. SACE would not typically guarantee financing on US-made Boeing aircraft, but was able to do so because of "several eligible Italian exports" involved in the deal, including Italian-made seats.

In the absence of traditional ECA financing being available, the AFIC product emerged.

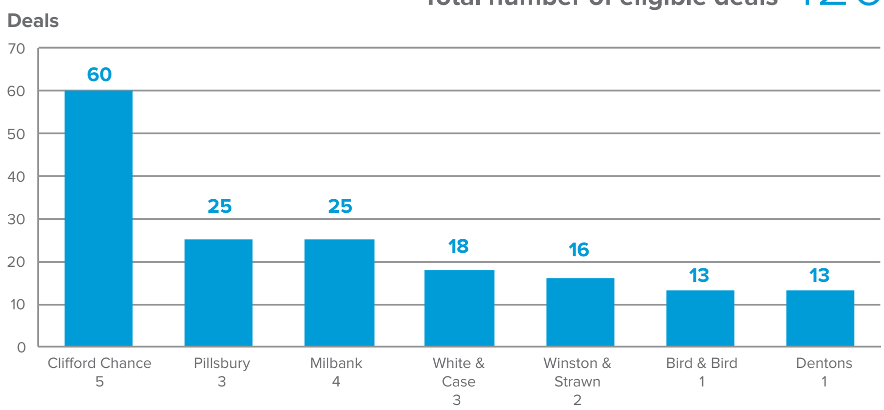
Mike Smith, an aircraft finance partner in White & Case's New York office, comments: "We are seeing significant interest in the AFIC product by a number of airlines, lessors and financiers. It is proving to be a flexible platform and has already been combined in various transactions with junior loans, Jolco, French tax leases and other features."

He adds: "A capital markets offering of AFIC-insured notes will happen in the near to medium term. The AFIC structure can also be adapted for other kinds of capital-intensive needs (since, among other things, AFIC is not constrained by WTO requirements). Once again, the global aircraft finance community is at the forefront of innovation."

The market also saw a number of ECA combinations with other financial structures. In September, Norwegian Air Shuttle closed the first UKEF-guaranteed debt financing for a Boeing aircraft in combination with a Jolco. The deal, which financed one 787-9, was also the first Jolco financing closed by Norwegian.

Sales & Purchases

Total number of eligible deals 420



The sale and purchase market was active in 2017, with *Airfinance Journal* compiling 420 deals that closed over the course of the year, making up 4.1% of the total number of deals aggregated for 2017.

The number of sale and purchase deals in 2017 was significantly higher than 2016's figure of 348. A high number of lease novations, coupled with strong balance sheets of airlines and lessors may be behind this increase. Many of the deals submitted were for second-hand or regional aircraft that are more affordable for airlines or lessors to pay for in cash. It was also common to see lease novations turn into sale and purchase transactions, because many airlines and lessors would buy the aircraft when it got to the end of its lease.

Clifford Chance came first in this category, acting on 60 deals in 2017. Pillsbury and Milbank were joint second, with 25 deals each.

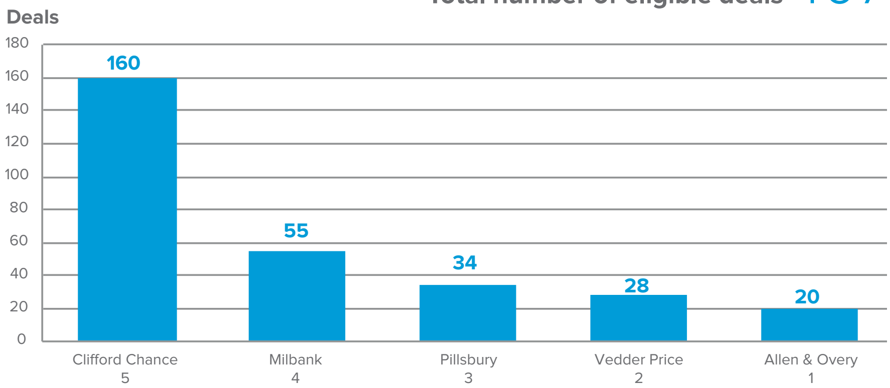
Jim Pascale, partner in Milbank's New York office, says: "The demand for aircraft equity and residual risk continued to strengthen as we witnessed significant bidding wars for all aircraft portfolios and leasing platforms on the market.

"Notably, the hopeful buyers were comprised of not only the usual aviation investors and existing lessors but a new and growing group of traditional private equity and investment funds looking to expand their aviation investment portfolios. The strength of the demand across the capital structure has clearly made it possible for lessors to efficiently renew their fleets through larger portfolio sales."

Paul Jebely, partner at Pillsbury, says: "We continued to see significant secondary market trading of single assets and small portfolios over the past year. Many lessors also continued to pursue fleet growth via pre-delivery sale-and-lease-back transactions – as opposed to placing direct orders. Though not aircraft trading in the strict sense, we expect to see continued M&A activity among lessors."

Commercial Loan

Total number of eligible deals 407



The commercial loan market accounted for 23.6% of the eligible deals submitted in 2017. However, with the rise of the capital markets and strong corporate balance sheets that are increasingly able to fund aircraft acquisitions in cash, this number has dropped substantially from last year, where these products accounted for 35.79% of the total deals submitted.

In 2017, the low interest rate environment and abundance of liquidity available meant bank financings were popular with airlines globally. This popularity is down to banks becoming active in aviation and hence pricing for bank funding become more competitive. This competition has had a negative effect on banks' margins, which have been compressed, meaning that some banks are more ready to look at financing weaker credits.

There is concern among some bankers that the increasing activity of the ABS market is causing a softening of banking covenants. Along with this, deals are getting more and more borrower-friendly because the banks and the issuers have increasing confidence in ABS takeouts, which is helping to drive the tightening of spreads and weakening of terms.

Last year saw the emergence of Aircraft Finance Insurance Consortium (AFIC), a product made in lieu of the export credit agencies, which have not been very active at financing aircraft because of political obstacles. It was a successful first year, with the Boeing aircraft product closing 16 deals amounting to more than $1.5 billion in assets.

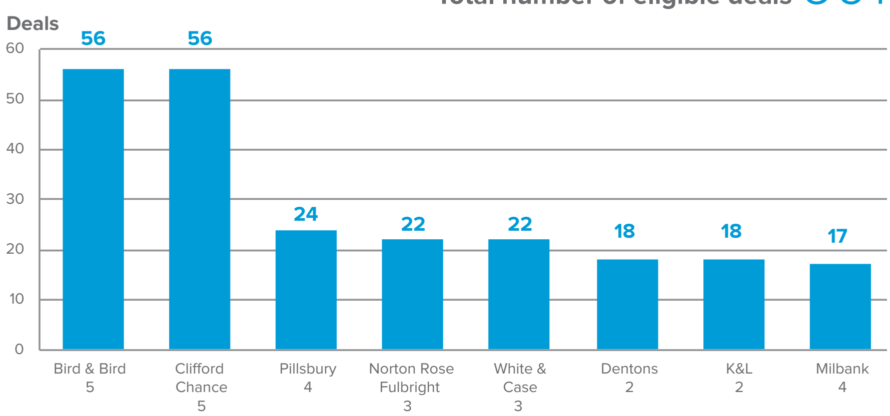
Although some market participants are sceptical it will have staying power, Airbus is developing a competing product called Balthazar, which is due to hit the market this autumn, and indicates there is a significant demand from the insurance companies to guarantee aircraft transactions.

Helfried Schwarz, partner in Milbank's New York office, says: "Notwithstanding the ongoing pressure on margins, as well as regulatory challenges faced by traditional lenders, the commercial loan market remained resilient across all products and asset classes."

He adds: "In 2017, Milbank was involved in both secured and unsecured term loan and revolving credit facilities for commercial and business jets, as well as engines and spare parts. The year was noteworthy for the introduction of a non-payment insurance product for new Boeing aircraft by the Aircraft Finance Insurance Consortium led by Marsh, in part to replace the lack of support from US Ex-Im."

Operating Leases

Total number of eligible deals 601



Operating leasing continues to be one most popular financing solutions in the market, providing for about 40% of all aircraft deliveries. This figure is expected to rise to 50% within the next decade.

As the leasing market gets more competitive, short leases on newer assets has become more commonplace. However, there were some deals where tenors were longer than is typically expected for those assets. For example, DAE Capital closed a sale and leaseback with Gulf Air to lease five Boeing 787s for 15 years – longer than the typical new aircraft lease of 12 years.

With low interest rates and aviation being a higher-yielding sector relative to others, a slew of new leasing companies have entered the market, mainly from China. However, with the US Federal Reserve looking to hike rates four times this year, many market observers believe the influx of new lessors will slow down.

"There continues to be strong demand for operating leasing globally, and particularly in Asia," says Jim Bell, a partner at Bird & Bird, the firm which came first in this category.

"It's not all been good news for operating lessors in the past 12 months though – there were a couple of notable insolvencies but luckily repossessions have been relatively painless, and most aircraft were quickly placed elsewhere," he adds.

Some of the firm's highlights of 2017 include advising Airasia on the sale and leaseback of 10 Airbus A320neo aircraft from GECAS, including the first Neo to enter the Malaysian market and the first to come off the Airbus final assembly line in Tianjin.

Bird & Bird also advised Air Berlin and the insolvency practitioner in the novation or termination of many aircraft leases with numerous operating lessors. The firm also advised Virgin Atlantic on an emergency operating lease where the airline had quickly to take delivery of four former Air Berlin A330-200s because its incoming 787 deliveries had issues with their Trent 1000 engines.

Rising **stars**

Airfinance Journal recognises eight of the most promising legal associates for 2017.

Brendan McCarthy

Senior associate, Allen & Overy

London

If you're not offering insight, or not adding your own experience, you're not offering value to the transaction.

Brendan McCarthy, Allen & Overy

Although Dublin-native Brendan McCarthy grew up in a city famous for its vibrant aircraft leasing sector, it was not until he landed a job in law firm McCann FitzGerald and spent time as a trainee in its aviation practice that he began to appreciate how enjoyable working in the industry could be.

"I think it's one of Ireland's best kept secrets in many ways, in that it's not an industry that people have huge knowledge of unless they're working in it, so it's kind of fortuitous that I ended up working here," he says.

Moving to London to work for Allen & Overy in 2013, McCarthy has been involved in many high-profile transactions, such as advising UKEF, US-Exim and NEXI on the ECA-backed financing of two Boeing 787 aircraft for Lot Airlines – a landmark deal because it was the first UKEF-supported financing for Boeing aircraft.

"It can be challenging," says McCarthy, describing the workload. "Different times of the year bring different sorts of pressure… but I think it's about knowing what your limits are and what you can and can't do, and the time you have available to you."

A major trend he is seeing is a tendency towards bigger lessor portfolio transactions.

"The deals are for bigger batches of aircraft, and that brings challenges in terms of the scale and complexity of those deals," he says. "Twenty to 30 aircraft going to different jurisdictions can be difficult to manage and for people to read into and understand."

Lawyers need to get their priorities straight to ensure such transactions close.

"You can go into these things with a big bang, throwing pieces of paper round the place and doing things for people, then get two weeks in and think, 'I should have thought of this and thought about that'," says McCarthy.

"You need to step back and think what the purpose and the big picture is, and how do I get everyone to buy into how it's going to be done.

When he gets a break from work, McCarthy likes taking his miniature schnauzer for walks in London's Victoria Park or on Hampstead Heath, as well as catching the latest movies at the cinema – although he says 1997's Air Force One starring Harrison Ford remains a favourite aviation-related film.

Christopher Healy

Senior associate, Bird & Bird

Hong Kong

There was so much going on in Asia, compared to in the UK, with Asian aviation on the up.

Christopher Healy, Senior associate, Bird & Bird

The son of a Chinese mother and British father, Christopher Healy left his native Hong Kong in 1997, the year of the handover of sovereignty to China, to study geography at University College London. He returned in 2011 after the economic downturn resulting from the 2007-08 global financial crisis drove him out of England to seek greener pastures.

"I had been in the UK for the better part of 12 years and the recession was not particularly kind to London," Healy tells *Airfinance Journal*.

"There was so much going on in Asia, compared to in the UK, with Asian aviation on the up," he adds.

Having trained at London-based law firm Devonshires between 2005 and 2007, Healy joined Bird & Bird in London in 2007. He stayed until December 2010, before moving to Hong Kong as an associate with Richards Butler (in association with Reed Smith) in 2011. In 2014, he joined Clyde and Co in Hong Kong, before returning to Bird & Bird in the firm's Hong Kong office in December 2015.

Healy has acted for many major airlines – including Airasia and Indigo – and even completed his own stint in the legal team of Virgin Atlantic Airways during the summer and autumn of 2010, although he quickly found that in-house legal work at airlines can present some unusual situations.

"There was a time I was called up by a policeman somewhere in Canada because one of the flights had been forced to land there because of a disruptive passenger," he says.

Working for airlines at major law firms also provides excitements of its own. Late last year, his firm was acting for two of its airline clients on sale and leaseback transactions and received notice that three new Airbus aircraft were scheduled to be delivered on the same day.

"The unusual aspect of this was that one aircraft was scheduled to deliver at each of the Airbus plants at Toulouse, Hamburg and Tianjin," says Healy.

"But with more than a bit of teamwork, and our extensive experience with assisting airlines with new aircraft deliveries, we managed to get everything in place for the deliveries to happen, although one delivery eventually slipped due to technical reasons and happened a couple of days later."

Airasia then invited Healy to the Tianjin delivery ceremony, as it was the first Airbus A320neo to be delivered at Airbus's China facility and Airasia's first delivery out of Tianjin for "a number of years".

He says: "Being able to take part in the delivery and – literally – to touch the metal more than made up for the loss of the delivery location hat-trick."

Richard Evans

Senior associate, Clifford Chance
Singapore

> *It's hard to spend all your day working in and around a particular industry without learning a reasonable amount about it.*

Richard Evans, Clifford Chance

Interview time is hard to grab with *Airfinance Journal*'s Rising Stars. Clifford Chance's Richard Evans was stuck on another call when *Airfinance Journal* telephoned his office for this interview and had to be rung back half-an-hour later.

"It's a bit hectic at the moment to be honest," the Londoner says on picking up the phone.

Evans studied law at Oxford University before joining Clifford Chance eight years ago. He moved to Singapore two years ago because his partner was studying an MBA there, and the pair decided to stay a while longer. They plan to relocate back to London in November.

"I think there will probably be more focus on the European side [when I move back]. Even before moving out to Asia I had a reasonable focus on the Asian side, particularly the banking and capital markets deals, and that will probably remain when I go back to Europe," he says.

When Evans joined Clifford Chance, he expected to end up in litigation, but after a six-month stint at Airbus in Toulouse, aviation began to grow on him.

"It's hard to spend all your day working in and around a particular industry without learning a reasonable amount about it, and as you learn about it, it becomes more interesting, so it's self-fulfilling that you become interested in – not necessarily the technical side of it – but the industry element," he says.

Once Evans moves back to England, he plans to stay there for the "mid-term".

"[I've got] no particular plan to move elsewhere anymore, but never say never because I'm someone who quite likes living in different places. Working in asset finance does give you that opportunity to move around relatively easily for a lawyer," he says.

Evans says one interesting transaction he has worked on recently was a bank syndicate financing for SIA Group subsidiary Scoot.

"It was Scoot's first financing and there were a few quirks to the structure and educational round for the parties," he says.

When he does manage to catch a break from work, Evans enjoys travelling and rugby.

"I'm quite into sport, a big rugby fan, which is a bit harder to find out in Singapore," he says. "It's not much fun watching matches at three in the morning."

Ethan Tan

Senior associate, Stephenson Harwood
Singapore

> *I love finance and the adrenaline of doing real-life transactions.*

Ethan Tan, Stephenson Harwood

When Ethan Tan is not busy closing aviation finance transactions, he loves spending time on the ocean.

"In Singapore, we still have conscription, so I'm actually from the navy," he says, referring to the country's two-year mandatory national service.

"I just love being out on the sea – going out and thinking and reflecting on life," adds Tan.

Such downtime is surely needed: Tan estimates his team has received about 10 new instructions over the past few weeks alone.

Tan, who admits he was attracted to law by reading too many novels by legal thriller writer John Grisham as a teenager, started off his career in the public sector working for Singapore's Supreme Court, but always wanted to go into private-sector transactional work.

"You don't even get to apply for the Supreme Court role. The government simply calls you up – and literally no one says no to them, so I did a two-year contract with them," he says.

"Once I finished that and got that on my CV, I was quite clear I wanted to get back into the private sector. I love finance and the adrenaline of doing real-life transactions."

Tan applied directly for the aviation team when he joined Stephenson Harwood in 2012.

"At the risk of sounding freaky, I think for some reason there's always been an affinity between myself and aviation. When I was in school, I did an internship with one of the biggest banks in Singapore – OCBC – and as part of that project I was posted to the aviation finance department.

"That really got me interested in the industry and I found out it's a very big growth area, especially out here in Asia. There seems to be a lot of exciting developments of airlines growing their fleets."

Tan advised Indonesian carrier Lion Air on the then largest-ever aircraft order for 234 Airbus aircraft worth $24 billion at list prices, as well as advising Lion's leasing arm, Transportation Partners, on its $1.1 billion Ex-Im Bank financing of a fleet of Boeing 737-900ER aircraft.

"Lion Air has expanded a lot over the last 10 years, and they're still expanding very aggressively," he says.

Tan adds that doing deals in a developing country jurisdiction such as Indonesia involves a lot of "behind-the-scenes" challenges.

"Regulators often don't even have things in black and white in terms of their process and procedures, so a lot of things are figuring things out as you go along and getting them comfortable with things," he says.

"As lawyers we just need to be very flexible and nimble and need to anticipate these things coming up and put in place contingency plans to do it."

As well as lion-branded airlines, Tan also has an interest in the real thing.

"Sometimes, if I can afford to, I'll get out to places like Botswana and go out camping in the wild and have animals walking around you," he says. "I've literally followed lions around on foot."

Yvonne McWeeney

Senior associate, Matheson
Dublin

From day one, when I saw the transactions and the fast paced nature of it, I knew it was something that interested me.

Yvonne McWeeney, Matheson

Besides aircraft finance, Yvonne McWeeney has another major passion: horses.

"I've been involved in horses from a very young age. Our family attends lots of horse shows around the country every year. The most significant is the Royal Dublin Society Horse show in August; I go there with my father," she says.

Fortunately for her workload, the family steeds reside far north of Dublin at the family home in County Leitrim, leaving her free to focus on the numerous high-profile aircraft financing transactions crossing her desk.

One of those deals was advising BBAM on the issuance of $1.21 billion secured notes and acting as Irish counsel in connection with the acquisition of a portfolio of 48 aircraft with leases attached – a deal which scooped *Airfinance Journal*'s North America Deal of the Year 2015.

"That was the largest ABS [asset-backed security] for over a decade. With 48 aircraft backing the notes and 48 Irish companies involved in the structure, the Irish element was quite significant in that transaction. The Matheson team were involved all through the structure in terms of the initial structuring, funding, and had a significant involvement in the novation of the aircraft as they moved into the ABS," she says.

"While it is difficult to choose one transaction as my favourite, I think that was a milestone for me in terms of the volume."

Such a large transaction can entail years of work for a law firm.

"We are still very much involved [in that deal] on the Irish law side. That transaction really shows the strength and depth of how an Irish counsel can support a deal and support a venture throughout its lifetime as the deal goes through its natural life," says McWeeney.

"The same can be said for the support and advice we provide to businesses establishing leasing platforms in Ireland; it is very rewarding to see those businesses progress and develop."

McWeeney studied a combined business and legal studies bachelor degree at University College Dublin and had been interested in business all the way through school.

When she finished university, she joined Matheson's summer internship programme in 2006 in its then banking department. She then worked within the aviation group for three years before starting her traineeship with Matheson and becoming a solicitor.

"From day one, when I saw the transactions and the fast paced nature of it, I knew it was something that interested me. From the moment I was involved in my first deal, I knew this was something that would really give me job satisfaction, so knew it was something that would always keep me interested. I've been bitten by the aviation bug."

Rhian Clayton-Payne

Senior associate, HFW
Singapore

Singapore-based Rhian Clayton-Payne gained experience in the Chinese market early in her legal career, though not in aviation finance. During a secondment to the Guangzhou office of British firm Wragge & Co, she worked on intellectual property cases for vacuum cleaner manufacturer Dyson.

"I used to get on the train at about 5am in the dark at Hung Hom and get the train over the border," says Clayton-Payne, referring to the Kowloon-Guangzhou Through Train that takes about two hours. She based herself in Hong Kong over the weekend with her partner and commuted into Guangzhou for the week.

Now, as an aviation finance lawyer, Clayton-Payne often works on Chinese free-trade zone (FTZ) transactions.

"Probably one of the most interesting things I'm doing at the moment is less a deal and more of a long-term project setting up for a client in the Shanghai free-trade zone," she says.

We have clients here who are AAA-rated lessors who, in the last year, have only managed to get one RFP, which is just madness compared to what their previous dealbook was.

Rhian Clayton-Payne, HFW

Clayton-Payne adds that foreign leasing companies are finding it harder to compete in China.

"That market is just so saturated with Chinese leasing companies, who perhaps take a more liberal approach to their security packages and transaction documentation compared to more sophisticated foreign lessors, so the airlines are more inclined to go for the quicker and easier route," she says.

"We have clients here who are AAA-rated lessors who, in the last year, have only managed to get one RFP [request for proposal], which is just madness compared to what their previous dealbook was. It's basically that they can't compete with the pricing and tax deals of the onshore leasing companies."

Having studied English Literature at King's College London, the South Londoner describes herself as being more adept at language-based than numerical-based subjects, so taking further study in law seemed an obvious choice for her.

"I started looking at internships in the City [of London] and it just became quite obvious early on that without either a legal or accountancy qualification it was going to be slower progress," she says.

"I had had prior interest in law insomuch as some of my parents' friends were lawyers. It's a career that you feel you know something about without actually having participated in it, so it was quite an easy choice."

After her training at Wragge & Co, she joined Berwin Leighton Paisner in Singapore in October 2012. In 2016, she was among the associates that partner David Brotherton took with him when he resigned from BLP and moved to HFW.

Outside of work, Clayton-Payne loves to travel.

"One of the best things about being in Singapore is the opportunity for travel. There are hundreds of flights daily to short-haul destinations in South-East Asia," she says.

Freyda Mechlowicz

Special counsel, Milbank

New York City

I've cut my teeth on ABS deals and have continued to be on a lot of the ones we've done and, of course, Milbank has been involved in almost every one.

Freyda Mechlowicz, Milbank

Hailing from Oregon, USA, Freyda Mechlowicz descends from Polish and Russian parents who emigrated to New York City and New Jersey. Her bachelor studies brought her back to the east coast, where she still has family, to Brandeis University just outside Boston. After a year-out back in Oregon where she worked temp jobs in Portland, Mechlowicz returned east to study a juris doctor at Columbia Law School.

Her foot in the door at New York City-headquartered Milbank came in the form of a summer associate job there in 2002 as a second year law student, during which time she spent a few weeks in the transportation and space group.

"I had a really great experience and the type of work was really interesting, so when I came back as a first year [associate], I chose them and they chose me," she says.

Since becoming a Milbank associate in October 2004, Mechlowicz has worked major aircraft transactions, describing her forte as being warehouse facilities and asset-backed securities (ABS).

"I've cut my teeth on ABS deals and have continued to be on a lot of the ones we've done and, of course, Milbank has been involved in almost every one," she says.

Mechlowicz also finds time for pro bono work such as assisting charity Her Justice on divorce cases, many for women who have experienced domestic violence. This non-aviation experience brings diversity to an otherwise highly specialised career.

"It's definitely really satisfying to have an important impact in someone's life and navigate a system that is sometimes overwhelming, and get them to an end result that they would have a hard time getting to on their own," she says.

Mechlowicz who is a parent of two children, has recently retreated to South Orange, New Jersey, from Brooklyn to find a home with a backyard to raise a family with her partner, an insurance broker.

"We're trying to explore our new home a lot and see some of the things around here. We live pretty close to a zoo and some wildlife areas – big preserved forest land," she says, describing a living environment that combines easy access to metropolitan New York City while retaining some of the natural beauty familiar from her home state.

Asked if there is any sign yet that legal work runs in the family, Mechlowicz says: "My older one wants to be an artist and a teacher – and fairy princess."

Chen Jie

King & Wood Mallesons

Beijing

I preferred to have an overview of the whole market, rather than gaining ideas from just a single customer.

Chen Jie, King & Wood Mallesons

After graduating from law school, Chen Jie received an offer from Run Ming Law Office and worked under renowned Chinese aviation finance lawyer Yi Liu.

"I learned a lot from lawyer Yi Liu and it helped me grow very fast when I entered the industry," Chen tells *Airfinance Journal*.

After the experiences in Run Ming, she worked as an in-house lawyer for China Aircraft Leasing (CALC). But Chen decided it would be a better choice for her career to return to a law firm.

"I preferred to have an overview of the whole market, rather than gaining ideas from just a single customer," she says.

Chen, who joined King & Wood Mallesons in 2016, expects Chinese airlines to benefit from increasing travel demand in China. She adds that this presents a great opportunity for Chinese lessors, though new leasing entrants in China may find it difficult to secure deals because "airlines prefer to trust those top brands".

Among Chen's standout transactions, she assisted Beijing-based Xiamen Aircraft Leasing on the transfer and leaseback of three 12-year-old Boeing 737-900s between three holding project companies of Xiamen Aircraft Leasing and Shenzhen Airlines in 2017.

She also assisted China Development Bank's Henan branch in providing financing to a joint-venture leasing company in Henan province to lease aircraft to Russian airlines.

Other challenges for lessors include old aircraft disposal and asset management, Chen says.

Chen thinks Chinese lawyers should try their best to become the leaders of the industry. The role for Chinese lawyers among overseas counsels is not only limited to taking the lead in large-scale cases, but to give customers all-round support, especially in the People's Republic of China.

"We need to do more communication and it is not an easy task for Chinese lawyers to do things like this, but we need to manage it during our work," says Chen.

In her free time, Chen enjoys watching movies and chatting with friends.

Recent structural developments in **aircraft ABS transactions**

David Berkery, partner at A&L Goodbody discusses the increased liquidity of E-notes, co-issuer structures and other changes in asset backed securitisations.

Since 2013, the demand for aircraft ABS (asset-backed securitisation) transactions has gone from strength to strength. Last year saw a record number (14) of ABS deals close and 2018 is on course to at least match that number.

For many aircraft lessors, access to the capital markets is a crucial component of their capital structure.

The model of raising equity capital, using a warehouse facility to acquire a portfolio of aircraft, refinancing the expensive warehouse debt through an ABS take-out (and repeat) has proven to be very successful and has allowed mid-sized lessors especially to grow rapidly.

The ABS product has shown incredible versatility in recent years in terms of the age and the types of assets in the pools, as well as the willingness of the market to allow for high concentrations of emerging market exposure. Also, in terms of how the vehicle has been structured in order to maximise tax efficiencies and to meet the specific needs of the equity investors and/or potential future equity investors.

> *"The challenge was to create a truly diverse, amalgamated collateral pool without disturbing the tax structuring of the equity in the portfolio on the CLAST 2014-1 deal."*

Ground-breaking deal

The *CLAST 2014-1 (Castlelake)* deal was ground-breaking for a number of reasons. The number of aircraft in the pool (79) and their weighted average age (17.5 years) were some distance beyond what the market had seen at that point. The transaction repurposed the ABS product as not just a means of moving aircraft off-balance sheet, but as a new and inexpensive financing source for mid-life and end-of-life aircraft.

The deal was also ground-breaking from a structuring perspective. The nature of the sponsor as a fund manager, rather than a more traditional aircraft lessor, meant that the equity in the ABS vehicle needed to be held by multiple different funds, each with its own tax and structuring considerations.

The challenge was to create a truly diverse, amalgamated collateral pool without disturbing the tax structuring of the equity in the portfolio. In particular, ensuring that US-sourced income in the structure was not used to pay dividends to non-US persons, for which a 30% withholding would apply.

Borrowing heavily from enhanced equipment trust certificate technology, the dual-level issuer structure was created. The assets would be held in separate silos depending on their lessee locations and expected flight patterns. Each silo would sit beneath a sub-issuer, which would issue cross-collateralised and cross-guaranteed notes to a single master issuer, a pass-through trust, which would amalgamate the debt cash flows and issue master notes to the debt investors.

The individual sub-issuers had separate equity investors, so there was no cross-contamination from a tax perspective of the residual cash flows from the portfolio. The structure has been replicated a number of times since – *CLAST 2015-1, CLAST 2016-1, CLAST 2017-1, CLAST 2018-1 (all Castlelake), AASET 2014-1, AASET 2015-1, AASET 2016-1, AASET 2016-2, AASET 2017-1 and AASET 2018-1 (all Apollo Aviation).*

Initial preferences for Luxembourg-based holding structures for non-US assets have largely been replaced by Irish based sub-issuers, particularly since the Luxembourg transfer pricing rules came into effect.

Co-issuer structures

More recently, similar tax considerations have been addressed by way of a co-issuer structure. These involve an entity that is Bermuda or Cayman incorporated but Irish tax resident, and a Delaware limited liability company subsidiary. They act as co-issuers of the ABS notes on a joint and several basis – *Blackbird 2016-1 (Napier Park/ALC), Labrador (GECAS), Thunderbolt (ALC), Falcon (DAE), Sprite 2017-1 (World Star), KDAC (DVB), METAL 2017-1 (Aergo) and MAPS 2018-1 (Merx*).

Aircraft deriving US-sourced income are held by subsidiaries of the Delaware co-issuer with cash flow from those assets held in separate (US) sub-accounts and the non-US aircraft are held by subsidiaries of the Irish co-issuer. This structure isolates the US-sourced "fixed or determinable, annual or periodical gains, profits and income" so that dividends paid from such amounts are paid only to US-persons. If such dividends were paid to non-US persons, withholding tax of 30% could apply.

The co-issuer structure has become the most frequently used structure for the product, with the US co-issuer seen as adding some flexibility in the event of a secondary trade of the equity interests (or E-notes) and/or re-leasing of assets to US-based lessees. This is true even for transactions in which the sponsor has retained the equity in the vehicle at closing and does not need a blocker to capture the US-sourced cash flow and for transactions which do not involve any US lessees at closing – eg, *MAPS 2018-1 (Merx*).

That said, the single issuer structure is still used from time to time in retained equity ABS deals – *HAIL 2017 (Aergen), Prop 2017-1 (Elix), S-Jets 2017-1 (Sky).* Such a structure could limit the universe of third parties to which the sponsor could potentially sell the E-notes. This is the case particularly in circumstances in which the E-note investors do not have the ability to appoint a majority of the directors on the board.

Recycled entities

Another significant structural change which has developed in recent years stems from the more pragmatic approach the rating agencies have been willing to take to the use (under certain circumstances) of what previously would have been deemed to be "stale" aircraft-owning special purpose companies as "recycled entities".

The logic behind the approach is sound. An entity which was previously used in a warehouse or acquisition finance facility, and subject to special purpose covenants in the transaction documents to which it was a party and/or in its constitutional documents, should not be materially more likely to have incurred unknown third-party liabilities than a new entity formed specifically for the aircraft ABS.

The efficiency created by this is difficult to overstate. Fewer or no lease novations and reduced lessee interaction allows aircraft to be transferred into the structure in a much shorter period. This means sellers receive their purchase prices a lot quicker. They are not all fortunate enough to have the benefit of a parent as creditworthy as GE, which can guarantee return of the purchase price (with interest) in the event of failing to transfer the aircraft within the purchase period and therefore allow them to receive almost all of the purchase price within days of closing the note issuance.

This means that the vehicle does not suffer from too much negative carry on the debt between the date of note issuance and the aircraft delivery date. Such negative carry can be mitigated somewhat in any event, in a loan format aircraft ABS at least, through the use of a delayed draw mechanism whereby only a portion of the debt proceeds are raised at closing and the remainder are committed but not funded until a later date – eg, *CLAST 2017-1 (Castlelake).*

Liquid E-notes

Although aircraft ABS debt has been in high demand in recent years, the E-notes in these vehicles have been a lot less liquid. The market for third-party equity in aircraft ABS vehicles in recent years has been limited primarily to hedge funds and private equity funds with different return expectations and different views of control rights to those of more passive institutional investors.

For most E-note investors, an ability to appoint a majority of the directors of the board of the issuer is a prerequisite for their investment. This placed pressure on the non-consolidation analysis for issuers which had their centre of main interests in Ireland after the enactment of the Companies Act, 2014 in Ireland. This Act included a change to the definition of a "subsidiary" under Irish company law from a share capital-based test (easily addressed through the use of a charitable trust holding the issuer's share capital and the issuance of E-notes mirroring the economics of equity ownership) to a test of "dominant influence and control".

"Aircraft ABS debt has been in high demand in recent years, the equity interests (or E-notes) in these vehicles have been a lot less liquid. The market for third-party equity in aircraft ABS vehicles in recent years has been limited."

Nonetheless, A&L Goodbody, working with a number of frequent arrangers of these deals, has managed to mitigate the consolidation risks in a manner which has been accepted by the market and each of the primary rating agencies active in the industry. This is notwithstanding the equity's ability to appoint a majority of the board.

Very recently, the *STAR 2018-1 (GECAS)* deal came to market featuring listed, tradeable, equity interests. The structure used involves the parent co-issuer issuing E-notes to an orphaned, special purpose vehicle, the E-note holder. That E-note holder then issues equity certificates to multiple investors. While it remains to be seen, the early indications are that these liquid equity certificates will attract a new class of investor to the aircraft ABS product. For example, those with a greater risk appetite and higher yield desire than the current investors on the BB/B rated tranche of debt but which do not have the same control expectations as the traditional private equity investors in E-notes to date should be receptive to this product.

At the time of writing, at least one other deal is preparing to come to market with the same tradeable equity feature and it is likely that more will follow.

Overall, the trends for aircraft ABS look good. Each year brings new first-time sponsors and new investors. The structures have proven to be dynamic and malleable, while the transaction documentation has been simplified and is more approachable for new investors than it was just a few years ago.

The introduction of a more liquid E-note shows the continued drive towards innovation among the arrangers of these transactions and, market conditions allowing, could give rise to the next wave of aircraft ABS transactions.

GDPR and the aircraft finance industry – key steps to compliance

Paul Lavery, partner, head of technology and innovation, and Georgina O'Riordan, partner, aviation, at McCann FitzGerald, explore what the new EU regulation will mean for aircraft financiers.

The General Data Protection Regulation (GDPR), which came into effect on 25 May, has replaced existing data protection law in Ireland and across the European Union. While many fundamental concepts and principles remain broadly the same, GDPR provides for significant changes which will have wide ranging impacts on a broad range of sectors.

Although it might not be immediately apparent, GDPR has significant implications for the aircraft finance industry. Below we set out details of why GDPR is relevant to the aircraft finance industry, the key changes that GDPR brings about and key steps that should be taken now to ensure compliance with GDPR.

Why is GDPR relevant to the aircraft finance industry?

GDPR primarily applies to companies which are established in Europe and which process personal data in the context of those establishments. However, GDPR also applies to data controllers and data processors based outside of the EU which offer goods or services within the EU. For companies operating in the aircraft finance industry, the types of personal data that are likely to be processed routinely include:

- **employee personal data** – any company that has employees will collect personal data in relation to those employees in the context of the employment relationship (eg, CVs, contracts of employment, performance reviews and records of sick leave);
- **director personal data** – where a company does not have employees but does have non-executive directors, it is likely that such company will collect an amount of personal data in respect of such directors;
- **AML/KYC data** – undertaking appropriate anti-money laundering (AML) and know your customer/client (KYC) processes is a key part of many aircraft finance transactions, including gathering personal data in relation to legal owners, beneficial owners and key employees; and
- **shareholder data** – depending on the structure of the company, it might hold personal data about its shareholders.

Key changes under GDPR

The principles of data protection law under GDPR are broadly similar to those which exist under current data protection law, such that GDPR is in many ways an evolution of current data protection law requirements. However, some changes that have been introduced could rightly be regarded as revolutionary, including:

- **fines** – perhaps the most radical feature of GDPR is the introduction of potentially severe administrative fines for non-compliance. GDPR empowers national data protection supervisory authorities to issue fines of up to 4% of the annual worldwide turnover of the undertaking to which the non-compliant company belongs or €20 million ($23 million), whichever is the greater;
- **liability** – data controllers and data processors may be liable to individuals for damage caused by a breach of GDPR. A single undertaking may be jointly liable for breaches by other entities involved in the relevant processing; however, a court will be entitled to apportion compensation by taking into account the culpability of the relevant data controller(s) and data processor(s);
- **security breach notifications** – a data controller is now obliged to inform the relevant supervisory authority of a personal data security breach as soon as possible and, "where feasible", not later than 72 hours after becoming aware of the breach. The data controller might also be required to inform the affected data subjects where there is a high risk to the individuals' rights;
- **extended rights for individuals** – GDPR focuses on giving individuals more control over their personal data. In addition to existing rights, such as the rights of access and rectification, it provides for a new right to restrict the processing of personal data in certain circumstances to storage only. The right to erasure, or "right to be forgotten", is also explicitly set out in GDPR;
- **demonstrating compliance** – one of the most novel features of GDPR is that it imposes an obligation on companies to be able to demonstrate their compliance with the obligations under GDPR. This includes keeping records of all processing activities carried out and updating internal policies to demonstrate compliance with obligations under GDPR (eg, a policy outlining how the controller deals with data subject requests);
- **data protection officers** – certain companies are now obliged to appoint a data protection officer to oversee compliance with GDPR. In these cases, the data protection officer must have certain designated functions, and they are given a form of protected employment status. It is also possible to appoint an external data protection officer on an outsourced basis; and
- **lead supervisory authority** – GDPR introduces a modified one-stop-shop system, whereby businesses established in the EU will be subject to the oversight of a lead supervisory authority. If they are established in more than one EU member state, then, depending on how they organise their affairs, they might have a single lead supervisory authority and other concerned supervisory authorities, or they may be subject to oversight by multiple lead supervisory authorities.

Key steps to compliance with GDPR

In order to ensure compliance with GDPR, companies should take the following key steps:

- **gathering information and gap analysis** – in order to undertake a GDPR compliance project, it is essential to first gather information in relation to a company's current processing of personal data, including details of how personal data is collected, how it is processed and what third parties have access to that data. It is also important to gather copies of any current data protection policies and procedures, so that they can be reviewed for data protection compliance;
- **drafting a data protection policy** – as mentioned above, being able to

demonstrate compliance with GDPR is a key requirement of the new law. A key part of this will be to draft a data protection policy that sets out how the company will comply with its obligations, and the records that it will keep to monitor compliance;

- **consider whether data collection is necessary** – companies should consider the life cycle of data, from collection to deletion, when considering whether their data processing is necessary, relevant and proportionate and when updating their data protection policies;
- **policies to deal with requests from data subjects** – companies should make themselves aware of the rights of data subjects under GDPR and consider updating internal processes so they can deal with requests from data subjects to exercise these rights;
- **data protection notices** – all data protection notices in company use will need to be updated to comply with the additional requirements under GDPR. If the company has identified that it requires additional data protection notices as part of its gap analysis, these will need to be drafted and provided to the relevant data subjects;
- **contracts with data processors** – where a company engages a third-party service provider to process personal data on its behalf, that third party is regarded as a processor. As of 25 May, GDPR requires companies to update their contracts with their processors to include detailed specific obligations. Accordingly, companies should engage as soon as possible with their third-party processors to ensure that amendment agreements or data-processing agreements are put in place;
- **identification of supervisory authority** – if an organisation operates in more than one EU member state, it should identify its lead supervisory authority;
- **appointment of data protection officers** – companies should consider whether they need to appoint a data protection officer (DPO). GDPR requires certain organisations to designate a DPO. Organisations requiring DPOs include public authorities, organisations whose activities involve the regular and systematic monitoring of data subjects on a large scale and organisations which process what is currently known as "sensitive personal data" on a large scale. In our experience, companies within the aircraft finance industry have generally not been required to appoint DPOs, but this needs to be considered on a case-by-case basis; and
- **implementation and training** – a key part of all GDPR projects will be implementing a data protection policy and related procedures to ensure on-going compliance. This is likely to involve specific training for staff who are responsible for handling personal data, and general awareness training for other staff members.

Common issues that arise in aircraft finance industry GDPR projects

In our work on GDPR projects with companies which operate in the aircraft finance industry, we have identified the following common issues that arise:

- **complexity** – the aircraft finance industry often employs complex group structures. Identifying the relevant companies within a group that hold and process data, and determining the correct data protection analysis for that processing, can be challenging. It can also require input from multiple stakeholders, and an understanding of the underlying rationale for the various structures;
- **consent** – a common mistake that we encounter in GDPR projects is an assumption that all processing should be undertaken on the basis of consent. In our experience, it is very rare for aircraft finance companies to use consent as the basis for their processing, for two reasons. The first is because there are more suitable bases for processing available, such as where the processing is required to comply with a legal obligation (eg, most AML/KYC data-processing activities). The second is because of the difficulties that relying on consent can present under GDPR (eg, consent can be withdrawn at any time by the individual concerned); and
- **intra-group transfers** – the international nature of the aircraft finance industry means that it is very common to identify international flows of personal data between companies. GDPR includes a general restriction on the transfer of personal data outside of the European Economic Area, which is subject to certain exemptions. We have found that our clients have generally opted to facilitate such transfers through adopting intra-group data transfer agreements that incorporate EU Commission-approved standard contractual clauses. Depending on the nature of the group involved, putting in place such intra-group data transfer agreements can be a time-consuming process.


Paul Lavery

Paul Lavery is the head of the firm's technology and innovation group and advises on a wide range of information technology, data protection, intellectual property, confidentiality and freedom of information issues.

Lavery is a leading expert on data protection and has advised a large number of clients, including many within the aircraft finance sector, on their projects to comply with the EU General Data Protection Regulation, including advising on the main obligations relevant to such clients and the notices, documents and agreements required to ensure GDPR compliance.


Georgina O'Riordan

Georgina O'Riordan's practice focuses on banking and asset finance transactions. She advises leading aircraft lessors, lenders and arrangers on all aspects of aircraft financing and leasing. This includes cross-border leasing transactions, sale and leaseback transactions, secured lending, portfolio acquisitions and disposals and the establishment of leasing and financing platforms in Ireland.

O'Riordan also advises clients on aircraft repossessions, the registration and operation of aircraft in Ireland and the establishment of Irish joint-venture vehicles for the acquisition and financing of aircraft.

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