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AIRFINANCE JOURNAL

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A healthy market can fill in ECA gaps

The original equipment manufacturers are hard at work with financiers to come up with innovative alternatives for export credit support, writes **Jack Dutton**.

Airfinance Journal has had an eventful past month with our 21st Annual Deal of the Year Awards and 37th North America Airfinance Conference in New York. We also have been preparing our 2017 *Guide to Aviation Lawyers*, which features our annual legal survey that ranks firms based on their activity in a number of markets and by product type. We had a record number of firms submitting their deals this year, highlighting how attractive a market aviation finance is for law firms and financiers a like.

For both the awards and the legal survey, there were a lot of strong submissions and a few notable trends. The first was South Korea, being now an important market for aviation finance. Two of the winning submissions had Korean investor participation. These were the Editor's Deal of the Year, the Labrador Aviation Finance asset-backed securities (ABS), where GECAS sold the entire E-Note to Korean investors and our Innovative Deal of the Year, where German investment company EMP Structured Assets structured a complex deal that featured 11 different classes of notes, three loans, the establishment of a Korean investment fund and the use of equity notes.

The Labrador deal marked the first time an E-Note in an aircraft transaction was sold entirely to Asian investors. As more investors become familiar with the ABS structure, there is likely to be a more diversified pool of E-Note buyers and an increasing participation from Asian investors.

Our legal survey results and Deal of the Year submissions also showed that, in 2016, export credit deals were few and far between, because of the Airbus and Boeing export credit agencies (ECAs) being limited in their offerings due to an ongoing investigation into Airbus and Export-Import Bank of the United States (Ex-Im Bank) not having a full board quorum of three directors.

Despite there being fewer export credit submissions this year, the innovation in the submissions made up for it. Our 2016 Export Credit Deal of the Year was awarded to Turkish carrier SunExpress for its Ex-Im-guaranteed French lease. The deal was interesting because to get Ex-Im Bank approval before the export credit agency was shut down, the mandate had to be awarded in April 2015 for five Boeing 737-800s scheduled for delivery in 2016. This required lenders and the tax investor to provide a firm commitment on the conditions of the deal a year before the delivery date.

More recently, the market has seen some interesting ECA deals where the agencies have been filling in the gaps. Industry sources say that the original equipment manufacturers are pushing for this. *Airfinance Journal* reported on another SunExpress deal in April that involved a guarantee from Sace, the Italian ECA, for three Boeing 737-800s. Normally, Ex-Im Bank would be guaranteeing such a deal, because of Boeing aircraft being produced in the USA, but one source says the Italian ECA is able to step in because of "several eligible exports", including Italian-made seats. Moreover, LOT Polish Airlines and Norwegian are in the market looking to finance Boeing 787s with financing guaranteed by UK Export Finance, an ECA which would not typically finance Boeing aircraft.

Along with some unorthodox ECA deals, we are seeing an increasing level of insurance company involvement in aviation finance transactions. In April, ING Capital closed the first insurance-guaranteed loan for an aircraft, covering the funding of a Boeing 747-8 with Korean Air Lines. The Korean carrier is due to receive three more 747s this year. It has already taken delivery of seven 747-8s, all of which were financed by Ex-Im support when it was still widely available. Only a month after the ING deal closed, Scandinavian carrier Norwegian announced that its leasing subsidiary, Arctic Aviation Assets, had completed the financing of six 737 Max 8 aircraft delivering this year using insurance-guaranteed funding. Such insurance-backed deals look likely to continue in 2017 as insurance and pension companies take more of an interest in this sector.

Finally, from our legal survey results, we noticed that the capital markets look relatively strong for the time being. Although some bankers have said there has been a slowdown in the enhanced equipment trust certificate market, because lease rates are so competitive and pricing often becomes more favourable to finance aircraft through leases, many have forecasted for there to be plenty of activity in the capital markets.

In an interview with *Airfinance Journal* in New York, Thomas Bliemel, Citi's managing director of global structured debt, said there "is an increasing amount of non-US investor demand for aircraft-backed transactions", before adding that there were several interesting private placements to come to the market later this year.

These comments, along with the results of our legal survey and Deal of the Year awards, suggest that financiers will continue to innovate in this industry.

JACK DUTTON
Editor,
Airfinance Journal

Cover Story

Peter Warlick, *VP finance for American Airlines, raised over $8,000 for his Aviators Against ALS campaign from the evening.*

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Gebremariam: excessive charges hold back African aviation

Excessive charges to African airlines through taxes and flying fees are hindering the progress of Africa aviation and make African carriers less competitive against foreign airlines, according to the chief executive officer of Ethiopian Airlines.

In an interview with *Airfinance Journal*, Tewolde Gebremariam says: "Aviation in Africa is being taxed like tobacco and alcohol. The price of jet fuel is twice the global average, and fees for overflying, aircraft landing, handling, parking etc.... are exorbitant compared to global standards.

"This puts huge operational burden on the continent's airlines which also face unfair competition from large foreign carriers, including the government-supported Gulf-based airlines."

He adds that there is a lack of a long-term and strategic view of aviation by African governments.

"Despite the fact that aviation is the only viable means of people transport in the continent of Africa and the critical value of air connectivity is clearly visible in socioeconomic development of the African countries, aviation lacks adequate attention and focus and resources by African governments," says Gebremariam.

Delays in liberalisation of African skies continue to be a huge challenge for the growth of the aviation industry in Africa. Continuous lobbying is required to implement the Yamoussoukro Decision (YD) for the creation of a single African Sky and for aviation to be treated as a strategic development tool, by mobilising the African Union Commission, industry actors and governments.

Gebremariam also notes that most African airports and facilities are underdeveloped and costs are high. "Most airport service providers are single providers like ground handlers, caterers, fuel companies etc.... and charge high prices for lower qualities, and airlines do not have choices and negotiating power," he adds.

Tewolde Gebremariam, chief executive officer of Ethiopian Airlines

SuperJet International names new CEO

SuperJet International's board of directors has appointed Stefano Marazzani as its new chief executive officer (CEO).

He succeeds Nazario Cauceglia, who has been the CEO since January 2012. Cauceglia has been appointed president and chairman of the board of SuperJet International.

Marazzani has been with SuperJet International since 2009. He was senior vice-president operations in 2013 and 2014 and has been for the past three years senior vice-president customer services.

Stefano Marazzani, chief executive officer of SuperJet

Jetlines recruits transportation finance executive

Canada's low-cost carrier Jetlines has appointed Jason Grant as an independent director.

Grant has been directly involved in raising more than $800 million in aviation and transportation capital over the past 20 years while carrying out key financial, operational and leadership roles in the airline, transportation, logistics and private equity sectors.

Grant held senior roles at American Airlines and Canadian Airlines before joining Atlas Air in 2002.

At Atlas Air, he held various financial and operating positions, including chief financial officer, leading two successful capital raises totalling $475 million. Grant managed a group of 130 professionals in the USA, Asia and Europe, overseeing all financial, investor relations, business development and information technology functions. During his tenure as chief financial officer, the equity market capitalisation of the company grew by more than 250% to over $1.5 billion.

He joined United Maritime Group between 2010 and 2013 through different roles and executed the successful sale of UMG's three operating divisions to three separate strategic buyers.

Grant is the managing partner of Headhaul Capital Partners, a New York-based private equity investment firm he co-founded in 2014, which specialises in acquiring and building businesses in the transportation, logistics and distribution industries.


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SAA names new CFO

South African Airways (SAA) has appointed Phumeza Nhantsi as its new chief financial officer (CFO).

Nhantsi became SAA's interim CFO in November 2015, after the departure of Wolf Meyer.

"Since the appointment of the full-strength board in September 2016, the focus has been on stabilising the business and one of the priorities was to ensure that key management vacancies are filled. This key appointment for the airline ensures that SAA's strategic objective of transforming the business into a financially sustainable aviation group is achieved," says Musa Zwane, SAA's acting chief executive officer.

Before joining SAA, Nhantsi was a director at SizweNtsalubaGobodo, the fifth-largest accounting firm in southern Africa. She was temporarily seconded from SizweNtsalubaGobodo to SAA.

A chartered accountant, she has extensive experience in the financial services and aviation arena.

Matheson appoints new asset finance partner

Irish law firm Matheson has appointed 12 new partners, including Stuart Kennedy in asset finance, across a range of high-growth areas.

This is the firm's largest promotions round in more than a decade.

"These partners are leaders in their respective fields, and work with clients in key sectors of the Irish economy in which the firm expects to see growth including: tax, regulation, compliance, M&A, lending, fintech, data privacy, cyber security, medtech, commercial real estate and energy and infrastructure," says the firm.

FPG Amentum hires aircraft trading manager

Irish leasing company FPG Amentum has hired Victoria Cape as marketing manager, aircraft trading and sales.

Cape recently worked with TWC Aviation, Los Angeles, as aircraft sales executive, executing sales and acquisitions of private jets, analysing the business jet market, and working directly with the original equipment manufacturers.

Cape previously held roles for Rossiya Russian Airlines and Nordavia, a former Aeroflot subsidiary.

In February, the lessor acquired four Airbus A321-200s with its parent company, FPG, on lease to Wizz Air through a Japanese operating lease.

FPG Amentum has a fleet of 46 aircraft, comprising Boeing 737-family aircraft, A320-family aircraft, A330s, 777s, 747s and Embraer E190s, according to *Airfinance Journal*'s Fleet Tracker.

Thirion made Etihad Group CFO

Abu Dhabi-based Etihad Aviation Group has promoted Ricky Thirion from senior vice-president group treasurer to chief financial officer (CFO).

The airline also announced that outgoing group chief executive officer (CEO) and CFO, James Hogan and James Rigney, respectively, will be leaving the company on 1 July.

The group appointed Ray Gammell as interim group CEO. Gammell is Etihad Aviation Group's chief people and performance officer, and has been a member of the executive leadership since joining the business in 2009. He has led the creation of a performance culture across the group.

Mohamed Mubarak Fadhel Al Mazrouei, chairman of the board of the Etihad Aviation Group, says: "Ray and Ricky are experienced leaders and have the complete confidence of the board. Ray will now take full management responsibility for the Etihad Aviation Group, ensure a coordinated group approach, and continue to advance the strategic review that was initiated by the board in 2016 to reposition the business for continued development in what we anticipate being a prolonged period of challenges for global aviation."

He adds: "We have strengthened our group leadership with recent appointments and are now in the advanced stages of recruitment for a new group CEO. The board has been very pleased with the calibre of candidates, and we expect to make an announcement in the next few weeks."

Air Seychelles appoints new chief financial officer

L to R: **Roy Kinnear**, CEO and **Michael Berlouis**, CFO, Air Seychelles

Air Seychelles has appointed Michael Berlouis as its chief financial officer.

Berlouis is a Seychellois national and previously held the positions of manager financial planning at Etihad Airways and head of financial planning and control at Air Serbia.

He replaces Abdul Mohsen Al Sayegh, who has been appointed vice-president finance of Etihad Airways Engineering, Hala Group and Etihad Airport.

Airfinance Journal's 2016 Deals of the Year Awards

We reveal the winners of our prestigious annual awards, recognising the most innovative deals, individuals and teams in aviation finance.

Bank loan deal of the year: **Accipiter $1.2bn recourse refinancing**

Borrower/Issuer: Accipiter
Structure: Recourse portfolio financing
Currency/Amount: $1.2 billion
Assets financed: 43 aircraft, two widebodies and 41 narrowbodies
Lawyers (and role): Milbank, Tweed, Hadley & McCloy represented Accipiter, Clifford Chance and A&L Goodbody represented the mandated lead arrangers
Banks (and role): BNP Paribas (MLA, Account Bank, Swap Bank), CA-CIB and Natixis (MLA and Debt Coordinator), BTMU, BOC HK, CBA, NAB, Citibank, DBS, Deutsche Bank, SMTB (all MLA)
Date mandated: January 2016
Date closed: 18 March 2016

Deal highlights

Dublin-based lessor Accipiter, a unit of Cheung Kong Holdings, closed a $1.2 billion refinancing for aircraft purchased in 2014 from three separate lessors.

The portfolio comprised 41 narrowbody aircraft and two widebody aircraft.

According to a filing with the Hong Kong Stock Exchange, between August and November 2014 Cheung Kong purchased 21 aircraft from GECAS for approximately $816 million. It also purchased 10 aircraft from BOC Aviation for $492 million and 14 aircraft from Jackson Square Aviation for $584.2 million.

At the time, the company paid for the aircraft with cash due to its high cash reserves.

The $1.2 billion facility refinanced these aircraft.

The facility was oversubscribed by a group of 11 banks, including: BNP Paribas, Bank of China, Bank of Tokyo Mitsubishi, CA-CIB, Citi, Commonwealth Bank of Australia, DBS Bank, Deutsche Bank, Natixis, National Bank of Australia and Sumitomo Mitsui Trust Bank.

CA-CIB and Natixis acted as debt coordinators. CA-CIB acted as the facility agent and security trustee and BNP Paribas as the hedge counterparty.

Milbank, Tweed, Hadley & McCloy represented Accipiter and Clifford Chance represented the mandated lead arrangers.

The deal marked the first portfolio financing for Accipiter. Despite the large portfolio and large bank group, the transaction was successfully closed within three months from mandate to closing.

Most importantly, this transaction helped transition Accipiter from a start-up operating lessor, relying on third-party servicers for asset management to a full-fledge operating lessor, capable of managing and maintaining its portfolio and enhancing its internal capabilities to source for financing and also positioning the platform for future growth.

ECA deal of the year: **SunExpress five 737-800 financing**

Borrower: SunExpress through five SPCs
Amount: approximately $190 million
Structure: Ex-Im French Leveraged Lease
Banks: BNP Paribas acted as lease investor, lease arranger, joint debt arranger, lender and Ex-Im Bank loan paying agent. ING Capital acted as joint debt arranger and guarantee agent. ING DiBa acted as lender
ECAs: US Ex-Im Bank
Lawyers: Norton Rose Fulbright Paris, Dentons, Pillsbury Winthrop Shaw Pittman, Robert Wray, Dikici Law
Collateral: Five Boeing 737-800s

Deal highlights

The transaction marked the first tax lease structure for SunExpress and the first French lease combined with fixed rate euro-denominated debt supported by Ex-Im Bank.

This transaction is also the first French lease closed to an airline in Turkey excluding Turkish Airlines' previous French leases.

It was the only Ex-Im backed French lease in 2016, which required a firm commitment in June 2015 from the investor and the lenders one year before the actual deliveries.

The five Boeing 737-800s delivered in a very short period (three months to June 2016) through five different special purpose companies.

BNP Paribas says the investor and the lenders had to respond and execute the termsheet quickly in order to allow SunExpress to apply for the Ex-Im approval before it was shut down. The five 737-800s closed between April and June 2016.

The lessor had to acquire the aircraft new and unused from the manufacturer for tax reasons. This required the creation of five special purpose companies and the closing of each delivery in a short time frame (one to two aircraft per month).

In order to get Ex-Im approval before it was shut down, the mandate had to be awarded in April 2015, which required the lenders and the tax investor to provide a firm commitment on the amount and the conditions one year before the actual delivery dates, despite the potential change in the liquidity costs and the lessee's environment.

Debt on the five aircraft was underwritten and held by BNP Paribas and ING Diba only. It was one of the first Ex-Im financing of ING DiBa (Germany) as lender.

SunExpress required a euro-denominated fixed rate financing, and the lease structure had to accommodate the requirement from the Ex-Im to convert the lease to US dollars at the election of Ex-Im in case of the lessee's default, and to manage the euro fixed rate breakage cost not covered by the bank.

Tax lease deal of the year: **Aeromexico Jolco**

Borrower: Aeromexico

Structure: Japanese operating lease with call option (Jolco)

Assets: One Boeing 787-9

Lawyers (and role): White & Case (Aeromexico); Clifford Chance (Japanese equity); Vedder Price (lenders)

Banks (and role): Natixis – lender, facility agent, security trustee; Development Bank of Japan; Credit Industriel et Commercial

Advisors (and role): SkyWorks Capital (Aeromexico); BBAM Aviation Services & Nomura Babcock and Brown (equity arrangers)

Date mandated: December 2015

Date signed: September 2016

Date closed: 8 November 2016

Deal highlights

Aeromexico's first ever Jolco was an important step for the airline. Mexico's flag carrier was seeking to diversify its sources of financing. Traditionally reliant on leasing – with the majority of the airline's aircraft fleet still owned by operating lessors – Aeromexico proved last year that it is capable of accessing a wider range of structures to finance its aircraft.

For Aeromexico, the deal achieved a couple of firsts. It was the airline's first financing in the Asia Pacific region and the first Boeing 787-9 aircraft to be delivered to Aeromexico.

The airline's success with last year's Jolco will serve it well with its target of owning around 50% of its aircraft in the medium term. By tapping new markets and proving the airline's appeal to international investors, the deal paves the way for future structures.

At *Airfinance Journal*'s annual conference in Dublin this year, Aeromexico's chief financial officer Ricardo Sanchez Baker said the airline plans to receive a public rating in the next couple of years to begin tapping the debt market to finance its incoming narrowbodies.

"We have a strong pipeline of aircraft coming into the company in the next few years, particularly in 2018, when we will start the reception of the 737 Max aircraft," he said.

"And for that, the plan is to do a combination of sale and leasebacks [...] and the other part will be a combination of Jolco, and we want to tap the debt market. At that point, perhaps we will do other types of transactions. Hopefully enhanced equipment trust certificates structures (EETC) could be an attractive alternative for us."

The deal was also significant for Mexico itself. With this transaction, the airline became the country's first to access the Japanese tax-based lease market.

The deal has also paved the way for more similar transactions. In December 2016 and January 2017 the airline took delivery of two more 787-9s, with Jolco financings arranged by Skyworks Capital.

Operating lease deal of the year: **IAFC's 50 Airbus Islamic lease to Saudia**

Borrower: Airfinance SPV (managed by International Airfinance Corporation)

Structure: Operating lease

Currency/amount: $800 million

Assets: 30 Airbus A320s, 20 A330-300s

Lawyers (and role): Holman Fenwick Willan (Borrower's counsel), Allen & Overy (Lenders' counsel)

Banks (and role): Dubai Islamic Bank, Abu Dhabi Commercial Bank, Sharjah Islamic Bank, Gulf International Bank, National Commercial Bank, Saudi Investment Bank, Arab National Bank, Arab Banking Corporation

Date signed: 2 December 2015

Date closed: August-December 2016

Deal highlights

Between August and December 2016, International Airfinance Corporation (IAFC) closed 50 operating leases with Saudi Arabian flag carrier Saudia.

The deal consisted of 30 new Airbus A320s and 20 new A330-300s with various deliveries starting from the third quarter of 2016. The A320s are on 12-year leases while the A330s are on 15-year leases.

The total transaction size is $3.5 billion spread over three years. IAFC claims the transaction is largest aircraft leasing transaction in the history of Saudi Arabian Airlines and the largest aviation deal to be secured via Islamic financing.

"Within that short period, IAFC was required to finalise the aircraft configuration, select the buyer furnished equipment and other options, select the engine type and finalise agreements with the engine manufacturers, pay the pre-delivery payments, arrange for long-term senior debt financing and close deliveries at an average pace of three to four aircraft per month," IAFC's president and chief executive officer Moulay Omar Alaoui told *Airfinance Journal*.

Alaoui says the biggest challenge in closing the deal was the "size and rhythm" of the deliveries. A total of 14 aircraft were delivered between August and December 2016. Another 18 aircraft are scheduled to be delivered in 2017 (four had already delivered in first quarter 2017) while the remaining 18 aircraft are due in 2018.

"Very few lessors would have the ability to enter into such a transaction and deliver a positive outcome to an airline customer within such a challenging timeline taking into account the difficult regional market conditions. IAFC is going from strength to strength and we are looking forward to closing more exciting transactions in 2017," he says.

Paul Nelson, a partner in Allen & Overy's London office who worked on the deal, said that the cooperation between the banks – despite the complexity of the deal – was impressive. "It's quite interesting because even though some banks had less experience of the aviation finance market than others, they all had a lot to contribute and they all had their own specific and interesting points," he said.

Nelson believes this is a landmark transaction for IAFC and will pave the way for more significant deals for the company in future. "The market sits up, listens and recognises when there is equity in town and a relatively new lessor that's doing these pretty amazing transactions," he says.

"IAFC have equity so they have had an accelerated growth and the expectation is that that will just continue." He adds that the deal was significant for Saudia because the carrier has not been doing new financings recently.


Asia's Leading
Aviation Finance
Event Returns for the 18th year

Sale and leaseback deal of the year: **Etihad/Natixis two A380s**

Borrower/Issuer: Etihad

Structure: Etihad/Natixis – sale and leaseback of two Airbus A380 aircraft. Natixis utilised the new ADGM structure and funds from a syndicate of financial institutions (including Natixis, Dubai Islamic Bank (DIB), First Gulf Bank (FGB) and Union National Bank (UNB)) through a combination of Islamic finance (including Ijaraja, Murabaha and Mudaraba) and conventional debt

Currency/Amount: Approximately $570 million in US dollars and euros

Assets financed: Two Airbus A380s

MSNs: MSNs 198 and 199

Lawyers (and role): Bird & Bird for Etihad and Clifford Chance for Natixis

Banks (and role): Each lessor obtained finance from a syndicate of financial institutions

Date Mandated: 17 November 2016

Date Signed: 28 December 2016

Date closed: 28 December 2016

Deal highlights

The deal marks Etihad's first operating lease of an Airbus A380. The transaction included conventional debt in euro and Sharia compliant, Murabaha, Ijara and Mudaraba structures in US dollars.

Both aircraft were used and were previously delivered and financed with various bridge financing transactions, following the withdrawal of the previously mandated export credit-supported financing.

This marks the first aviation finance transaction in the Abu Dhabi Global Markets (ADGM) since the recent enactment of the Cape Town Convention and Aircraft Protocol 2001 into its insolvency framework to support its ambition to be an aviation financing and asset management hub in the UAE and the MENA region.

The new set of regulations further augments ADGM's strengths as an international jurisdiction for aviation financing and leasing as well as global financial services.

The location of the two special purpose companies that own the aircraft in ADGM reaffirms that it provides a special purpose vehicles regime on par with the best international jurisdictions in terms of features, cost and ease of set-up.

Brett Hailey, partner at Bird & Bird says: "This first aviation finance transaction in the ADGM, supports ADGM's ambition to be an aviation financing and asset management hub in the UAE and the MENA region. This transaction demonstrates that ADGM is open for business in the aviation sector and should assist it to attract more global aviation financing and leasing businesses to establish their operational presence in ADGM to conduct their regional business. It has also established a special purpose company framework that caters to the aviation industry's financing needs and requirements of leading participants."

The transaction was completed within one month of mandating during a period of extended national and traditional holidays.

Both aircraft were initially funded at delivery by means of various bridge financing by First Gulf Bank and Union National Bank among others. This was a result of the standstill arrangements announced by the export credit authorities one week prior to the delivery of the first aircraft in April 2016 that were, at the time, both mandated to be financed by means of export credit guarantees.

> *"This first aviation finance transaction in the Abu Dhabi Global Markets (ADGM), supports ADGM's ambition to be an aviation financing and asset management hub in the UAE and the MENA region."*
>
> **Brett Hailey**, *partner, Bird & Bird*

Added complexity to the transaction, both in terms of matching the new financing start periods with the existing bridge facilities termination dates, included finding a suitable window of opportunity to effect the transfer of title of these aircraft, being operated on daily long haul routes, in a suitable legal- and tax free jurisdiction.

The complexity of the transaction also included the sourcing of debt and equity funding sources within a short period from being mandated to closure.

Jim Bell, partner at Bird & Bird says: "We are one of the leading law firms for leasing and so this category is really playing to one of our strengths. It's also testament to our excellent team of friendly, dynamic and highly skilled people that we are being asked to advise on the most sophisticated transactions in the market."

As a result of this transaction, Natixis and ADGM are in advanced discussions for setting up an aircraft investment platform in ADGM, which will target investors looking for high US dollar yields.

This development reinforces ADGM's commitment to provide a dynamic environment for successful aviation transactions, and to attract more global aviation financing and leasing businesses to establish their operational presence in ADGM to conduct their regional business.

It also validates the continued dedication of ADGM's board of directors to support the growth of Etihad Airways and the civil aviation sector by establishing a framework that caters to the aviation industry's financing needs.

L to R: **Farrell Sheridan, ADMG; Ranki Sundaram, Natixis; John Mogan, Ethiad Airways** *collecting their award from AFJ's managing director* **Laura Mueller**

Equity deal of the year: **BOC Aviation's IPO**

Borrower: BOC Aviation

Structure: Initial public offering (Hong Kong exchange)

Size: Approx. $1.127 billion

Number of offer shares under the global offering: 208,203,000 shares (comprising 104,101,500 new shares and 104,101,500 sale shares and subject to the over-allotment option)

Number of Hong Kong offer shares: 15,615,400 new shares (subject to reallocation)

Number of International offer shares: 192,587,600 Shares (comprising 88,486,100 new shares and 104,101,500 sale shares and subject to reallocation and the over-allotment option)

Offer price: HK$42.00 per offer share

Use of proceeds: To fund pre-delivery payments for and future purchases of new aircraft to grow the company's owned aircraft portfolio

Joint bookrunners: BNP Paribas, BOC International, Goldman Sachs, Morgan Stanley, Citibank

Joint sponsors: BOC International, Goldman Sachs

Joint global coordinators: BOC International, Goldman Sachs, Morgan Stanley

Financial adviser: BOC International

Pricing date: 25 May 2016

Listing date: 1 June 2016

Deal highlights

BOC Aviation became a public lessor on 1 June 2016 after it listed on the Hong Kong Stock Exchange in yet another move to diversify its funding sources.

The lessor said the net proceeds from the $1.1 billion initial public offering (IPO) will pay for pre-delivery payments for future aircraft deliveries.

The IPO was backed by 11 cornerstone investors: China Investment ($100 million), Silk Road Fund ($100 million), China Development Bank ($60 million), China Life Franklin Asset Management ($50 million), Oman Investment Fund ($50 million), Hony Capital Group ($50 million), Elion Resources Group ($40 million), Fullerton Fund Management ($38 million), Fosun International ($35 million), Boeing ($30 million) and China South Industries Assets Management ($30 million). The investors agreed to purchase a total of 107.7 million shares worth HK$4.52 billion ($583 million), or 52% of the global offering size before the exercise of the overallotment option.

The BOC Aviation transaction was the largest ever global aircraft lessor IPO, the largest ever China SOE spin-off IPO and the third largest global IPO in the first five months of 2016.

The landmark transaction was executed in the context of a quiet capital markets pipeline but the deal priced at a premium to book value, at 1.1x 2016E P/B.

The IPO was one of the most heavily subscribed IPOs in Hong Kong in 2016 with the international tranche at more than 10 times and the domestic public offer at around 37 times.

BOC Aviation first whet the appetite of Asian investors by issuing bonds, from 2000 onwards, on an unrated basis from Singapore. Then, in 2012, the lessor received its first corporate ratings of BBB from Standard & Poor's and A- by Fitch Ratings. Standard & Poor's has since upgraded the lessor to A-.

It went on to access the Reg S market, which is the market for debt offerings outside the USA for US and foreign issuers, before finally registering under both the 144A and Reg S together – a move that allows issuers to tap the US investor base. This resulted in a $750 million, 10-year issuance backed by a $3.2 billion orderbook with a final pricing fixed at 99.59% on a coupon of 3.875% to yield 3.925%, or 215 basis points over US Treasuries.

M&A deal of the year: **FedEx merger with TNT Express**

Borrower: FedEx

Structure: M&A

Currency/amount: €4.4 billion

Lawyers (and role): Allen & Overy (TNT Express); NautaDutilh (FedEx); Baker McKenzie (FedEx)

Banks (and role): Goldman Sachs (TNT Express); JP Morgan (FedEx)

Date signed: 7 April 2015

Date closed: 25 May 2016

Deal highlights

The landscape of the package delivery market changed in 2016 when FedEx closed its €4.4 billion ($4.8 billion) acquisition of TNT Express.

The deal saw the US logistics giant FedEx, which operated a fleet of 650 aircraft at the time, merge with its Dutch rival, whose fleet consisted of around 45 aircraft. With 54,000 employees, operations in 200 countries and more than one million shipments daily, TNT Express was a sizeable purchase and the largest in FedEx's history.

FedEx will now benefit from TNT Express' strong European presence and boost its growth. The combined airlines will be a strong presence in the logistics industry.

FedEx believes that the deal will lead to an improvement to its operating income of between $1.2 billion and $1.5 billion in 2020 compared with the fiscal year 2017.

FedEx says the process is running smoothly, despite having had to invest more than expected in the smaller airline's information technology and operations units, which had been "severely under-invested" in the years running up to the deal, according to its chief financial officer Alan Graf.

The offering price of €8 per share represented a 33% premium to the closing share price on 2 April 2015, the last trading day before the announcement.

The market seems to believe that the merger will be a success. A €3 billion (dollar value) eurobond issuance issued by FedEx in April, the proceeds of which were used to partly fund the takeover, was over five times oversubscribed when it closed. One banker on the deal said there was "stunning interest" from investors, many of whom believe the airlines will merge without any major hiccups.

The deal follows an attempt by fellow air freight operator UPS to buy TNT Express in 2013. UPS was blocked from completing the deal – which valued TNT Express at €5 billion – by the EU's antitrust watchdog.

In March 2017, Europe's highest court annulled the decision, clearing the way for a potential damages claim by UPS. But with FedEx having completed the deal, this will be of little consolation to UPS.

The **FedEx/TNT deal team**

Capital markets deal of the year: **Blackbird ABS**

Borrowers: Air Lease Corporation and Napier Park

Structure: Aircraft asset-backed securities

Currency/amount: $800 million

Assets: 19 aircraft

Lawyers (and role): Hughes Hubbard & Reed (issuers), Milbank, Tweed, Hadley & McCloy (underwriters), A&L Goodbody (Blackbird Capital Aircraft Lease Securitization Limited 2016-1)

Banks (and role): BNP Paribas, Mizuho – joint lead structuring agents & joint lead bookrunners; BofA – global coordinator, joint lead structuring agent & joint lead bookrunner; Citi – joint lead bookrunner and liquidity facility provider; Credit Suisse, Fifth Third Securities, MUFG and Societe Generale – co-managers

Date mandated: 6 September 2016

Date signed: 9 September 2016

Date closed: 15 November 2016

Deal highlights

In November 2016, Air Lease (ALC) and Napier Park Global Capital closed a landmark asset-backed securities (ABS) offering through Blackbird Capital I, secured by a portfolio of 19 aircraft.

The deal stood out for a number of reasons. It was the first aircraft ABS deal to achieve an AA rating since the financial crisis; the tightest A-rated tranche pricing (2.5%); the youngest average aircraft age for an ABS (3.3 years); and more than twice the number of orders and unique investors compared with the previous aircraft ABS.

ALC wanted to standardise the aircraft ABS structure for younger aircraft portfolios and expand the investor base beyond those that typically get involved in aircraft ABS deals. The deal successfully brought in more than 40 investors, including a number from Asia.

"This transaction has set a new benchmark for post-financial crisis aircraft ABS issuances, including the first AA tranche of rated securities, the lowest blended cost of funds through the BBB class, the largest number of investors to place bids, the largest number of investors to get allocated bonds, and the shortest period to execute a transaction in only six weeks," said Ryan McKenna, head of strategic planning of ALC.

The portfolio comprises a mix of narrowbody and widebody aircraft that are serviced by the leasing company.

The deal is made up of three tranches: a $200 million AA tranche priced at 2.487%, a $540 million A tranche at 4.213% and a $60 million B tranche at 5.682%.

Blackbird was the first aircraft ABS since 2012 to feature a AA-rated tranche.

With a weighted average age of 3.3 years, the aircraft in the portfolio was substantially younger than recent ABS transactions.

The AA notes amortised on an eight-year straight-line schedule. The A and B notes amortised on a 16-year straight-line schedule. Kroll Bond Rating Agency and Standard & Poor's gave ratings to the three tranches of AA, A and BBB. The loan-to-value ratio is 19.1% on the AA tranche, 70.5% on the A tranche and 76.3% on the B tranche.

The issuers also offered subordinated notes through Blackbird Capital comprised of D notes and an E note, representing the equity interest in BBIRD Cayman, each of which were purchased by an affiliate of Blackbird.

Innovative deal of the year: **Emirates $750m structured sale and leaseback**

Lessee: Emirates

Lessor: Crianza Aviation

Structure: Senior loan, junior notes and subordinated equity notes in respect of aircraft one; senior loan, first priority notes, second priority notes and subordinated equity notes in respect of aircraft two, senior loan, first priority notes, second priority notes and subordinated equity notes in respect of aircraft three, with, in each case, sale and leaseback arrangements with Emirates. The notes were issued into the capital markets as private placements to many different investors (principally Korean) but also included the establishment of an aircraft investment fund in Korea by Crianza Aviation. Crianza established, placed and invested into the Korean fund platforms, which bought the Korean E-Notes, representing the Junior and Equity Tranches of the deal

Currency/amount: $750 million

Assets: Two Boeing 777s and one A380

Lawyers (and role): Bird & Bird (arrangers); Yulchon (certain investors); Pillsbury (Emirates); Allen & Overy (Seraph) and Walkers (lessor SPVs)

Banks (and role): EMP Structured Assets as arranger, DekaBank as lender

Date closed: 20 December 2016 (aircraft one), 19 December 2016 (aircraft two) and 21 December 2016 (aircraft three)

Deal highlights

The most innovative deal of 2016 was Emirates' $750 million structured sale and leaseback transaction, covering the financing for two Boeing 777s and one Airbus A380.

EMP Structured Assets managed to structure a deal that brought in new investors that had not financed aircraft before, including real estate investors and ultra-high net worth individuals.

The deal featured a senior loan from Germany's DekaBank, junior notes and subordinated equity notes, first priority and second priority notes for three aircraft, all on sale and leaseback deals with Emirates.

The notes were issued into the capital markets as private placements with different (principally Korean) investors but also included the establishment of an aircraft investment fund in Korea. The transaction was arranged by EMP Structured Assets. Seraph was the lease manager.

Bird & Bird acted as legal counsel for EMP Structured Assets and DekaBank, Yulchon acted for certain investors, Pillsbury acted for Emirates, Allen & Overy acted for Seraph and Walkers acted for the lessor special purpose vehicles (together with numerous other local counsel).

Philipp Prior, founding partner, EMP Structured Assets, said: "This was a bit more complicated as we took this as a three-aircraft deal, with different investor groups and included the equity in this and we hadn't done that before with Korea.

We brought the equity with German investors and this was the first time we included an equity portion from Korean investors.

"The biggest obstacle was the timing of the delivery of the three aircraft as everything had to be done before the year end. The treasury team from Emirates worked really well with us to get it done on time."

Prior says that the Emirates team realised that the deal was about the amortisation profile and airline credit and not about how remarketable the aircraft was, in a way which helped maximise returns.

"Even a difficult aircraft with a good airline with a strong amortisation profile is a good investment. There was a 0% balloon strategy on those aircraft and this is what the airline understood," he says.

Jim Bell, partner at Bird & Bird says the deal featured a complex and innovative blend of commercial debt, funds and debt and equity notes. "It really showcases our debt capital markets capabilities."

Editor's deal of the year: **Labrador ABS**

Borrower: Labrador Aviation Finance

Structure: Aircraft asset-backed security

Currency/amount: $709 million

Assets: 20 aircraft

Lawyers (and role): Pillsbury Winthrop Shaw Pittman (Mizuho); Vedder Price (Equity counsel); Clifford Chance US (GECAS); A&L Goodbody (Labrador Aviation Finance Limited and its Irish subsidiaries Labrador Ireland); A&L Goodbody (GECAS)

Banks (and role): Mizuho Securities, sole structuring agent and sole bookrunner; Natixis, liquidity provider; Phoenix American Financial Services, managing agent; Wells Fargo Bank, trustee; Korea Investment Management, equity asset manager; Meritz Securities, equity underwriter

Date mandated: March 2016

Date signed: 8 December 2016

Date closed: 15 December 2016

Deal highlights

In recent years, Korea has been one of the most active new markets in aviation finance. Traditionally, Korean investors have looked at single aircraft, often widebodies, on long-term leases with airlines with strong credit ratings.

But GECAS' $709 million Labrador Aviation Finance asset-backed security (ABS) broke this trend and set several precedents.

Unlike traditional Korean aircraft financings, this involved the sale of a whole portfolio, predominantly comprising narrowbodies on lease to both legacy and low-cost carriers. Qatar Airways, EgyptAir and Garuda Indonesia represented the three largest lessee concentrations in the offering, making up 37.1% of the portfolio, accounting for 15.3%, 12.4% and 9.4%, respectively.

Labrador was the first ABS deal with equity placed in South Korea and the best priced aircraft ABS transaction on a spread basis in 2016. The transaction's $603 million A tranche priced at 2.83% spread over the 5.57-year swap rate and its $106 million B tranche priced at 3.83% spread over the 5.57-year swap rate.

The A tranche had an initial loan-to-value ratio (LTV) of 65%, rated A by Kroll Bond Ratings Agency (KBRA) and Standard & Poor's (S&P), priced with a coupon of 4.3%; and the $106 million B notes, had an LTV of 76.4%, were rated BBB by KBRA and S&P, and had a coupon of 5.682%.

Some of Labrador's low pricing was due to its portfolio of young, liquid and in-production assets. The notes were secured by a portfolio of 20 aircraft on lease to 16 airlines located in 15 countries. The weighted average age of the portfolio was 4.89 years and a weighted average remaining lease term of 7.3 years.

Compared with other recent aircraft ABS transactions, the average age of the Labrador Aviation portfolio is significantly younger. In addition, the portfolio's weighted average remaining lease term is longer than DVB's DCAL securitisation and comparable with Air Lease's Blackbird 2016-1 and Avolon's 2013 Emerald ABS transactions.

The portfolio is 65% narrowbody and 35% widebody, and carries a total appraised value of $928 million, based on the average of the base values provided by Morten Beyer & Agnew, IBA and Avitas. It comprises 17 narrowbody units, representing 64.6% of the total fleet value, with the remainder of the fleet's value, 35.4%, made up of widebody aircraft, including the Airbus A350.

Labrador was the first 144A/Reg S bond format aircraft securitisation for GECAS in over a decade. GECAS had not entered the ABS market since 2014 in loan format, when it issued a $670 million ABS offering. The deal was secured against 26 aircraft, valued at approximately $900 million, supported the sale of a portfolio of aircraft to Merx Aviation.

"The Labrador deal was the first large, mixed aircraft portfolio sale in Korea, which allowed investors to deploy significant amounts of capital while diversifying their risk exposure," Greg Conlon, GECAS's executive vice president, Capital Markets tells *Airfinance Journal*. "What made this deal innovative was our co-issuer structure, which split out US aircraft and expanded the equity pool beyond traditional US or European onshore entities. The use of the Asian E-Note with ABS debt in a 144/Reg S structure attracted both US and global investors."

Labrador was the first ever aircraft ABS transaction with E-Notes sold to Asian (South Korean) investors. There was a fast execution on the debt placement with time between printing of preliminary offering memorandums and pricing only eight business days over Thanksgiving 2016 in a post US-election volatile market.

Mizuho Securities was the sole structuring agent and bookrunner while Phoenix American acted as the managing agent on the transaction. Natixis provided the initial liquidity facility in the transaction. GECAS is the servicer of the portfolio.

Several law firms were involved, including Clifford Chance, which acted for the issuer; Pillsbury Winthrop Shaw Pittman, which acted for the underwriter, and Vedder Price, which acted as counsel to the equity.

Prior to Labrador, the only deals Korean investors had invested in were on one or, in the rare case, where two widebodies are on lease to a flag carrier, according to Vinodh Srinivasan, managing director and co-head of structured credit group, Mizuho Securities USA. "The thinking behind that was: I'll get comfortable with the airline that makes the lease payments, so I don't have to worry about the aircraft type as much," he says.

He adds: "Widebodies allow Korean investors to invest more equity than a narrowbody deal. It took a lot of time for us to realign their thinking for them to care about the aircraft type as well as the airline credit."

The deal allowed investors to diversify away from single airline and aircraft type risk, while having the largest leasing company in the world to service their aircraft. It allowed investors to deploy a large amount of equity but reduce the risk of their investment.

Labrador was the first product to give Korean investors an opportunity to deploy large equity volumes and diversify their risk exposure by buying into a large, mixed aircraft portfolio. The transaction is likely to accelerate the growth of the Korean market, as more investors are educated about the potential returns to be made from aircraft. Labrador illustrated the growth potential for the Korean equity market, which has grown substantially over just a few short years.

The **Labrador ABS deal team**, *collecting thier award from AFJ's editor* **Jack Dutton**


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Overall deal of the year: **Bohai Leasing's takeover of Avolon**

Borrower/Issuer: Avolon

Amount: $7.6 billion

Structure: Sale of Avolon to Bohai Leasing

Advisors: JP Morgan, Morgan Stanley, Bravia Capital, UBS

Lawyers: Weil, Gotshal & Manges, Sidley Austin

Closed: 8 January 2016

Deal highlights

Shenzhen-listed Bohai Leasing closed the purchase of Irish-lessor Avolon on 8 January 2016. The $7.6 billion acquisition saw the subsidiary of the Haikou-based conglomerate HNA Group purchase the entirety of Avolon. At the time, the deal was the largest overseas transaction in history among China's A-share listed companies, and the second largest acquisition of a US-listed company and fifth largest acquisition overall among Chinese companies.

The deal was announced just nine months after Avolon's initial public offering (IPO) against a backdrop of volatile market conditions where the average share price movement was +3% among lessor peers in 2015, along with stagnant markets and falling oil prices.

Avolon delivered a 55% return to shareholders who invested in the IPO in December 2014 – a significant return exceeding all global market indices by a multiple. The IPO was the largest ever listing on the New York Stock Exchange (NYSE) by an Irish-founded company, and the company's exit via the Bohai acquisition was one of the shortest ever tenures on the NYSE.

The merger with Bohai Leasing catapulted Avolon to the top five leasing firm in the world with a fleet of over 400 aircraft and gave it an equity injection of $1.2 billion to drive organic and acquisition growth.

Following the merger, Avolon is now the core leasing brand for Bohai Leasing and its parent HNA Group.

Avolon also assumed management of the Hong Kong Aviation Capital (HKAC) business. HKAC's fleet, processes and systems was fully incorporated into Avolon during the first half of 2016.

"It shows the efficiency and economies of scale when that can be achieved when you combine different platforms," said Avolon's chief financial officer Andy Cronin, speaking to *Airfinance Journal* about the deal.

He adds that one of the challenges of closing the deal was negotiating the differing regulatory requirements of the New York and Chinese stock exchanges.

"In China, there is a much higher level of regulation, with more diligence requirement. There is far more third party evidencing, so for example in the US if you buy an aircraft the regulators don't need to see a bill of sale for an individual aircraft, whereas in China they do. It's a much more forensic, bottoms-up regulation than in the US," he says.

Being part of a huge conglomerate like HNA Group has significant advantages for Avolon, Cronin says.

"From the manufacturers' perspective, we are part of a huge airline group as well as being part of a large multinational conglomerate. You need to look at HNA as significantly more than an airline," he says, pointing to the multiple acquisitions HNA Group has made in recent years. The most recent of these at the time of writing is HNA Group's acquisition of a 16.79% share of the Swiss travel retailer Dufry.

"HNA Group have grown that business from a start-up to be one of the largest companies in the world. They bring an expertise and a perspective on the industry, which is very unique and insightful," Cronin adds.

Avolon's transformation into a Chinese-owned leasing company raises the question of how much of its business will be devoted to China.

"We will track the market. I don't think we will be doing a disproportionate amount of on-shore Chinese financing," says Cronin.

"Chinese airlines often do finance leasing rather than operating leasing. Bohai has a significant finance lease business but Avolon does operating leasing, so we are obviously very well positioned to do a significant amount of operating leasing business in China."

> *Bohai has a significant finance lease business but Avolon does operating leasing, so we are obviously very well positioned to do a significant amount of operating leasing business in China.*
>
> **Andy Cronin**, *chief financial officer, Avolon*

Kartik Hariharan, executive director, Morgan Stanley says the challenges of the deal were "numerous", including the crossborder nature with parties in various geographies, absolute size of the financing and the carve-out nature of the financials that made valuation complicated. Additionally, tax related structuring issues surfaced at the later stages.

"Having a highly experienced and deal savvy management team at Avolon and Bohai made it easier and faster to deal with the challenges," Hariharan says, adding that the deal showed the ability of Chinese acquirers to pull off complicated cross-border merger and aquistions.

"Finally, it showed that Western debt financing markets love the aircraft leasing space, as evidenced by attractive borrowing rates achieved by Avolon during the financing transaction."

The **Avolon-Bohai deal team**, *and Bertrand Grabowski, special advisor to DAE and one of AFJ's independent judges*

Airline treasury team of the year: **American Airlines**

American Airlines scoops the prize this year for carrying out major investment in its fleet and for using a broad range of financial structures.

Last year, the airline invested $4.4 billion in new aircraft, comprising 55 new mainline and 42 new regional aircraft. It took advantage of historically low interest rates to finance this fleet renewal and tapped a variety of markets.

The airline has been a prolific issuer of enhanced equipment trust certificates (EETC) for years, but in 2016 it tapped this market more than any other airline by issuing $2.8 billion in three separate EETC deals. The deals were well priced, with an average fixed interest rate of 3.63%.

"Something like 37% of the outstanding EETC paper was issued by an entity that is now subsumed within American Airlines", said Tom Weir, vice president and treasurer at the airline. "We were mindful of the potential that we could go to that market too often. But right now, there's no obvious pricing penalty that we're paying for over-allocating our financing to that market," he adds, noting that there was plenty of Asian appetite for recent EETC deals.

The airline also closed $1.8 billion in other loans, bearing interest at fixed and variable rates of LIBOR plus margin, which averaged 2.96% at the end of the year.

> *The repricing of the JFK bonds was a very good transaction for us.*
>
> **Tom Weir**, *vice president and treasurer, American Airlines*

The ***American Airlines treasury team****, collecting thier award from AFJ's editor* ***Jack Dutton***

On top of this, the airline issued $844 million of special facility revenue bonds ("JFK bonds") via the New York Transportation Development Corporation (a special vehicle that issues debt for infrastructure projects), to refinance a prior issuance. The deal was rated "BB" by Fitch Ratings, which is one notch higher than the airline's long-term issuer default rating. This is due to the strategic importance of American's position at JFK airport.

"The repricing of the JFK bonds was a very good transaction for us. We felt we had good cooperation from the port authority and I think our timing was very good," adds Weir.

The deal involved bringing together local authorities and lenders in a complicated deal. But it closed successfully despite the number of parties involved.

American Airlines also tapped the capital markets in August 2016 through a private placement covering two Boeing 737-800 deliveries. BNP Paribas acted as the sole structuring and placement agent. This transaction was to diversify funding sources and gain access to a new investor base different from the typical investor base for public EETC issuances. It was the first primary issuance by American Airlines to be placed with Japanese investors. The transaction features straight line amortisation for the senior and junior notes, one Japanese rating agency (Rating & Investment Information, Inc.), and Reg S format.

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

The year 2016 was a pivotal one for operating lessor AerCap. The lessor was upgraded to investment grade by two ratings agencies, it diversified its financing sources and re-priced several deals. In February 2017, AerCap won an investment grade rating from a third agency, reflecting the improvements it made throughout the year.

The lessor closed $4.6 billion in new deals in 2016, bringing the total amount of financing raised to $27 billion since it announced the acquisition of ILFC at the end of 2013. It also sold 141 aircraft and recorded $2.37 billion in proceeds from the sale or disposal of assets - $800 million more than the year before.

"We continued to focus on proactive portfolio management initiatives, which have resulted in executing over $3 billion in asset sales. This, combined with signing a record 279 lease agreements, illustrates the scale of AerCap's platform and the expertise of its people," said AerCap's chief executive officer Aengus Kelly.

Explaining their decisions to upgrade the lessor, the ratings agencies noted AerCap's deleveraging efforts, declining average fleet age, and increasing number of unencumbered assets.

AerCap reduced its total debt by $2 billion to $27.7 billion in 2016. The lessor's adjusted debt/equity ratio was 2.7 down from 2.9 in 2015.

The Irish-based lessor ended the year with 1,566 aircraft that were owned, on order or managed. Its owned fleet's average age was 7.4 years and the average remaining contracted lease term was 6.4 years.

AerCap teamed up for the first time with Financial Products Group (FPG) in 2016 to execute a Jolco structure. The senior debt was provided by SMTB and CA-CIB.

"We are most proud of developing the diversity of our funding sources and the successful completion of our first deals in the Korean market, in addition to adding Japanese operating lease with call option (Jolco) transactions to our liability structure", said Paul Rofe, group treasurer at AerCap.

This year, the lessor will try to build on its momentum to further improve its credit profile.

"We will continue to source diverse forms of long term committed financing from multiple geographies in addition to managing our liquidity profile," adds Rofe.

The ***Aercap treasury team****, collecting thier award from AFJ's editor* ***Jack Dutton***

Aviation woman of the year: **Amelia Anderson**

American Airlines' managing director and assistant treasurer, Amelia Anderson, has been chosen as *Airfinance Journal*'s Aviation Woman of the Year based on a public nomination process, which ran through the month of February.

Anderson, whose team is responsible for the execution and administration of American's corporate debt, completing over $20 billion of financing transactions in the three years following the merger with US Airways in December 2013, won the process by an overwhelming majority of submissions received from the global aviation industry.

She is the first recipient of *Airfinance Journal*'s Aviation Woman of the Year award. In addition to her work at American, Anderson is known as the co-founder of Advancing Women in Aviation Roundtable (AWAR), a grassroots initiative working with senior executives to build awareness and develop strategies to promote the development and advancement of women leaders. "In many ways I share this award with my AWAR co-founder, Dana Barta of Morgan Stanley," she says.

Anderson also serves as co-chair of American Airlines' women's leadership programme, and she is actively involved in American Airlines' MBA recruiting process.

Amelia Anderson, *managing director and assistant treasurer, American Airlines*

According to Anderson, one of the best ways to "drive change" for women starts with education and having more girls and young women engaging in "stem subjects" or science, technology, engineering and mathematics.

"When you look at women in CEO positions, they are disproportionately likely to hold degrees in engineering, math or computer science," Anderson tells *Airfinance Journal* in an interview. "So, yes, there is a strong link."

However, according to the Women in Science and Engineering (Wise) campaign's 2016 analysis of UK labour market statistics, women make up just 12.8% of the Stem workforce. The proportion had increased by only 0.2 percentage points since their analysis in 2012.

Anderson acknowledges the road to becoming a CEO is still a difficult one for women, with only 5% of company chiefs being female at Fortune 500 companies.

She speaks globally through AWAR trying to raise awareness about the factors impacting women as they transition from entry level to middle management and then to the boardroom.

"Women tend to have those natural behaviours that lend themselves to team building and people development, but as you move up in an organisation, especially in operational or finance roles, you have to do more than just lead and develop your team, you also have to be able to compete and to go toe-to-toe with your competition," she says, adding: "Business is still a rough and tumble place, and there are times women have to be comfortable taking a tough stand. So, we need to recognise our traditional behavioural styles, and be aware of situations when those behaviours may need to change."

Anderson holds an MBA in corporate finance from Georgia State University in Atlanta, and a BS in finance and economics from the University of Alabama in Huntsville.

Young person of the year: **Ahsan Gulabkhan**

Having left university a little over 10 years ago, Ahsan Gulabkhan is now senior legal counsel at UK carrier Virgin Atlantic, where he oversees a broad range of legal matters including fleet financing, engineering, operations, airport issues and alliances and strategy.

Gulabkhan studied law at Nottingham University, graduating in 2005. He stayed there for law school and then joined Norton Rose as a trainee solicitor in 2007 (as it was then known, before its merger with Fulbright & Jaworski in 2013). He qualified in January 2009, into the asset finance team, which is where he gained his first experience in commercial aviation law.

He joined Virgin Atlantic in September 2013, where he has since gained exposure to a number of challenging and innovative deals.

"It's been a very busy three years," he tells *Airfinance Journal*.

One stand-out deal was the £220 million ($283 million) Heathrow airport slots securitisation. This deal, which won the "New structures" category in AFJ's 2015 Deals of the Year, saw the airline attract blue-chip investors to an innovative, low-cost deal.

Ahsan Gulabkhan, *senior legal counsel, Virgin Atlantic*

"It was not an easy transaction to do," Gulabkhan notes. "It involved setting up the subsidiary airline [Virgin Atlantic International – the issuer of the notes] which is not a small-scale operation. It took the best part of a year to do it, but being involved in a deal like that is one of those career highlights."

Under his tenure at the airline, Virgin Atlantic has undertaken an ambitious re-fleeting programme that has seen it replace older Boeing 747s with new 787s. The airline has used a combination of cash purchases, sale and leasebacks and Japanese operating lease with call option (Jolco) financings.

For Gulabkhan, aviation has always been a passion: "I always knew that it was something that I wanted to do", he says. As a child, he collected aircraft magazines and, whenever at the airport, was "pressed up against the glass looking at the runway".

Since making it a career, he has made friends in the industry and enjoys the "wonderfully close-knit community" of professionals that he gets to meet on a regular basis.

When he gets a chance, Gulabkhan enjoys squash, badminton and cricket. He also plays the guitar and enjoys food and travel. Having recently returned from a week's holiday in Barbados, he is now ready for the next milestone: getting married this August.

Lifetime achievement award: **Tom Budgett**

Tom Budgett, a partner at Berwin Leighton Paisner (BLP), wins this prestigious award for a career that has spanned 45 years.

Budgett graduated from Cambridge with an MA in law in 1969. He joined a provincial firm in 1970 and left for Clifford Turner (now Clifford Chance) in early 1973. He became a partner there in 1981 and stayed for another 20 years.

In 2001, feeling like he had enough of law, he left for investment banking, with a team that was acquired by Investec in 2002. He left the bank in 2006, "having noticed that everybody I was working with was probably younger than my oldest son." After that he returned to BLP, in 2006, where he remained until his retirement this March.

Commercial aviation finance has changed dramatically in the course of his career, and Budgett has played an important role in that change. In the last 10 years, he notes, operating leasing has become far more widespread. Far more investors are entering the space as aircraft become better recognised as a stable source of long-term income. And aircraft-backed capital markets products, traditionally seen only in the USA, have blossomed in other regions such as Europe and Asia.

L to R: **Tom Budgett**, *partner, Berwin Leighton Paisner collecting his award from AFJ's editor* **Jack Dutton**

> *His global experience with Clifford Chance and Investec has been an invaluable asset.*
>
> **Russell Clifford**, *head of asset finance, BLP*

Among decades of deals, Budgett is especially proud of advising on a couple of landmark transactions. He worked on a fully defeased European ECA-supported Japanese leveraged lease for an Indian carrier at a time when European ECAs were still new to the market. This deal had every bell and whistle contemplated at that time. He also advised on CityJet's purchase of up to 32 Sukhoi Superjet in 2015, which was the first time that a European buyer had purchased that aircraft type.

Although formally retired, Budgett continues to work for a BLP service called Lawyers on Demand, which supplies legal advice on select projects. He intends to also focus on pro bono work by advising air ambulance services in the UK on their purchases and financing of helicopters. By offering his services for free, Budgett hopes to enable these charities to make substantial savings and direct more resources towards their important work.

"His global experience with Clifford Chance and as a banker with Investec, combined with his acute insight and judgement in problem-solving, has been an invaluable asset to clients and colleagues alike. His career contributions are proportionate to the explosive growth of the aircraft finance sector," says Russell Clifford, head of asset finance at BLP.

Colin Thaine, a consultant at the firm, adds: "We at BLP are proud to be associated with his accomplishments as a partner and consultant advising leading elements of the industry."

Most improved airline of the year: **United Airlines**

During the past two years, United's financial fundamentals have seen a significant improvement, according to *Airfinance Journal*'s Financial Ratings model.

The model evaluates four key ratios:

- **EBITDAR**: United's margin of 22.1% for 2016 was ahead of American's and just a touch behind Delta's;
- **Fixed charge cover**: United was ahead of American;
- **Liquidity**: United's position was a strong second place behind American;
- **Leverage**: United's at 2x (improved from 3.2x two years ago) also puts it in second place.

> *United ended 2016 with $5.8 billion in unrestricted liquidity, including $1.35 billion of undrawn commitments under its revolving credit facility.*

Underlying some of these improvements was strong operational performance. United set new all-time records for departure performance, arrival performance, completion factor and baggage handling.

United ended the year 2016 with $5.8 billion in unrestricted liquidity, including $1.35 billion of undrawn commitments under its revolving credit facility.

Operating cash flow was $5.5 billion and free cash flow $2.2 billion for 2016, permitting some reduction in debt.

The company continued to invest in its business through capital expenditures of $3.2 billion for the full year. Including assets acquired through the issuance of debt and airport construction financing and excluding fully reimbursable projects, the company invested $3.3 billion for the full year in adjusted capital expenditures.

Gross debt balance at year-end, including capitalised operating leases, was $16.5 billion, about $600 million less than at the end of 2015.

L to R: **Jason Fein** *from United Airlines, collecting his award from AFJ's managing director* **Mike Duff**

The company has publicly stated that maintaining a strong balance sheet remains the top strategic priority which lends confidence that the balance sheet improvement will continue and that an investment grade rating should not be out of reach on a two-three year view.

BOC Aviation – one year on from IPO

Robert Martin, BOC Aviation's managing director and chief executive officer, says the lessor is going from strength to strength a year after going public.

BOC Aviation has added $550 million of new equity on its balance sheet since going public on the Hong Kong Stock Exchange last year.

The Singapore-based lessor had put all of this equity to work by the end of 2016, executing some large transactions, including one with Air China for five widebodies.

That growth will continue this year and the company expects to take delivery of 80 aircraft in total, which will "build the balance sheet growth that we were planning for", the company's managing director and chief executive officer Robert Martin tells *Airfinance Journal*.

"When we took the new equity, we dipped down to about 2.6 to one debt-to-equity, and our aim is to gradually re-leverage up to about 3.5 to 4 to one by the end of 2018, which we see as being our optimal debt-to-equity," he explains.

In April, the company took delivery of its 500th Airbus and Boeing aircraft – an Airbus A320 leased to China Eastern. In May, BOC Aviation will pass the milestone of having a total of 700 commitments to both manufacturers, counting 500 aircraft "plus effectively 200 aircraft on order or committed purchase and leaseback".

BOC Aviation became a public lessor on 1 June last year after its listing.

The IPO was backed by 11 cornerstone investors: China Investment, Silk Road Fund, China Development Bank, China Life Franklin Asset Management, Oman Investment Fund, Hony Capital Group, Elion Resources Group, Fullerton Fund Management, Fosun International, Boeing and China South Industries Assets Management.

The investors agreed to purchase a total of 107.7 million shares totalling HK$4.52 billion ($583 million), or 52% of the global offering size before the exercise of the over-allotment option.

Martin says that being listed comes with pros and cons, such as having a much greater obligation to disclose information publicly, though overall it gives a "greater feeling of transparency".

Combining this with an investment-grade credit rating gives a company "probably the best case when you go to the capital markets, whether it be debt or equity".

> *"We put in place a $1.5 billion revolver facility last year which we are using as we deliver the aircraft and we're gradually increasing the drawings under that."*
>
> **Robert Martin**, managing director and chief executive officer, BOC Aviation

Martin emphasises, however, that BOC Aviation has been A- rated since 2012, long before the IPO, so capital markets fundraising has never been difficult.

"One thing we have always been very proud about is our cost of funding, and basically that hasn't changed," says Martin.

In 2015, BOC Aviation issued a 24-aircraft asset-backed securities (ABS) deal – the first of its kind in Asia. The company will not be returning to that market this year because it "simply doesn't need to do one".

Martin says: "Our aircraft sales numbers are going to be less than last year, and when we looked at the market this year, we didn't think it's giving a premium to selling the aircraft individually." He adds that an ABS in 2018 is more likely.

Martin says the key for BOC Aviation in ABS transactions is the E-note, because the company does not want to issue the deal as a means for financing.

"It's too expensive; we can fund ourselves much cheaper in the unsecured markets," he explains. "The key for us is: 'is there a market for the E-note?' That's a market that opens and closes."

He adds that, this year, BOC Aviation has been selling its aircraft in smaller numbers, or in ones and twos, and has not done a portfolio trade and does not foresee doing one. However, the company will issue some bonds later in 2017, perhaps as early as the first half.

"We put in place a $1.5 billion revolver facility last year which we are using as we deliver the aircraft and we're gradually increasing the drawings under that, and once we get past the half-a-billion dollar stage then we'll go into the capital markets. We'll probably do a five-year unsecured."

BOC Aviation versus CDB Leasing

Market analysts inevitably like to compare and contrast BOC Aviation's IPO with CDB Leasing's, since the two took place around the same time.

CDB Leasing raised $800 million from its IPO. Bank of America Merrill Lynch, Citic, CLSA Securities and Deutsche Bank were joint sponsors, as well as global coordinators and bookrunners alongside HSBC and UBS.

BNP Paribas, Bank of Communications, China Construction Bank International, CMB International, Everbright Securities International, Haitong International Capital, JP Morgan and Morgan Stanley were joint bookrunners.

Martin argues that the "very clear difference" between the two IPOs is that, while BOC Aviation is a "pure aircraft operating lease company" that does not invest in other asset types, CDB Leasing is a "much more broad-based combination of a finance lessor and operating lessor" that invests in multiple asset classes.

CDB Leasing recently established an entity called CDB Aviation based in Ireland and Hong Kong that is dedicated to leasing aircraft. Martin declined to comment on this.

Hong Kong tax reforms

BOC Aviation's place of listing, Hong Kong, is not its base of operations, which remains in Singapore, However, Hong Kong is in the process of reviewing a significant bill that would lower the effective tax rate for locally domiciled aircraft operating lessors.

Martin is observing this development with interest, but cautions it will take a decent amount of time for Hong Kong to establish the relevant double tax treaties that would make the region competitive compared with Ireland and Singapore.

"There is a complex web of double tax treaties that are set up, so it's not just about the corporate tax rate... Even if the legislation is passed, it will take time to build that and get it in place. So this is not going to be a rapid process," he says.

Martin adds that the first question for Hong Kong is whether it is looking to attract new entrants to the special administrative region or aiming to persuade the existing 350 (his estimate) operating lessors in the world to change domicile to Hong Kong.

"It's unclear to us which one they are focused on at this point," he says.

He adds that Singapore "definitely" has a better double tax treaty network for aircraft lessors than Hong Kong, noting that Singapore started its aircraft leasing incentive scheme in 1995 and so has a 20-year head start.

"The other thing to remember is we are moving into a period of complex interrelations between countries related to political changes in the geopolitical scene," he says.

"The obvious one is the Trump government. What are they going to do with double taxation treaties? The US market is still 20% of the global market. What is Europe going to do? Even with China they have set up their own free-trade zones and so the question is: 'How does Hong Kong fit in with that?'"

Avolon's growth – a threat?

Avolon, one of BOC Aviation's rivals, has expanded rapidly recently with its acquisition by HNA Group affiliate Bohai Leasing. The $7.6 billion transaction was significant enough to win *Airfinance Journal*'s Overall Deal of the Year Award for 2016. In April 2017, Avolon purchased CIT Aerospace for $10.38 billion.

Despite Avolon's rapid expansion, Martin remains unfazed by the potential threat to BOC Aviation, arguing that industry concentration and consolidation also has to be considered.

"If you calculate industry concentration now and compare it with 10 years ago, it's hardly moved. If you look at the proportion of the market, the top 10 players, I think today those top 10 players, including the Avolon acquisition, is about 53% of the total market, and that needle hasn't moved much," he says.

"CIT was already in the top 10. Avolon was probably just about there. So all that's happened is you've ended up with two rather than one."

He also makes reference to Dubai Aerospace Enterprises' acquisition of Terra Firma's AWAS portfolio.

"They've just acquired someone who was in the second half of the top 10, so all you've done is just made a slightly bigger company. I don't think it makes that much difference," says Martin.

"If you look at who we're competing with day in, day out, it hasn't really changed off the back of these two acquisitions."

Fleet

The core of BOC Aviation's fleet will always be the A320 and 737 types because it has had "good runs" on both assets.

"We've now placed our last A320, so going forwards we just have Neos delivering. Then basically on the 737 side we have about 10 next year and then we're on to the 737 Maxs," explains Martin.

"What we have been doing recently on the widebody side is doing back-to-back transactions. We've done 777-300ERs on very long-term leases with THY [Turkish Airlines]. We picked up a couple of 747-8 freighters on very long leases to AirBridgeCargo. We'll always have up to 30% of our portfolio invested in widebodies by dollars, and that includes widebody freighters."

The political situation in Turkey has caused uncertainty among some market segments, including the Japanese operating lease with call option market. Asked if he is worried about this, Martin says he is not.

"My feeling is Turkey has been through a period of rationalisation. There have been some carriers that have ceased operations. Always what we do in this situation is we look for the strongest carrier in a market that is consolidating," he says.

"If you think back to 2011-2012, we did a lot of stuff with Iberia down in Spain when that market was having problems. And so the same here we are dealing with THY, who are the strongest carrier in the market."

PEMCO enters 737NG conversion market

With a weakening passenger market, the 737-700 is entering a new era.

Source: PEMCO, May 2017

Freighter conversion specialist PEMCO World Air Services is entering the Boeing 737-700 conversion market with two products: the 737-700 Full-Freighter and the 737-700 FlexCombi™.

This market segment has been popular, with many 737-300 freighter conversions performed, in which PEMCO has a lot of expertise.

PEMCO will be competing with Israel Aerospace Industries (IAI), which announced 15 passenger-to-freighter Boeing 737-700/-800s conversions last October with Spectre Air Capital.

"We're excited to finally announce the launch of our 700-series conversion programmes for the Boeing 737," says PEMCO's director of conversion programmes Mike Andrews.

The programmes will be marketed as 737-700FC (passenger-to-FlexCombi™) and 737-700F (passenger-to-freighter) models, says PEMCO.

"Over the past several months, we have worked closely with our customers to fully understand their requirements and implement a comprehensive solution," states the company.

The 737-700 has been the second most successful member of the 737 family for Boeing (after the 737-800) with about 1,051 of the type currently in service, according to *Airfinance Journal*'s Fleet Tracker. In addition, 19 aircraft are in storage and/or transiting between operators.

> *We've sparked a lot of interest among airlines, lessors and operators. The 737-700F will eventually replace the -300F.*
>
> **Mike Andrews**, director of conversion programmes, PEMCO

About 53 aircraft have been retired from service, of which 13 were withdrawn in 2016.

Although the 737-700 has established a diverse and widespread operator base, concentration of the fleet has been an issue. Southwest Airlines' fleet accounts for 495 in active service.

The passenger market for the type has shown signs of weakening for a few years because of intense competition and the general trend for operators to move to larger aircraft.

Andrews sees a market for more than 200 units.

"There's about 1,100 737-700 aircraft, and we're projecting about 20% will be converted into freighters," he says.

"We've sparked a lot of interest among airlines, lessors and operators. The 737-700F will eventually replace the -300F. The -700FC is a unique aircraft, that won't necessarily replace a product, but may be an alternative for the combi or quick change variant, depending on the operator's needs."

Andrews says candidate aircraft for a conversion will be 10 to 15 years old, but there are other factors to consider such as flight cycles and flight hours. Maximum take-off weight is 154,000lbs for both the -700F and -700FC variants. The MTOW is the aircraft as-delivered weights.

"Ideally, 737-700 values need to be around $4 million to $8 million, but it'll be a couple of years until we see those values in place. That said, the acquisition cost is much higher for the 737-800, which means the -700 is the more attractive option at the present time," adds Andrews.

The launch customer for the 737-700FC variant is Bahrain-based Chisholm Enterprises, an internationally recognised provider of tailored aviation and business solutions in the Middle East. Its subsidiary Texel Air, a non-scheduled cargo airline, will operate the 737-700FC model from Bahrain.

The company also announced agreements during the first quarter for the passenger-to-freighter modification of five 737 aircraft, all for China-based airlines, raising to nine its backlog of 737 conversion orders.

AEI sees buoyant **CRJ conversion market**

The CRJ cargo conversion programme is already proving a huge success.

The CRJ-200 Freighter's maiden flight in July last year

> *I believe that most CRJ-100SF, CRJ-200SF aircraft will be operated on longer-range regional services with thin demand that require the speed of a jet but can't support larger narrowbody freighters.*

Robert Convey, vice-president marketing, Aeronautical Engineers

Six months after redelivering its first CRJ-200SF, cargo conversion company Aeronautical Engineers (AEI) says the programme is far exceeding expectations and there is much interest from the industry.

AEI says it has received commitments for 54 aircraft conversions for the CRJ programme, including 28 disclosed orders from Avmax (eight units), Farnair (six units), IFL Group (four units), Navigatair (six units) and Aeronaves TSM (four units).

The CRJ-200SF programme was launched in February 2013. Supplemental type certificate was obtained on 27 October and the first delivery was handed over to IFL Group in December 2016.

"The interest remains high. AEI is forecasting over 100 conversions through the life of the programme," says vice-president marketing Robert Convey.

The AEI CRJ-200SF is the only passenger-to-freighter conversion product that offers operators two separate cargo loading system options: eight 61.5-inch x 88-inch or eight 62-inch x 88-inch unit load device pallet positions for containerisation.

This unique capability is achievable because of AEI's large 94-inch x 77-inch main deck cargo door. Depending on the model and aircraft weight limits, the CRJ-200SF will have a main deck payload of up to 14,840lbs (6,731kgs). The aircraft also incorporates up to two supernumerary seats and houses a 9g rigid cargo/smoke barrier with sliding door.

At this time AEI is not offering a floor bulk loaded freighter.

AEI is forecasting the delivery of four to five conversions in 2017. The business calls for 12 units in 2018 and 15 the year after.

This involved installing a 94-inch x 77-inch cargo door on the left side of the fuselage and turning the main deck into a Class E cargo compartment.

Ancra International is the exclusive supplier of CRJ-200SF eight-pallet configuration 1.75-inch cargo loading systems (CLS) to AEI.

The basic CLS, applicable for the eight 61.5-inch x 88-inch unit load device positions, is included in the purchase price. The CLS is optional for the eight 62-inch x 88-inch unit load device positions version.

The kit includes the stripping out of all passenger elements of the cabin, the installation of protective flooring, fuselage liners, ceiling panels and fire and smoke suppressants, a 28VDC independent cargo door hydraulic system. The cabin windows are replaced with aluminium window plugs.

Containers will be loaded through the left forward door. In the all-cargo configuration, the CRJ-200SF will have a cargo volume of about 41.1m3 (1,452ft3) and a payload of 6,731kgs.

At 24,000kgs, maximum take-off weight of the long-range version will be the same as the high-gross-weight version of the CRJ-200.

The conversion of a CRJ-200 is understood to take 130 days and the unit list price is $1.85 million. The aircraft are converted at AEI's authorised conversion centres – Commercial Jet located in Miami, Florida, and in Dothan, Alabama.

Used CRJ-200s converted into special freighters provide airfreight operators the ability to meet demand for efficient freight transportation with a customised aircraft.

AEI says the CRJ-200SF aircraft has a jet speed advantage over its 50-seat competitors for long, thin and niche routes. The company believes its superior economics apply for mid- to long-haul cargo.

"I believe that most CRJ-100SF, CRJ-200SF aircraft will be operated on longer-range regional services with thin demand that require the speed of a jet but can't support larger narrowbody freighters," says Convey.

The CRJ-100/-200 aircraft programme has a proven robust commercial aircraft platform. The programme clocked 935 deliveries to customers and there are still 562 passenger aircraft in service and 113 stored, according to *Airfinance Journal*'s Fleet Tracker.

Values

The 50-seat regional jet market has been soft for years because operators have shifted to larger models. However, its operator base has grown as large fleets have been integrated by smaller operators.

This is a seller market mainly, and lease rates for passenger aircraft have been between $30,000 and $55,000 across the board.

On the lower side of the spectrum, units sell at a level of between $1 million and $1.5 million. Convey says aircraft in better condition are expected to sell in the $2.5 million range.

Precision sees second life in 757 conversions

E-commerce has kicked life into the 757 conversion market, and Precision Aircraft Solutions is at the forefront of the revival.

Precision Aircraft Solutions believes the 757 cargo conversion market will awaken over the next three years as the industry moves towards a cubic foot volume model driven by the recent boom of e-commerce.

Precision's vice-president of marketing, Brian McCarthy, argues that cargo density for the e-commerce player has decreased while higher volume aircraft is the current trend. The 757 model is at the frontline of this demand for the next few years, he says.

"The density of the e-commerce cargo is lighter. The small volume aircraft are not going to be as popular as in the past," says McCarthy.

Going forward, the volume aspect of the cargo aircraft is going to be important, he says. The likes of the 757 and Airbus A321 freighters with a 14-pallet position configuration will be the popular aircraft, he reckons.

The A321 freighter will be a good aircraft but feedstock will be an issue in the first few years of production. Meanwhile, 757 availability has been plentiful over the past few years.

The Portland, Oregon-based modification centre had converted 90 aircraft at the end of April and will close another 10 conversions this year.

"We currently have a backlog of 25 aircraft," says McCarthy, who adds that this figure is likely to remain at that level for the next few years.

Precision started the 757 conversion programme in the early 2000s and demand for the model will inevitably diminish.

McCarthy sees the 757 conversion market to top close to 145 to 150 aircraft over the next five years because no other aircraft in the 737 Classic and old 757 market will come as close.

Demand remains extremely strong in different parts of the world, he says. China has developed as a strong market and there is strong appetite in Europe.

DHL has converted 13 757s out of its 28-aircraft orderbook with Precision since last year and the pipeline stretches to the end of 2018, says McCarthy.

The company began replacing its 32 14-pallet 757-200SF fleet, operated by European Air Transport Leipzig and DHL Air, with the new cargo conversions in the final quarter of 2015.

This was not an unexpected

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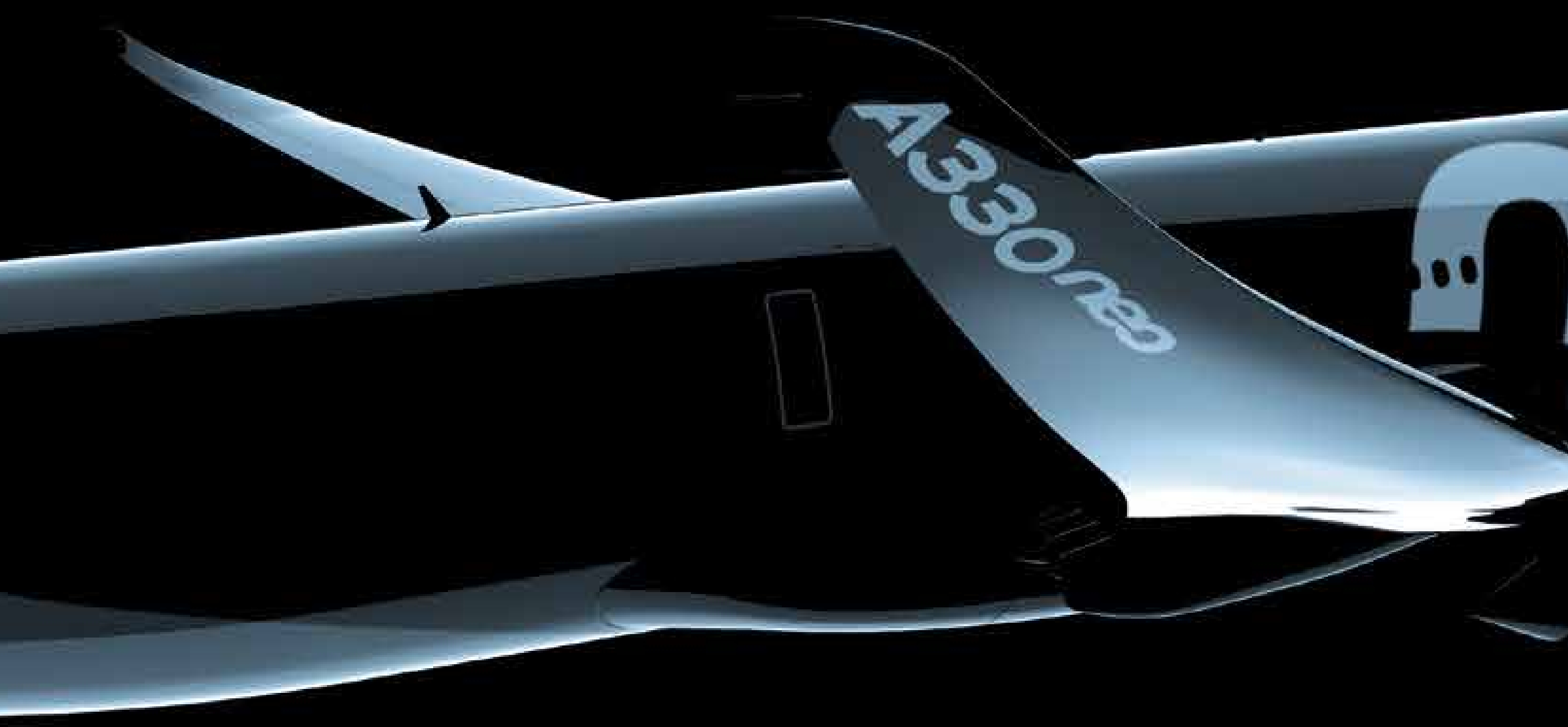


The Airbus Widebody Family
featuring the new Airspace cabin

development because the DHL 757-200SF fleet was predominantly built between 1983 and 1989. All but one were converted to freighters by Boeing, ST Aero and IAI Bedek after 2003.

"In China, the 757 freighter is the next step up from the 737 freighter," says McCarthy. But he points out the congestion problem in China.

"The 767 freighter is difficult to operate on a China eastern seaboard area because of the short sectors. However, the 767 freighter will make sense in a congested skies environment," he says.

"Once the logistic companies start to develop the connecting air hub and network of trucking networks, the economics of a widebody freighter on 1,500- to 1,800-nautical mile sectors make more sense.

"China is a hot market. When I see [e-commerce company] Alibaba's strategy and development, this could increase greater appetite for the 757 aircraft."

He sees the 757 PCF [Precision Conversions Freighter] being developed as a tool for distribution time in e-commerce type of cargo. "The 15-pallet volume aircraft with up to 84,000lbs of cargo is ideal for those type of businesses."

One of the reasons that the 757 freighter is still appealing is the future's traffic and growth restriction, says McCarthy.

He says Atlas Air and ATSG have bought and committed many 767s to fulfil contracts with e-commerce giant Amazon, but believes those fleets will need to be supported by smaller aircraft.

"In the future, the 767 freighter will be too expensive to run in a fleet and the largest freighter narrowbodies will be the most attractive models for China," he says.

The company has performed conversions for many Chinese customers, including SF Airlines, China Postal Airlines and China Air Cargo Corp.

YTO Express Airlines is moving towards the 757 freighter operations after purchasing five units. A request for proposals for conversions has been in the market and the Chinese carrier could soon announce the preferred bidder.

To meet the demand, the conversion company uses maintenance, repair and overhaul facilities involved in the conversions in Chengdu (two lines) and Xiamen (one line).

Precision also has three conversion lines at Flightstar Aircraft Services in Jacksonville and one at HAECO Americas in Greensboro, North Carolina.

The 757-200 PCF is Precision's flagship product and is the only full 15-pallet/unit load device positions 757-200 freighter on the market. The model has the lowest operating empty weight and the highest payload of any 757 conversion in production today. At just 115,500lbs-116,000lbs, it is 1,500lbs to 1,800lbs lighter than the competition, says Precision.

Precision says the 757-200PCF is built to perform and designed to last, using the latest design technology that surpasses the original type certificate data sheet. In a world full of "STC holders" lacking in support, Precision Conversions has the contemporary data set required to back up a commitment to quality conversions, support continued airworthiness, develop future life-extending modifications, offer operational weight increases and, in short, provide support for a great aircraft for decades to come.

The company also offers the 757-200 Precision Conversion Combi (PCC) model, which is configured with 10 full-cargo positions and can seat 54 passengers.

Feedstock

McCarthy says there are about 250 low-cycle 757-200 candidates for conversion but the status of the engines and the life-limited parts is crucial.

The feedstock 757 passenger aircraft is mainly composed of models with 22,000 to 25,000 cycles that are operated on longer sectors, he says.

In the past, the majority of 757 conversions involved aircraft in the 1988- to 1992-vintage range, but today all 1996-built to 2002-vintage models are considered.

But in 2015, Precision received FAA approval for a new maximum zero fuel weight (MZFW) increase on both winglet- and non-winglet-equipped freighters. The upgrade authorisation allowed Precision to increase MZFW as high as 200,000lbs (90,718kg) – 12,000lbs (5,443kg) over the original equipment manufacturer highest certificated MZFW for converted aircraft, including Rolls-Royce- and Pratt & Whitney-powered 757s. Consequently, the 757 gross structural payloads were increased to up to 84,000lbs for Rolls-Royce-powered aircraft variants and 82,000lbs for the Pratt-powered variants.

> *"Once the logistic companies start to develop the connecting air hub and network of trucking networks, the economics of a widebody freighter on 1,500- to 1,800-nautical mile sectors make more sense."*
>
> **Brian McCarthy**, vice-president of marketing, Precision

The weight upgrade expanded available feedstock for operators, as well as improving residual values for owners.

Values

The current market value for 757s built between 1994 and 1995 need to be in the $7 million to $8 million range to match the economics of a conversion, says McCarthy.

However, the values of the latest passenger aircraft (late 1999- to early 2000-vintage models) are still in the $10 million to $12 million range, he adds.

A cargo conversion is priced at $4.65 million, adds McCarthy, but additional work may include the landing gears, airframe maintenance, avionics, as well as weight upgrades.

The total cost of acquiring a converted 757 can be in the $12.5 million to $14.5 million range, says McCarthy, but with additional work on the avionics, engines and component overall, a converted freighter can easily reach $16 million.

Big data's big problem

The maintenance, repair and overhaul industry is increasingly using big data processes to improve its services. But with new-technology aircraft generating more and more information, operators should do more to harness its true potential.

Although the phrase "big data" does not set the pulse racing, the billions of dollars in savings it could generate certainly should.

Using big data is how operators, original equipment manufacturers (OEMs) and maintenance, repair and overhaul (MRO) shops benefit from the vast amounts of information produced by their equipment.

As an aircraft flies, its monitoring equipment creates huge amounts of operational data. That data is too vast to scroll through manually, but by using analysis tools, an operator or an MRO provider can make better decisions about how to use or repair their asset. This can lead to large cost savings and a better chance of avoiding certain maintenance problems.

By collecting engine data from flights in different regions, and by pairing it with satellite information, for example, a company can learn far more about how its equipment is affected by flying in desert regions, say, or by travelling through areas with high levels of air pollution. Pairing these two sets of information sheds light on how equipment responds to different environmental factors, or how it performs over time. These insights overhaul the maintenance process and allow airlines to avoid unscheduled maintenance work, generating large savings.

Original equipment manufacturers are already embracing the technology whole-heartedly. Engine manufacturers such as Rolls-Royce, Pratt & Whitney and GE realised big data's potential years ago, and have set up special units to harness its power.

"We really feel that this is the next wave of innovation in the industrial world," says Ryan Chapin, executive manager of digital services solutions at GE Aviation.

"If you look at productivity trends over the last couple of decades," adds Chapin, "it's pretty much flattened out. Some of the news out there would indicate that there is upwards of $1 trillion of... trapped productivity."

By using big data products, operators stand a better chance of unleashing this trapped productivity. For them, the goal is quite simple: by gaining more insights into an asset's performance over time, big data processes can allow them to make simple operational changes that will lead to large savings. A narrowbody making thousands of flights a year could have its useful economic life extended meaningfully by an insight created by big data.

Although very lucrative, the provision of big data-based analysis is a tricky market to crack for unestablished players. To be most effective, analysis of the data needs to be coupled with an intimate knowledge of the products. Having the data is one thing, but it is far less powerful without knowledge of the components.

Companies can offer data-trending services without knowledge of the assets. But to offer the most useful insights they also need deep technical knowledge, says Jayesh Shanbhag, executive of engine services operations at GE Aviation. They need both.

"If you think about it, any company can come in and do data trending," he says, "but if you truly want predictive capability, that's where you need the power of big data and the OEM understanding of the product."

With their deeper knowledge of the assets, OEMs are best placed to take advantage of customer appetite for big data analytics. What this means for the market in the long term is unclear. But given the fierce debate that already exists about OEM control of the aftermarket, manufacturer control of the information generated by flight equipment would be resisted by third parties.

However, there is competition on the horizon. Analysts are predicting an emerging battleground over who controls the flow of data generated by flight equipment. Whoever owns the data is able to use it to their advantage.

In its most recent MRO survey, advisory firm Oliver Wyman argues that competitors will challenge OEM dominance in big data. Despite the OEM argument that manufacturers are best placed to offer big data analytics because of their knowledge of the flight equipment, new competitors will be tempted to crack this market.

"OEMs have captured an early advantage in deploying analytics to better manage their equipment, particularly engines," states the report.

"However, the market will not concede this ground easily. With major industry-level issues to resolve, such as standards and ownership rights for the new data, the eventual shape and size of this growing slice of the aviation aftermarket will not be known for several years," it adds.

> *"If you look at productivity trends over the last couple of decades, it's pretty much flattened out. Some of the news out there would indicate that there is upwards of $1 trillion of trapped productivity."*
>
> **Ryan Chapin**, executive manager of digital services solutions, GE Aviation

Struggling with inefficiencies

Not adopting big data is a costly move because the resultant inefficiencies place companies at a competitive disadvantage. But despite the fact that some companies are already taking full advantage of big data's benefits, others are still lagging behind.

More companies could benefit from this data analysis, particularly as more and more data will be produced in the future by the world's newest aircraft, which will account for the increasing number of aircraft in operation.

A recent forecast predicts that aircraft could generate more than 98 million terabytes of data in the year 2026. By comparison, they produce an estimated one million terabytes a year today.

> *"These new next-gen aircraft provide a robust data stream which will enable operators and providers to better forecast, plan, and deploy aircraft assets. However, the industry faces a real disconnect on how to integrate this data into ageing IT infrastructure."*
>
> **Tim Hoyland**, partner, Oliver Wyman

However, some airlines are simply not responding fast enough to the huge volumes of data coming their way. Tim Hoyland, partner at Oliver Wyman, believes that airlines are failing to make the best use of data because of outdated IT systems.

He notes in a recent report: "These new next-gen aircraft provide a robust data stream which will enable operators and providers to better forecast, plan, and deploy aircraft assets. However, the industry faces a real disconnect on how to integrate this data into ageing IT infrastructure at many airlines. Until this is resolved, the real power of this data cannot be leveraged."

The latest generation of aircraft, such as the 787 and A350, or new-engine narrowbodies, such as the A320neo and 737 Max, all generate far more data during operation than older models. By way of illustration: *Airfinance Journal* understands that a new 787 generates data for about 100,000 aircraft health monitoring (AHM) parameters for each flight. By contrast, a 767 generates data for just 10,000 AHM. Some carriers have not made the upgrades that are required to store and sift intelligently through 10 times as much information as they are currently generating.

The immediate challenge for some operators will be to handle the existing data they collect more effectively. Sources tell *Airfinance Journal* that some airlines are already asking OEMs to reduce the amount of data collected by the older aircraft in their fleets, because their IT systems cannot deal with the quantity produced.

The problem may not be critical – after all, the airline industry functioned for years before the generation of data reached its current levels. However, those decades were also very inefficient, with states propping up their loss-making flag carriers. In today's privatised, more competitive industry, few airlines can afford to miss out on efficiency savings. In a world where inflight magazines are disappearing because of the marginal increase in fuel burn they cause, not taking big data seriously smacks of recklessness.

If they want to make the best use of big data, airlines need to adapt their systems quickly as newer aircraft enter their fleet.

The airlines which are quickest to use it effectively will have an advantage over those which do not. If used in the right way, this surge of data could result in sophisticated improvements to the way aircraft are maintained. This could lead to large efficiency savings for the companies which crack the problem early on. Those which do not may soon wish they had invested earlier.

Mitsubishi Regional Jet – delayed reaction

The manufacturer continues to extol the virtues of the all-new design of its regional jet, but the competition is not standing still, writes **Geoff Hearn**.

Mitsubishi Aircraft Corporation, a joint venture of Mitsubishi Heavy Industries and Toyota, launched the Mitsubishi Regional Jet (MRJ) family in 2007. It includes the MRJ70, which typically accommodates 76 passengers, and the MRJ90, which has 88 seats in a typical configuration. Both models are offered in standard, extended and long-range versions, with corresponding maximum take-off weights.

The original development programme envisaged that the MRJ70 would be the first aircraft to enter service, but Mitsubishi have responded to changing market demand and switched the focus to the larger MRJ90, which is slated to be the first variant to enter service in 2020.

The aircraft has a four-abreast cabin and is powered by two Pratt & Whitney (PW) geared turbofan (GTF) engines similar to those offered on the A320neo, Bombardier CSeries and Embraer E2 Jets.

The E2 models are the MRJ's closest competition, but unlike the Embraer aircraft, the Mitsubishi models are not developed from existing designs. The Japanese manufacturer says the clean-sheet approach allows for more advanced aerodynamics, including a low-drag fuselage and high aspect-ratio wing.

Mitsubishi says that since the MRJ first flight in November 2015 significant progress has been made in both engineering and testing

Operating cost

The lower operating costs afforded by the all-new design are a key part of Mitsubishi's sales efforts. The company says that fuel burn on a 500 nautical-mile sector is 20% lower than current generation regional jets. This claimed saving compares with the 16% advantage that Embraer says the E190-E2 will enjoy over its predecessor.

Mitsubishi also says that the MRJ will offer double-digit savings in maintenance costs. Total operating cost savings are claimed to be 20%, again compared with current generation jets. How much of this advantage will be eroded by the E2 models is a matter of some debate and, in the views of some commentators, the delays to the MRJ entry into service have increased the threat to the MRJ programme from the Embraer models.

Delayed development

The MRJ has suffered a number of setbacks during its development. The latest delay was announced in January when Mitsubishi confirmed the first delivery would slip to mid 2020. The company said the change was because of "revisions of certain systems and electrical configurations on the aircraft to meet the latest requirements for certification".

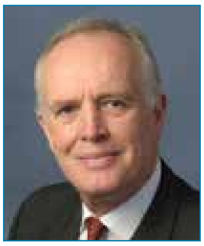
Similar problems have been responsible for a number of the previous delays to the programme. In the announcement the company added: "Since the historic MRJ first flight in November 2015, we have made significant progress in both engineering and test, and now three aircraft are in flight test in the United States."

Future developments

Mitsubishi has revealed plans for a 100-seat version of the aircraft, but it has not yet been formally launched and the MRJ70 is still scheduled to be the second member of the family to enter service.

Istat appraisers' views

ICF



Angus Mackay, principal

The launching of the MRJ family was an ambitious attempt to introduce a new clean-sheet benchmark in regional jet design and capability. Important features of the aircraft include the installation of the Pratt & Whitney PW1200 series geared turbofan, which offers superior fuel burn, a smaller noise footprint and lower maintenance costs than current generation engines.

It was originally intended to incorporate significant levels of composite structure in the wings and fuselage, but this has been scaled back to about 15% of structure to reduce production risk and complexity. The aircraft also features an advanced flight deck.

The initial MRJ90 model faces strong competition from current and new-technology aircraft, including Embraer's E175, E175-E2, E190 and E190-E2, as well as Bombardier's CRJ900. To a lesser extent, it faces competition from the larger E195, E195-E2, CRJ1000 and CS100, particularly in expanding markets. Comac's ARJ21 will also be a rival in the important Chinese market, where airlines are likely to be encouraged to buy the indigenous aircraft.

Mitsubishi, in its Aircraft Forecast 2016-2035, maintains that the regional jet segment will grow from 3,283 aircraft to 5,349 in 2035. The MRJ orderbook has grown reasonably well, standing at 233 firm and 194 option orders from seven operators, and the aircraft has had notable success in the important US market, with Trans States Holdings and SkyWest Airlines each placing 50 firm orders, with options for a further 100 aircraft. More recently, US leasing company Aerolease has signed for 10 firm and 10 option orders.

Commercial success for the larger MRJ90, and stability of the orderbook, will

AIRCRAFT CHARACTERISTICS

Seating/range

Max seating	92 at 29-inch pitch
Typical seating (single class)	88 at 31-inch pitch

Maximum range

Standard (STD) version	1,150 nautical miles (2,120km)
Extended-range (ER) version	1,550 nautical miles (2,870km)
Long-range (LR) version	2,040 nautical miles (3,770km)

List price

Standard version	$47.3 million

Technical characteristics

Maximum take-off weight	
STD	39,600kg
ER	40,995kg
LR	42,800kg
Operating empty weight	26,000kg
Maximum zero-fuel weight	36,150kg
Engines	PW1217G
Thrust	17,600lbs (78.2kN)

Fuel burn

Manufacturer claims 20% improvement over current generation regional jets

Fleet data

Planned entry into service	2020
Orders (all MRJ variants) 194 options/purchase rights	233 plus

Maintenance

Manufacturer claims double-digit improvement over current generation regional jets

Source: *Airfinance Journal* research and analysis

be largely driven by restrictive US domestic pilot scope clauses, which broadly limit aircraft with a capacity greater than 76 seats and/or a maximum take-off weight in excess of 86,000lbs to mainline operators. The MRJ70 should comply, but it has yet to be produced or flown. There is concern that some of the MRJ90 order contracts from US carriers are subject to walk-away clauses in the event that pilot scope clause relief is not forthcoming.

The MRJ programme has also been beset with numerous programme delays, which have offset the benefits of first-mover advantage and allowed competitors to catch up. The most recent two-year delay to allow reconfiguration of key avionics and wiring systems means the MRJ90 will not be introduced until 2020, seven years later than originally planned.

Nevertheless, significant management structuring has occurred with key programme partners, investors and customers resolute in their faith in the programme and the ability to execute a production ramp-up on final certification. Should key competitor Bombardier retreat from the market in favour of a focus on the CSeries, it is entirely possible that Mitsubishi will be able to realise its goal of becoming one of the two leading regional jet manufacturers by market share.

Oriel

Olga Razzhivina, senior Istat appraiser

The MRJ is one of a host of recent regional jet programmes that also include the Embraer E2, the Russian SSJ and the Chinese ARJ. The Mitsubishi programme offers an all-new airframe design complemented by new-generation Pratt & Whitney GTF engines.

The airframe is developed by Mitsubishi Heavy Industries, which has long-standing experience of producing critical components for American and European airframe manufacturers. However, the MRJ programme has proved more challenging from the manufacturing perspective and from the perspective of obtaining regulatory approval for the design. The delays that have been caused by the misinterpretations of certification requirements may prove detrimental to the success of the programme.

> *"With powerful competitors such as the Embraer E2 models, the MRJ programme has to deliver not only on price but also on operational and support criteria."*
>
> **Olga Razzhivina**, senior Istat appraiser, Oriel

The initial plan that the MRJ's entry into service would be ahead of its main competitors, the smaller members of the Embraer E2 family, was seen as the Japanese aircraft's foremost competitive advantage. With the same Pratt & Whitney GTF engines, the MRJ has an all-new airframe, while the E2 family has an established customer base of its predecessor, the original E-Jets, The latter is a more powerful driver of airlines' purchase decisions. The proven track record of supplying an aircraft capable of fulfilling its mission and supporting it in the aftermarket is difficult to compete with.

Although not impossible, breaking brand loyalty can be costly and Mitsubishi may have to buy market share by reducing prices. Lower initial pricing could pave the way for additional sales and making the aircraft a worldwide rather than a regional name.

While it is not disputed that the MRJ will be built and delivered, its acceptance outside Japan will have to improve. As a regional jet, one of its main markets is the US regional carriers, but its specification, like that of the E2 models, places it in a category that is precluded from such operators by pilot agreements (scope clauses).

With powerful competitors such as the Embraer E2 models, the MRJ programme has to deliver not only on price but also on operational and support criteria.

MRJ flight-testing is taking place in the US

New widebodies approach entry into service

The first 787-10 and A330-900 deliveries are scheduled for next year, opening a new front in the battle between their manufacturers. **Geoff Hearn** reports.

The first flight of the 787-10 took place at the end of March

Airbus has scheduled a fast-paced programme from launch to first A330neo delivery

The competition between Boeing and Airbus for mid-size widebody aircraft sales is set to enter a new phase as their latest offerings in the category approach a critical stage of their development.

The 787-10, the largest member of what Boeing calls the Dreamliner family, made its first flight at the end of March. The 787-10 has since started its flight-testing programme and customer deliveries are planned to begin in the first half of 2018.

The A330-900, arguably the closest competitor to the 787-10, is not far behind, although Airbus has recently confirmed that the entry into service of its latest offering will be slightly delayed. Flight-testing is reportedly being put back a few weeks and will now start in Q3 or Q4 2017, with deliveries to launch customer TAP not likely to occur before the first quarter of 2018. The delay is perhaps not surprising given that Airbus had scheduled only 42 months from launch to first A330neo delivery.

The A330-900 is the larger of the two new engine option (Neo) versions of the A330 and, like its smaller stablemate, the A330-800neo, it is powered by Rolls-Royce Trent 7000 engines.

As well as the fuel savings from these latest generation engines, the A330neos incorporate aerodynamic improvements – including new sharklet wingtip devices that effectively increase the wing span by nearly four metres – providing increased lift and reduced drag.

Airbus says, as a result of the new engines and aerodynamic improvements, the A330neos deliver fuel savings of 14% per seat compared with in-production A330s. According to the manufacturer, the aircraft also offer increased range, additional payload capability and decreased maintenance costs.

The A330-900neo has the same fuselage dimensions as the A330-300, but the manufacturer says that thanks to cabin design enhancements the new model offers additional seats at an equivalent comfort level. Airbus's press releases cite "up to ten additional 18 inch wide seats", but *Airfinance Journal* believes typical configurations are more likely to accommodate five or six more passengers. This additional capacity appears to be

Mid-size widebody models

Model	787-9	A330-300	A330-900neo	A350-900	787-10
Maximum seats	408	440	440	475	440
Typical seats two class	280	300	306	311	323
Typical range (nm)	8,300	6,100	6,800	8,100	6,400
(Target) entry into service	2014	1993	(Q4 2017)	2014	(Q1 2018)
Delivered	208	696	0	84	0
Orders backlog	453	123	204	561	182
List price ($m)	265	259	275	311	306

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

Indicative relative direct cash operating costs

	A330-300	A330-900	A350-900	787-9	787-10
Relative trip cost	Base	-8%	-2%	-7%	-6%
Relative seat cost	Base	-10%	-5%	-1%	-12%

Assumptions: figures are based on *Airfinance Journal*'s interpretation of manufacturer claims and published data. Additional assumptions: 1,000-nautical mile sector, typical seating layouts.

factored into Airbus's headline claim of a 14% fuel improvement. The A330-900neo is intended to complement the more capable A350-900, but some commentators believe that there is a danger it will eat into the market of the more expensive model.

The 787-10 is a five-metre stretch of the 787-9, making it the largest member of the 787 family, typically seating between 320 and 330 passengers. The 15% increase in capacity compared with the 787-9 is achieved in part at the expense of range, and some commentators suggest this may have a detrimental impact on sales. The 787-10 is aimed at replacing models such as Boeing's own 777-200, as well as members of the Airbus A330/A340 family. It competes directly with the larger members of the Airbus A330neo and A350 families.

Order status

Comparing sales for individual variants in isolation can be misleading in terms of who is winning the battle for market share. The manufacturers are adept at slicing the market to suit their own purposes, but the A330-900neo versus 787-10 comparison is probably a valid one given the closeness of the in-service dates and their similar payload range capabilities.

The 787-10 has won 149 orders from nine customers, including launch customer Singapore Airlines.

The A330-900neo received a flurry of orders when it was launched and, with an order backlog of 204 aircraft, has outsold the 787-10. Both the A330-900neo and the 787-10 aircraft have a good mix of airline and leasing company customers. ALC has a foot in each camp with 25 orders for each aircraft.

Operating cost comparison

Boeing says the 787-10 will deliver 25% better fuel per seat and emissions than the aircraft it will replace and a 10% improvement over the competition. As ever with such manufacturer claims, the details of such comparisons are somewhat vague. Airbus's claim of a 14% fuel improvement is also difficult to benchmark because it takes credit for the additional seating cited above. In an attempt to bring more clarity to such comparisons, *Airfinance Journal* has analysed the relative operating costs of aircraft in this category.

Assumptions

The figures are based on *Airfinance Journal*'s interpretation of manufacturer claims and published data. For the purposes of the analysis, cash costs include fuel, navigation, landing, crew and maintenance.

Taking the A330-300 as the baseline for comparing direct cash operating costs shows that all of the new aircraft models offer significant cost savings over the current generation of aircraft.

The A330-900 and the 787-10 show up in a particularly good light, offering double-digit savings in costs per seat. However, *Airfinance Journal*'s calculations indicate that none of the new models fully match the claims of the manufacturers. One reason for this is that *Airfinance Journal*'s assumptions are conservative in terms of the maintenance cost savings that the new generation of aircraft will provide. New technologies and designs undoubtedly allow manufacturers to reduce theoretical maintenance costs, but these can be offset by commercial realities.

Airfinance Journal's analysis suggests that the gains in cash operating costs achieved by the new-generation aircraft are more than offset by their higher list prices.

Both the 787-10 and the A330-900 appear very competitive against their respective stablemates. However, this takes no account of the additional capabilities of the 787-9 and A350-900. For example, the lower maximum take-off weights associated with the more modest range capabilities of 787-10 and A330-900 models tend to lead to lower operating costs.

Airfinance Journal's analysis indicates that the gains in cash operating costs achieved by the new-generation aircraft are more than offset by their higher list prices. If more realistic pricing levels are used in the analysis, the new-generation models still only show very modest reductions in total operating costs. The analysis suggests that pricing premiums sought by the manufacturers for the latest models are too high. However, the savings in operating costs would be higher should fuel prices start to rise again.

What price a 777

The arrival of the latest generation of mid-size widebodies is likely to put greater pressure on the values and sales prospects of the Boeing 777-300ER. Although these new models are not direct competitors to the 777, their improved efficiency means that their per-seat costs are competitive with the larger Boeing aircraft.

Airfinance Journal's analysis suggests that both the A330-900 and 787-10 have lower per seat costs than the 777-300ER. The arrival of the 777-8 and 777-9 will no doubt restore the advantage, but that is another battle.

787-10 customers

Customer	Orders
Singapore Airlines	30
Etihad	30
ALC	25
EVA Air	18
United Airlines	14
British Airways	12
GECAS	10
KLM	7
ANA	3

Source: *Airfinance Journal research*

A330-900 customers

Customer	Orders
AirAsia X	66
Iran Air	28
Delta	25
ALC	25
CIT	15
Avolon	15
TAP	14
Garuda	14
Arkia	2

Source: *Airfinance Journal research*

Rating Agency Unsecured Ratings

Airlines

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

Source: Ratings Agencies - 22nd May 2017

Lessors

	Fitch	Moody's	S&P
AerCap	BBB-(stable)	-	BBB-(stable)
Air Lease Corp	BBB(stable)	-	BBB(stable)
Aircastle	-	Ba1(stable)	BB+(pos)
Avation PLC	B+(stable)	-	B+(stable)
Aviation Capital Group	BBB(stable)	-	A-(stable)
AWAS Aviation Capital Limited	-	Ba3(stable)	BB(stable)
BOC Aviation	A-(stable)	-	A-(stable)
CIT Group Inc	BB+(stable)	Ba2(stable)	BB+(stable)
DAE Aviation Holdings	-	B3(stable)	B-(stable)
Fly Leasing	-	B1(pos)	BB-(stable)
ILFC (Part of AerCap)	-	Baa3(stable)	-
SMBC Aviation Capital	A-(stable)	-	BBB+(stable)

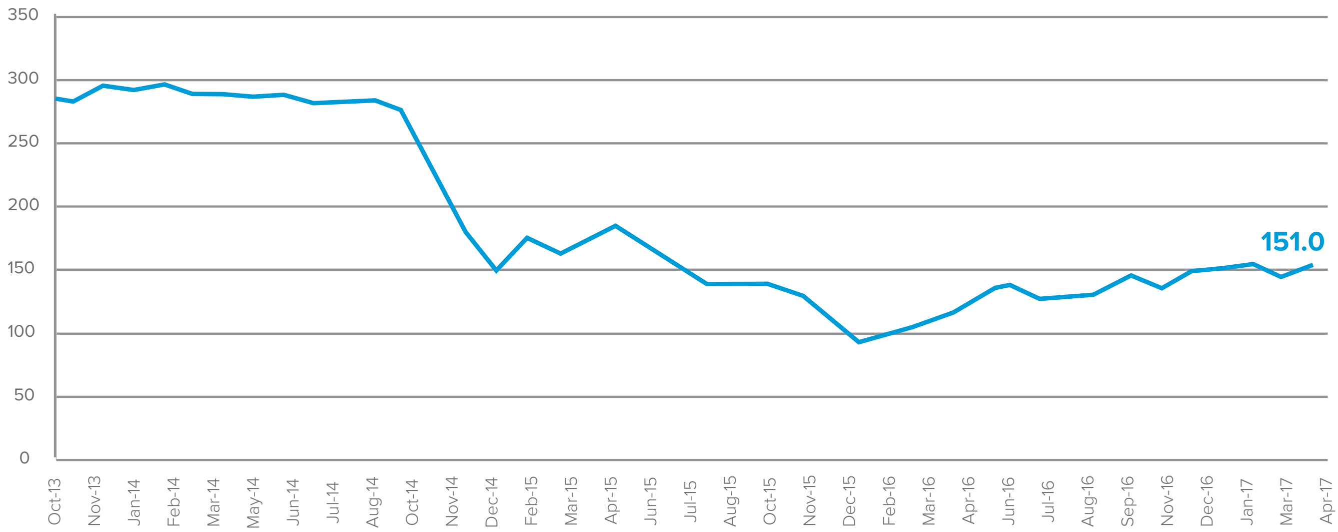
Source: Ratings Agencies - 22nd May 2017

Manufacturers

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

Source: Ratings Agencies - 22nd May 2017

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



Source: US Energy Infromation Administration

Recent commercial aircraft orders by customer

Customer	Country	Quantity/Type
BOC Aviation	Singapore	5xA320
GECAS	USA	75x737 Max 8
ACG	USA	30xA320neo, 2xA320, 3xA321
SpiceJet	India	100x737 Max 8s
Widerøe	Sweden	15xEmbraer E2s
Flynas	Saudi Arabia	60xA320neo
CityJet	Ireland	10xCRJ900
KAIR Airlines	South Korea	8xA320
CDB Aviation	China	30x737 Max 8
BOC Aviation	Singapore	13x737 Max 8
CityJet	Ireland	4xCRJ900
CALC	China	2xA320neo
Jambojet	Kenya	1xQ400
Silk Way	Azerbajan	10x737 Max 8
China Southern	China	20xA350-900
American Airlines	USA	4xE175
WestJet	Canada	10x787-9
Delta Air Lines	USA	30xA321

Aircraft list prices - new models

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

Current production aircraft prices and values ($m)

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

*Based on Istat appraiser inputs for Air Investor 2017

Lease rates ($m)

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

Commercial aircraft orders by manufacturer

	Gross orders 2017	Cancellations 2017	Net orders 2017	Net orders 2016
Airbus (30 April)	51	28	23	731
Boeing (16 May)	209	4	205	668
Bombardier	15	0	15	237
Embraer	37	0	33	55
ATR	0	0	0	45

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

Asia's history and future in aviation

Air traffic in Asia and China will continue surpassing economic growth in those regions, writes **Adam Pilarski**, senior vice-president at Avitas.

Half a century ago Asia had only less than 8% of world passenger traffic while accounting for almost 60% of the world's population. The Chinese share at the same time was only 0.1% while accounting for more than one-fifth of world population.

My last column dealt with the relationship between traffic growth and economic growth. This relationship is statistically very robust over various time periods and geographical regions. It shows that for every 1% of economic growth, we experience about a 2% growth in traffic. This should not surprise anybody since travel is a luxury product – we have to eat but we do not have to fly.

About four decades ago I started investigating the future of traffic in Asia, especially in China. I was struck by the disparity between the share of world population and of traffic in Asia. This demanded an explanation and the most obvious one was that it had something to do with economic growth. In 1964, China's share of the world economy was 0.8%, which was eight times the share of China's traffic. For Asia as a whole, the share of the world economy in 1964 was about double that of the share of world traffic (14.5% versus 7.9%). Since that time, the economies of Asia and China (especially after 1978) have been growing at spectacular rates. So it came as no surprise that Asian and Chinese shares of world traffic have also been rising substantially.

The reality in 2015 was what had been predicted for a long time. Asia's share of the world economy went from 14.5% in 1964 to 31.7%. China's share rose in an even more dramatic fashion, from 0.8% to 11.8%. The more fascinating observation, though, is what happened to China and Asia's share of world traffic. As could have been predicted, both skyrocketed from 1964 to 2015. They rose from 0.1% to 11% for China and from 7.9% to 31.9% for Asia. An interesting and very meaningful point is that, by 2015, their shares of the world economy and world traffic were almost identical: 31.7% versus 31.9% for Asia and 11.8% versus 11% for China.

The fascinating finding of almost equal shares of world traffic and economy for both Asia and China begs many questions. The fact that both shares increased in dramatic fashion is not surprising. It is also an obvious fact that Asia and China were coming closer to their "due" share over time. The question is whether this means they already reached the traffic level justified by their economic performance? In other words, they have been catching up from a much lower-than-expected level and now that they have reached par with economic performance, can we expect their future growth to be more limited? Considering that Asia and especially China are seen as the most promising aviation markets in the world, a slower growth pattern in Asia could have a devastating impact on our industry.

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

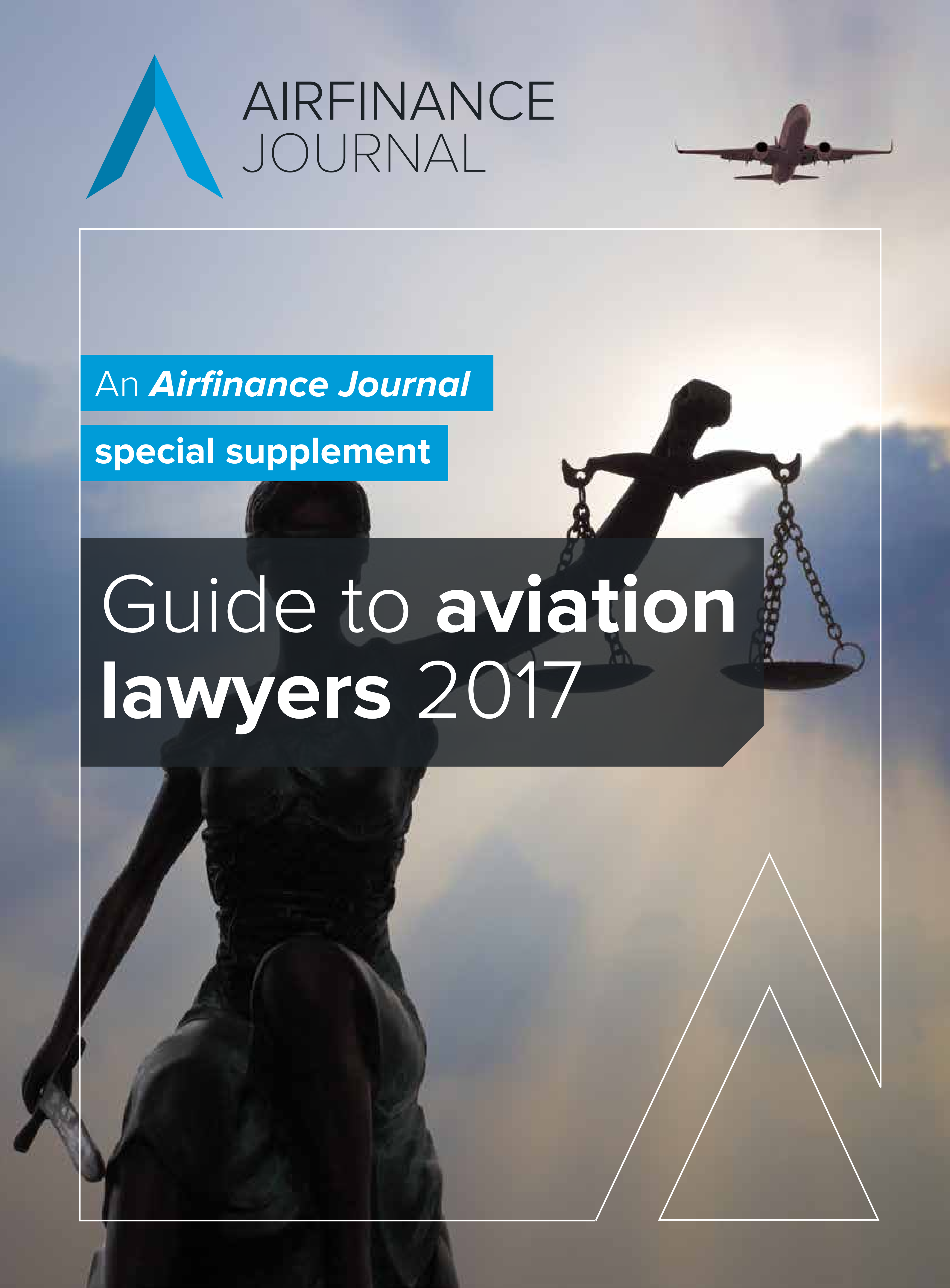
> *"Asia's share of the world economy in 1964 was about double that of the share of world traffic. Since that time, the economies of Asia and China (especially after 1978) have been growing at spectacular rates."*
>
> **Adam Pilarski**, senior vice-president, Avitas

A much more positive way to look at reality is to compare traffic levels to population size. If we postulate that all members of the human race should fly at the same level (an interesting though controversial hypothesis), the Asian continent and China still have a lot of potential for growth to reach their due level. Asia has about 60% of the world's population and its traffic share is only half that level. The results for China are similar: having more than 18% of the world's population it has only 11% of its traffic.

What determines the propensity of various peoples to travel? As documented in countless studies and mentioned repeatedly in this article, the level and growth rate of income is a critical determinant. There are additional other factors, some clearly related to geography. Places that are harder to get to are prone to have more air traffic. Asia has a very large population living on islands where air travel may the only way to reach them. Based on this, Asia should have a higher share of world traffic than just explained by pure economic factors.

There are a number of additional cultural and historical factors to consider. Ethnic ties should stimulate traffic, and two of the world's most populous countries, China and India, have large diasporas around the region and the world. Putting it together, I would expect the share of world traffic for Asia and China to be higher than their share of the world economy in the future.

Boeing, in its 20-year forecast, has Asia's share rising from about 32% now to 40% for both the economic and traffic share, and China's share rising from about 11% to 16% for traffic and 18% for economy. Airbus has very similar forecasts. This assumes a continuation of today's reality. I believe that while the economic share may increase at that rate, traffic will grow faster and continue the trend of surpassing economic growth in the future both for Asia and China.



AIRFINANCE JOURNAL

An *Airfinance Journal* special supplement

Guide to aviation lawyers 2017

And the **winners are...**

Airfinance Journal announces the victors in the fifth year of its legal survey, which recognises the most active law firms in 2016 by region and product type.

We would like to thank all the law firms which participated in the 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.

Airfinance Journal received submissions from 22 firms, compiling 1,875 deals overall, including transactions gathered from Deal Tracker. This is the first year we have used data from Deal Tracker for our legal survey and it provides us with a more accurate picture of the 2016 activity because it includes law firms which were not able to submit or chose not to submit. The firms that did submit have the most accurate representation of their deals in 2016.

The survey reveals several shifts in aviation financing. Although there was a notable drop in financing involving the export credit agencies, arrangers have created innovative structures that have incorporated less traditional airfinance players, such as pension and insurance companies.

The growth of emerging markets, particularly in Asia, has increased demand for new aircraft, in a leasing environment that is more competitive than ever. With the low fuel prices, carriers and lessors have also seen ample opportunity to close second-hand aircraft deals and sell portfolios. This is why we introduced the Sale and Purchase category, 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 2016. In addition, the significant leasing and legal consolidation that has occurred in the past few years has kept many firms busy. The law firms highlighted in the survey represent the market leaders in this space, and they continue to evolve and thrive in today's active aircraft finance 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.

> *“Aircraft financing activity remained very strong in 2016, with bank, bond, aircraft trading and operating lease markets all going strong.”*
>
> **Mark Lessard**, partner, Pillsbury

The legal survey reviews deals from 2016 only. This is significant because we recognise that markets change, as do law firms, however we felt 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. Our researchers assess each deal to verify them and to avoid double counting.

The benefit of using Deal Tracker is that we can offer a granular presentation of law firm activity by both product type and region. Of course, there are limitations to the survey. We recognise 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.

Again, 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.

Overall winners

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, we 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. The firm came top in the Africa, Asia-Pacific, Europe, Middle East, Latin America, Commercial Loan, Operating Lease, Sale and Purchase and Structured Lease categories.

Reflecting on the deals done last year, Clifford Chance partner and global head of asset finance, William Glaister, says: “The aviation industry has seen robust growth over the past year, with high levels of bank liquidity, an active trading market in aircraft sales and operating lease portfolios (with attendant financings), a vibrant ABS [asset-backed securities] market and strong M&A interest in leasing companies.

“Investors are increasingly looking at aircraft-backed securities as a source of steady cash flows with attractive returns and low default rates; and we have seen strong borrower credits able to access the capital markets on both a secured and an unsecured basis.”

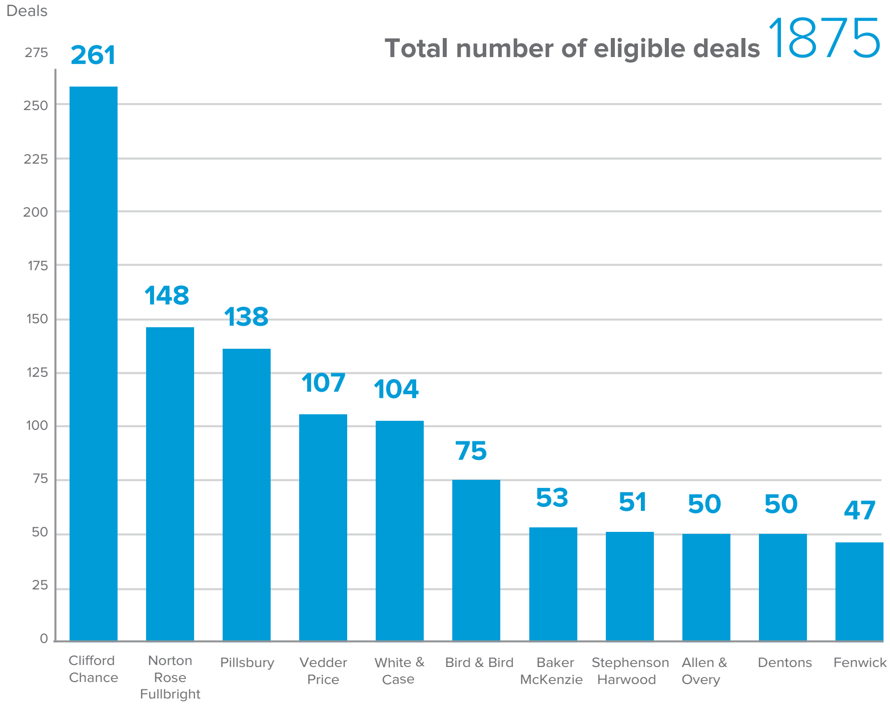
Pillsbury was ranked second overall in the survey. Mark Lessard, partner in the firm's New York office, says: “Aircraft financing activity remained very strong in 2016, with bank, bond, aircraft trading and operating lease markets all going strong. On the back of abundant debt and equity capital, there were significant transactions in all sectors of the industry.”

Norton Rose Fulbright was placed third overall. Duncan Batchelor, global head of aviation at the firm, says: “The outlook is bright for the aviation industry despite challenging market conditions. The industry is enjoying high levels of interest from both new and experienced investors and financiers and there is diversity in funding. Fuel prices remain low, and new aircraft are being delivered to airlines.”

Top Ten Law Firms by Score

Rank	Firm	Score
1	Clifford Chance	56
2	Pillsbury	33
3	Norton Rose Fullbright	29
4	Vedder Price	17
5	White & Case	15
6	Dentons	9
7	Stephenson Harwood	7
8	Bird & Bird	6
9	Winston & Strawn	4
9	Baker McKenzie	4
9	Mason Hayes & Curran	4
9	Allen & Overy	4
10	Nishimura & Asahi	3
10	Morris James	3

Top Ten Law Firms by Number of Deals



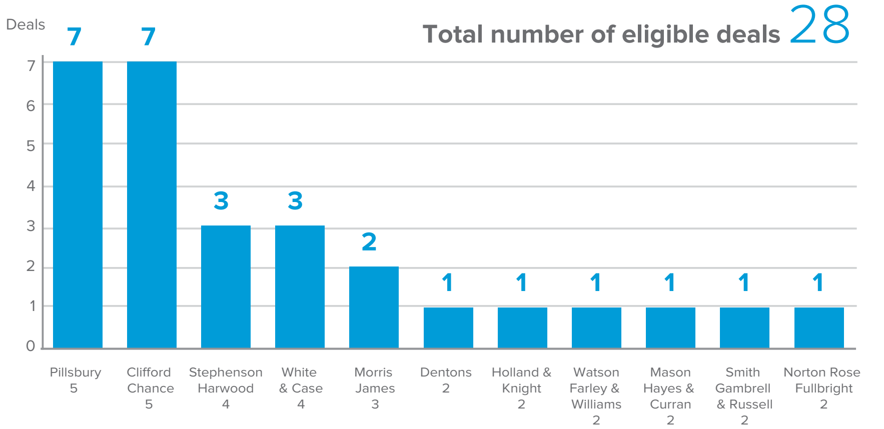
Africa

Commercial loan deals were popular in Africa in 2016, with 57.14% of the deals in Africa being commercial loans as a means to finance aircraft. The proportion of export credit deals were notably higher than in any other region, amounting to 14.29% of all the African deals that closed last year. This figure was nearly 10% higher than other areas of the world, with Asia-Pacific coming second with 4.72% of its deals being export credit agency-guaranteed.

Clifford Chance and Pillsbury came joint top in this category.

Paul Jebely, co-head of asset finance at Pillsbury, says: "The African market experienced notable turbulence over the last year, with airlines like Kenya Airways and South African Airways undergoing significant reorganisation, while what smelled like the nationalisation of Arik Air shook investor confidence – in Nigerian aviation specifically and African aviation generally."

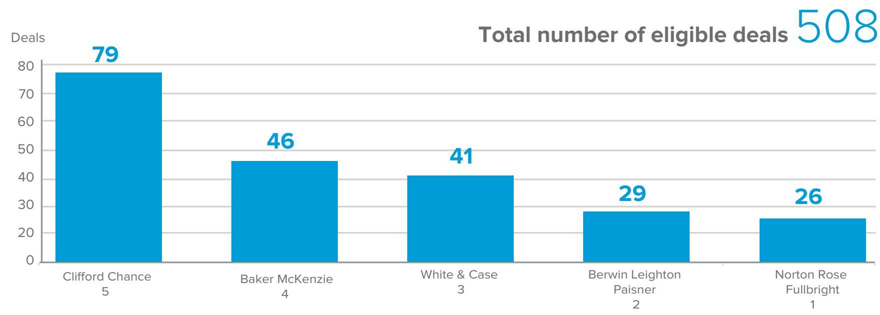
Among other transactions, Pillsbury served as lead counsel to Ethiopian Airlines in connection with the financing of a predelivery payment facility in an aggregate amount of $139 million, relating to the purchase of eight Airbus A350-900 passenger aircraft. The firm also served as lead counsel for the airline in connection with the permanent financing of the first of the A350-900s to deliver in 2017.



Michael Smith, partner at White & Case, which came second in this category, says: "In the medium term, robust demand for aircraft is predicted for Africa, and Africa is likely to take on a relatively greater role in the growth of aviation generally.

"Nonetheless, there are also a number of more immediate headwinds," adds Smith. "These include competition from more established and better-funded airlines in the Middle East and Europe, airport infrastructure and labour issues, currency conversion concerns and geopolitical factors generally. Many of these complications are evident in the ongoing restructuring of Kenya Airways, where we are one of the advisers."

Asia-Pacific



The 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 and, although global aircraft orders are slowing down, this reduction in orders can hardly be seen in Asia.

China is one of the fastest-growing markets in this region. It is a market that international law firms are becoming increasingly familiar with, despite concerns about the so-called lower “China price” (Chinese law firms offering Chinese clients cheaper rates than international law firms.) offered to law firms for their services by Chinese airlines.

Andrew Lockhart, head of aircraft finance, Baker McKenzie, which came second in this category, says: “We expect that the China market will continue to expand. Similar to last year, we believe that domestic leasing and financing structures will remain popular, in particular the free-trade-zone structure involving domestic and cross-border leases. We also note the continued growth of the People’s Republic of China [PRC] leasing companies. They are not only involved in the PRC deals, but are also active in cross-border transactions.”

Baker McKenzie has recently represented various PRC leasing companies in transactions in China, Indonesia, Vietnam, Malaysia, France, Spain and Italy.

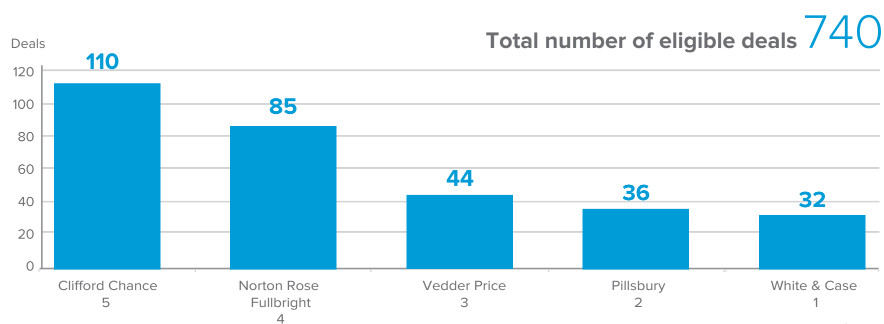
The region scored high in the sale and purchase category, accounting for 20.67% of the 508 Asian deals submitted. Operating leases and commercial loans were both well represented, accounting for 33.86% and 33.46%, respectively, of the total Asian deals.

South Korea has also become one of the most active new markets in Asian finance. The market has seen increased participation from Korean entities over the past year, whether financing widebody aircraft for first-tier carriers such as Emirates or setting up a new leasing company such as Crianza Aviation.

Last year was also strong for initial public offerings, with Asian lessors BOC Aviation and CDB Leasing listing on the Hong Kong Stock Exchange. Yet, despite the strong demand for low-cost travel in China, many of the region’s low-cost carriers (LCCs) faced obstacles to growth. Challenges for LCCs can include getting the necessary approvals from the Chinese government to operate and gaining aircraft importation from National Development Reform Commission.

Even so, China still looks on course for steady growth, with Avolon in May forecasting that Chinese airlines will require an additional 3,200 aircraft in the next decade.

Europe



In Europe, the aviation finance market has seen an increasing number of airlines issuing on an unsecured basis and tapping the European and US capital markets.

After tapping the Norwegian capital markets several times, flag carrier Norwegian Air Shuttle raised $349.12 million through an enhanced equipment trust certificate (EETC) offering in May 2016. Morgan Stanley arranged the deal and Natixis provided the liquidity facility.

EasyJet also issued its debut Eurobond in February, raising €500 million ($560.82 million) in an offering that was a seven-year bullet repayment with a coupon of 1.75%, payable annually. The bond priced at 147 basis points over mid-swaps.

The operating lease and commercial debt markets have remained robust and several European carriers, such as Finnair and Air France, have been tapping the Japanese operating lease with call option (Jolco) market. Operating leases accounted for 23.38% of the deals, the lowest number only to North America (2.87%), while sale and purchase deals accounted for 19.05%.

William Glaister, global head of asset finance, Clifford Chance, London, says: “EU regulated financial institutions are still having to navigate their way through an increasingly complex regulatory framework, including, for example, Basel IV proposals, MiFID [Markets in Financial Instruments Directive] and BRRD [Bank Recovery and Resolution Directive], compared with the flexibility of alternative financiers and investors operating in other markets. Unsurprisingly, those arrangers and lenders able to participate in highly structured transactions and to take a degree of asset risk have been most active.”

Some European carriers, especially the UK-based ones, have also felt a slight impact from the Brexit vote in last June’s referendum. A weaker pound and investor uncertainty led to UK-based airline conglomerate IAG’s profits fall by €460 million ($517 million) over the past year. Despite IAG chief executive, Willie Walsh, describing Brexit as “painful”, he remained positive that the group would recover in 2017.

Some of the European leasing companies have shown less of a concern.

“The fact that the UK is leaving the European Union is not a positive for anyone, including Ireland for sure – it’s our biggest trading partner and a very important ally,” Aengus Kelly, chief executive officer, AerCap, told *Airfinance Journal* in an interview last year. “It’ll have some impact, but it’s not going to be a material impact on global demand for air travel.”

Latin America

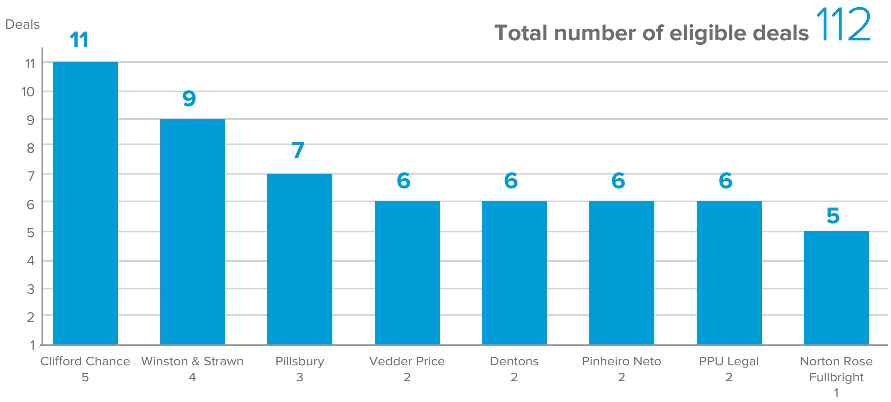
Despite challenges in the region, such as a strong US dollar and falling commodity prices, in 2016 the airlines in Latin America were well prepared for volatility. Low-cost carrier Azul arranged the redelivery of 34 aircraft, while, by the end of 2016, fellow Brazilian carrier Gol improved its full-year operating margin outlook by one-third after a positive set of third-quarter earnings results.

The airline raised its full-year earnings before interest and tax margin guidance to 6% from 4%, as cost reductions offset declining passenger revenues to generate a net profit for the quarter. Net income for the third quarter reached R$65.9 million ($20.6 million), compared with a loss of R$2.1 billion in the same period last year.

Gol attributed the change to its capacity management efforts and other cost reductions, as well as the strengthening of the Brazilian real.

"The Latin American economy has been fairly tough and growth has been slower in certain countries in the region," says Mark Moody, partner, Winston & Strawn, which came second in the Latin America category.

"Nevertheless," he adds, "the Latin American aviation market has continued to be resilient despite challenging conditions in certain jurisdictions. Several airlines in the region are being very disciplined with their fleet-renewal programmes, which is resulting in more operating lease structures being utilised."



Latin America had the highest proportion of operating lease deals of any region, accounting for 40.18% of the deals overall. Commercial loans also made up a large portion of the deals at 38.39%. Capital markets and export credit made up particularly low levels, with 1.79% and 3.57%, respectively.

Winston & Strawn has worked on several deals for LATAM Airlines, acting for a syndicate of European and Japanese banks in the financing of several Airbus A350 and A320neo aircraft for the South American carrier.

"Most of the aircraft financing activity in Latin America involves operating leasing and, in particular, we are seeing an increase in Chinese lessors in that market. In addition, there has been some capital markets activity, and our most notable recent transactions include representing LATAM Airlines in an unsecured bond offering and in a private placement of a junior tranche of notes under their existing EETC [enhanced equipment trust certificate] transaction," says Emily DiStefano, partner in Clifford Chance's New York office.

Middle East

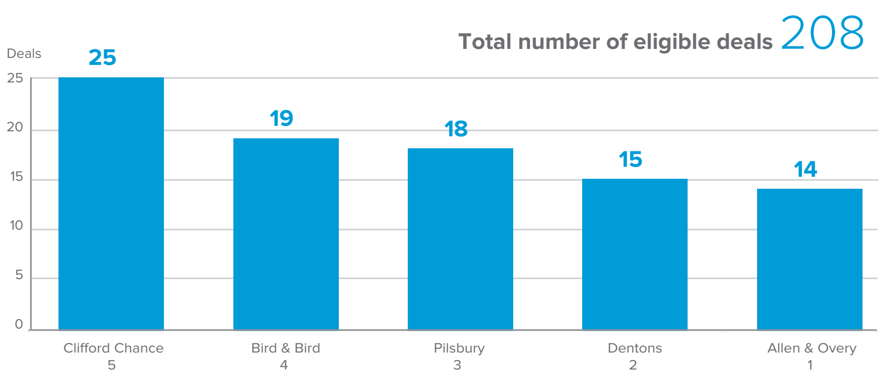
There were some innovative capital markets issuances from the biggest carriers in the Middle East, but commercial bank lending and operating leases still dominated the submissions, amounting to 65.79% of the deals.

The largest Middle Eastern capital markets deal of 2016 was Etihad Airways' $1.5 billion sukuk, which closed in November. The fact that it was initially planned to be about $1 billion and was upsized by 150% demonstrated the appetite from sukuk investors for aviation credits.

"The large airlines in the Middle East continue to source a wide variety of new and traditional financing options to satisfy their growing fleet and to maintain a diverse financing portfolio," says Jim Bell, partner, Bird & Bird, the second most active firm in the region in this year's survey.

He adds: "We are very well placed to support airlines, lessors and financiers who are active in the region on the full range of financing options – from sale and leaseback to Islamic finance, and from tax leasing to innovative debt capital markets products."

During the past 12 months, the firm advised Emirates on the sale and



leaseback of three Airbus A380s and EMP (as bookrunner) on the debt capital markets financing of one Airbus A380 and two Boeing 777s for Emirates, which won *Airfinance Journal*'s 2016 Innovative Deal of the Year.

Bird & Bird also advised Etihad on the sale and leaseback and predelivery payment financing of nine Boeing 787-9 Dreamliners with Goshawk and BBAM, and advised the same airline on the sale and leaseback of two Airbus A380s using a combination of Islamic finance and the first-ever Abu Dhabi Global Markets (ADGM) company, winning *Airfinance Journal*'s 2016 Sale and Leaseback Deal of the Year.

Antony Single, a partner at Clifford Chance's office in Abu Dhabi, who also worked on the ADGM transaction, says: "There has been a marked increase in the number of operating lease financings in which regional banks and financial institutions have been participating. We have also seen a growth in the number of regional institutions investing in equity structures and funds. A key trend has been the increase in Sharia-compliant transactions – in particular, more complex structures using a combination of conventional and Islamic finance."

North America

North America continues to dominate in the capital markets category, making up 20.07% of deals in 2016. Another interesting trend that emerged from the survey is that North American carriers have the lowest percentage of operating lease deals, with only 2.87% of all deals. This is a stark contrast to Latin America, which leases 40.18% of its aircraft.

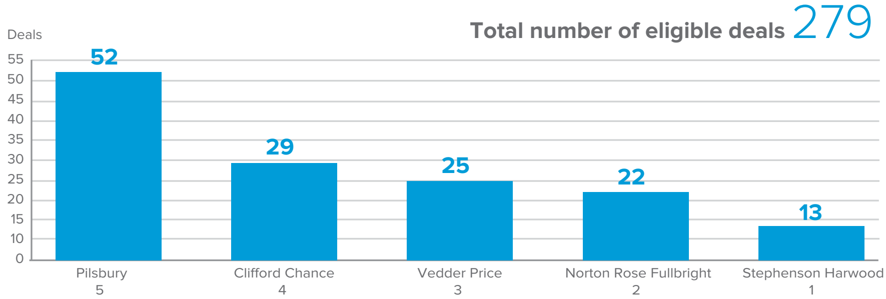
One of the standout deals from the last year included Labrador Aviation Finance, GECAS's first aviation issuance since 2014. The deal set a number of firsts, including being the first-ever asset-backed securities (ABS) deal with equity placed in South Korea and the best-priced aircraft ABS transaction on a spread basis in 2016. The transaction's $603 million A tranche priced at 2.83% spread over the 5.57-year swap rate and its $106 million B tranche priced at 3.83% spread over the 5.57-year swap rate.

North American airlines continued regularly to tap the capital markets to fund their fleets, with American Airlines being the main issuer. The airline tapped the enhanced equipment trust certificate (EETC) market more than any other carrier in 2016 by issuing $2.8 billion in three separate EETC deals. United Airlines also issued an EETC in 2016, achieving the lowest pricing for an EETC, with an AA tranche pricing at 2.875% and an A tranche pricing at 3.100%.

"American Airlines continued its major fleet-renewal and financing programme in 2016, though the deliveries will begin to tail off a bit starting in 2017. Alaska Airlines did its first round of secured financings in a while to raise capital for its acquisition of Virgin America. Pillsbury acted for dozens of banks financing dozens of aircraft for these two airlines alone in 2016, not to mention several other airlines, including low-cost carriers Allegiant and Spirit," says Mark Lessard, partner at Pillsbury, which came first in this category.

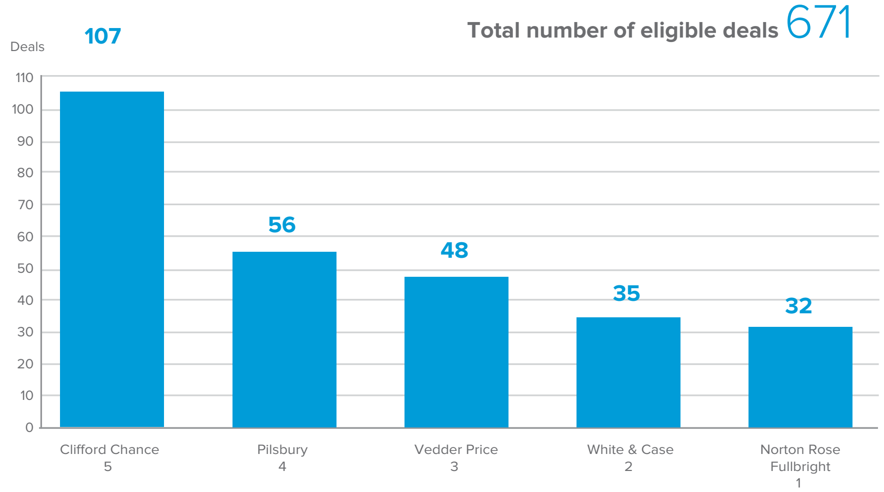
"Meanwhile," he adds, "US-based leasing companies have been growing at a rapid clip in recent years and have turned toward larger transactions to achieve economies of scale in their financing arrangements. Many leasing companies put fresh warehouse facilities in place in 2016 and also sought to trim their portfolios to keep their average fleet age down. Pillsbury acted for the lending syndicates on a number of these transactions, including a $400 million BBAM-managed Incline warehouse facility and the $400 million Aircastle secured portfolio financing."

Total number of eligible deals 279



Commercial Loan

Total number of eligible deals 671



The commercial loan market has remained active throughout 2016, making up 35.79% of the eligible deals submitted. In the low interest rate environment and with an abundance of liquidity available, bank financings are becoming increasingly popular with airlines in different regions. More banks are becoming active in aviation and prices for bank funding have become more competitive.

Although the export credit agencies (ECAs) have been inactive throughout much of 2016, the commercial market is in good health, meaning that the loss of the ECAs has not been a big burden for most airlines.

Africa, a region which usually heavily relies on ECA-guaranteed financing, scored the highest percentage of deals that were financed through commercial banks, accounting for 57.14% of all the deals that African companies closed in 2016. Such a high percentage infers that commercial financing has been able successfully to fill the gap left by a dearth of ECA financing.

"Our bank clients kept us busy acting on lessor portfolio and warehouse transactions, in addition to large fleet financing initiatives with the likes of American and Alaska. Bank loan pricing stayed very competitive even in the face of Basel IV, as arrangers continued to work their syndication capabilities to develop new sources of bank and institutional capital. As a result of these efforts, we have a much more educated, developed and international lender base than before," says Jonathan Goldstein, a partner at Pillsbury, which came second in this category.

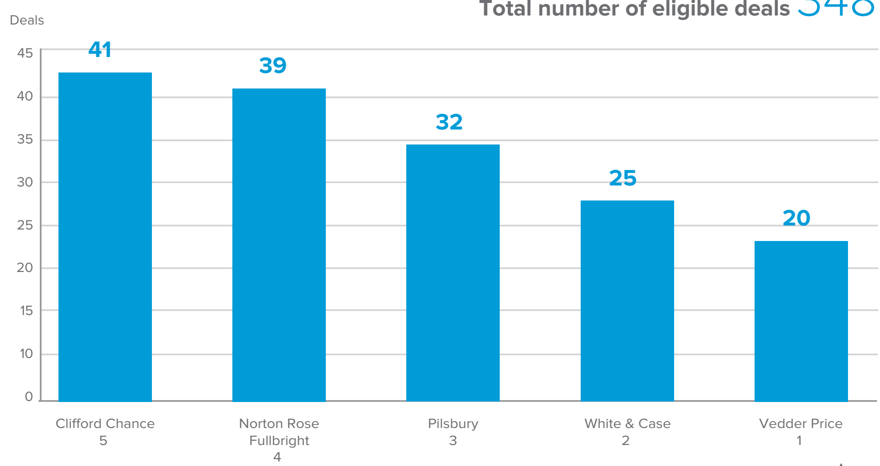
One of the largest commercial deals that closed in 2016 was Accipiter's $1.2 billion refinancing of 43 aircraft purchased in 2014 from three lessors. The deal marked the first portfolio financing for the lessor, which was funded with a large group of banks (see *Airfinance Journal's* Bank Loan of the Year 2016, page 10).

Another notable commercial deal that closed in 2016 was AerCap's $740 million acquisition of a portfolio of 37 aircraft, leased to 32 airlines in 26 jurisdictions.

"In terms of commercial debt, pricing remains competitive, with traditional banks having to deal with the challenges of continued regulatory pressures and a low interest rate environment. The search for yield continues to generate innovative solutions, such as debt funding platforms and structured portfolio financings, and to attract alternative financiers from all regions," says William Glaister, global head of asset finance, Clifford Chance, London.

Sale and Purchase

Total number of eligible deals 348



The sale and purchase market was active, with *Airfinance Journal* compiling 348 deals that closed over the course of 2016.

Many of these deals 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 notations turn into sale and purchase transactions, because many airlines and lessors would buy the aircraft when it got to the end of its lease.

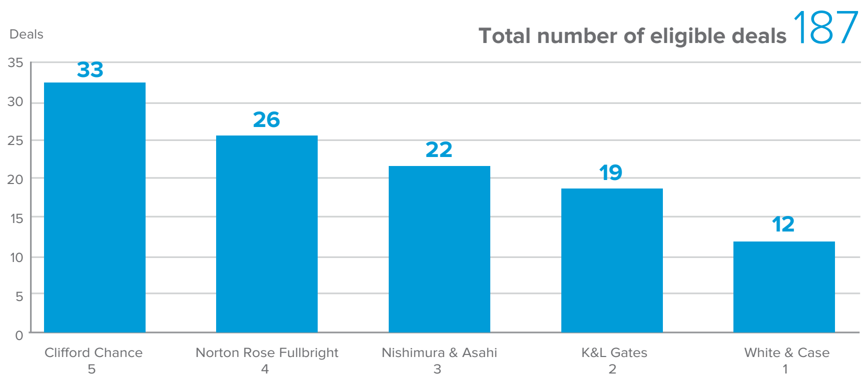
The regions that had the highest proportion of deals in the sale and purchase category included Asia-Pacific, with 20.67%, Europe, with 19.05%, and North America, with 28.32% of the deals.

North America likely had the highest proportion of sale and purchase deals because a lot of the North American carriers have strong balance sheets, and are therefore able to acquire aircraft without the assistance of banks or lessors.

The regions that scored the lowest in this category were Africa, with 0% of deals, Latin America, with 4.46%, and the Middle East, with 8.65% of the deals.

One example of a regional aircraft deal in this category was Santander's sale of three Bombardier CRJ1000s to AeroCentury and Gulf One. Law firm BLP advised on the transaction, which involved the sale of the entire share capital of the special purpose vehicles owning the aircraft.

Structured Lease



The structured leasing market remains strong and has seen the emergence of new investors to this space. In October, Stellwagen Finance, which has its headquarters in Dublin, tapped the Spanish banks to close a structured sale and leaseback deal for an Emirates Boeing 777-300ER (MSN 42338).

Bankinter, Banco Popular and Caixabank, which had traditionally financed only Spanish operating leases, provided the senior tranche of a commercial loan used to fund the acquisition of the aircraft. UAE-based Noorbank is providing the junior debt through a Murabaha loan.

The Japanese operating lease with call option (Jolco) market also remained popular in 2016, with companies such as CALC and Lufthansa continuing to tap the market on a regular basis because of its ultra-low financing costs.

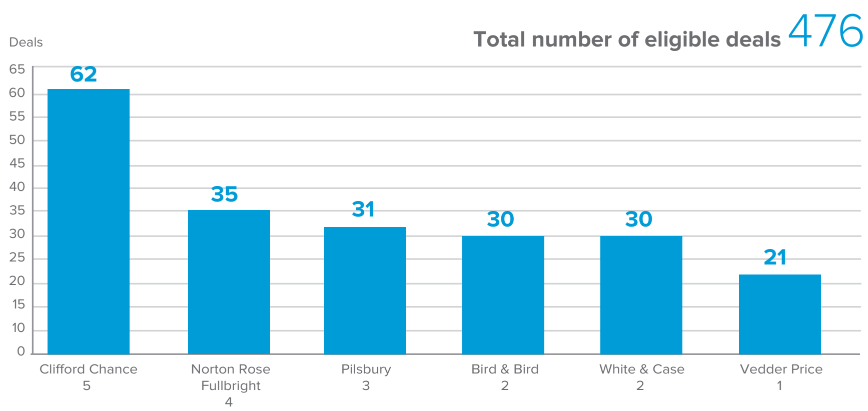
However, some jurisdictions where risk is high have unnerved Jolco market participants. For example, in Turkey, which has been experiencing challenging conditions in its tourist sector because of terrorist attacks and geopolitical instability, *Airfinance Journal* reported last year that equity appetite for Jolcos in the region was falling.

But Turkish carriers saw plenty of activity in another structured lease: the French tax lease. In June 2016, Turkish Airlines tapped this market, closing a French tax lease for two new Airbus A321-200s. SunExpress, a joint venture between Turkish Airlines and Lufthansa, financed five Boeing 737-800s through a US Ex-Im-backed French tax lease in the second quarter of 2016.

Duncan Batchelor, partner at Norton Rose Fulbright, says: “The market remains highly dynamic. In particular, we have seen many Jolco transactions. The Jolco market appears strong and investors are becoming more familiar with other airline names. We have advised the main financing banks in the aviation market, including BNP Paribas, Sumitomo Mitsui Banking Corporation, CA-CIB [Crédit Agricole Corporate and Investment Bank] and The Bank of Tokyo-Mitsubishi UFJ, on structured lease and lending facilities, as well as various airlines.

“As well as many Jolco transactions, we advised CA-CIB Bank on commercial debt financing combined with a French optimised lease structure of five new Airbus A321-200 aircraft for Turkish Airlines, involving a syndicate of international banks, arranged by Crédit Agricole Corporate and Investment Bank.”

Operating Lease



Operating leasing is one of the 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.

“The operating lease sector continues to drive the market, with established lessors continuing to expand their leasing books and new entrants taking an assertive position in terms of portfolio acquisitions and M&A deals,” says William Glaister, global head of asset finance, Clifford Chance, London.

He adds: “Chinese, Asia-Pacific and Middle Eastern players have become very active alongside the larger global leasing companies. We anticipate some airline defaults, for weaker credits, and a potential shift in financing options for airlines reporting under IAS [international accounting standards] when the new lease accounting rules come into effect.”

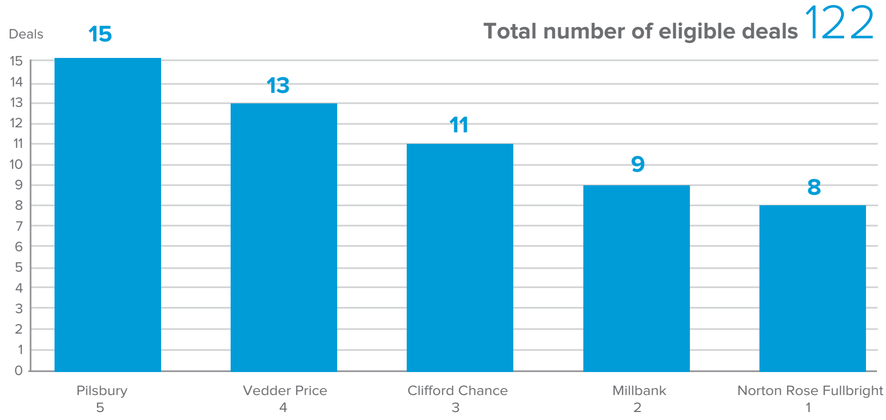
Arguably the biggest leasing M&A in 2016 was Bohai Leasing’s acquisition of Avolon. The acquisition, which was completed barely a year after Avolon’s initial public offering (IPO) in weak market conditions, delivered a 55% return to the shareholders who invested in the IPO in December 2014. The acquisition catapulted Avolon into the top five leasing firms in the world with a fleet of more than 400 aircraft and gave it an equity injection of $1.2 billion to drive organic and acquisition growth, such as its recent purchase of CIT Aerospace.

The acquisitions of regional lessors Aldus Aviation and Jetscape by Nordic Aviation Capital (NAC) were also among the biggest leasing M&A deals of the year. The acquisitions allowed NAC to become the dominant player in the regional market, bringing its fleet up to 294 aircraft and 48 managed aircraft. After the acquisitions, NAC also had a further 74 aircraft on order, comprising 20 E-Jets and 54 ATRs.

Mark Lessard, a partner at Pillsbury, which came third in this category, says: “Lessors continued to diversify their balance sheets and chase growth targets by raising new capital, including significant amounts of equity capital through managed vehicles such as ABS [asset-backed securities] and joint ventures.

“Pillsbury acted for Aircastle in the establishment of a joint venture with IBJ Leasing, after which we put in place a warehouse facility and the acquisition and long-term financing arrangements for a series of aircraft. We are also active for a number of lessors in the acquisition and sale of aircraft portfolios.”

Capital Markets



In 2016, the volume and demand of the capital markets in aviation has been high, resulting in attractive pricing. The E-Note market continues to develop with new investors and a better understanding of the potential and limits of the product.

One of the largest aviation-related capital markets deals of the year was BOC Aviation's $1.13 billion initial public offering (IPO), which closed on 1 June. The deal stood out by being the largest-ever global aircraft lessor IPO and set a precedent for being the first major leasing company to list in Hong Kong.

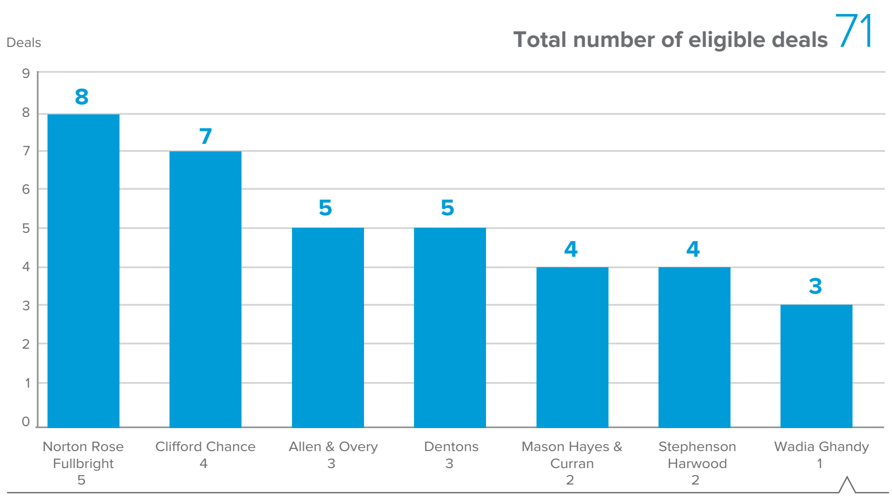
The Schuldschein market – the largest private placement market in Europe – has gained a presence in the aviation space, with Lufthansa and Goshawk closing deals last year.

"Pillsbury was active in some capacity on practically every ABS [asset-backed security] or EETC [enhanced equipment trust certificate] transaction that came to market, notably acting for Mizuho as sole lead on GECAS's first 144A ABS in over a decade, which involved the placement of the E-Note with a group of Korean investors [the first E-Note ever sold in Asia]," says Jonathan Goldstein, partner at Pillsbury, which came first in this category.

He adds: "The ABS market also continued to diversify, with several mid- to end-of-life aircraft transactions with the likes of Castlelake, Apollo and AerGen. American and United made strong use of the EETC market [collectively issuing almost $5 billion], while Norwegian came to market with a $350 million deal using an Irish SPV structure."

Kevin MacLeod, head of New York capital markets at Vedder Price, says: "We have seen during the past 12 months continued deep liquidity and greater diversification of the investor base. In particular, we have seen increased interest and investment from Asian investors, notably in Japan and South Korea, which supported issuance in the ABS market, the EETC market and the unsecured market for aircraft lessors. These liquidity trends paired with general pricing conditions enabled issuers to achieve record pricing and supported market entries by new issuers."

Export Credit



The export credit market has been weak this year, due to a number of factors. While the US Export-Import Bank of the United States (Ex-Im Bank) was granted reauthorisation in December 2015 with a mandate until 30 September 2019, the bank cannot do any commercial aviation deals at the moment.

All transactions need to be approved by Ex-Im's board of directors, which is missing its third member. The bank requires a board of three to make a quorum, but currently has only two directors.

Also, in mid-April, President Trump announced he would nominate former Republican representative Scott Garrett, a critic of the bank, as its new head, raising questions about Ex-Im's future.

The Airbus export credit agencies (ECAs) – Bpi (the French public investment bank, Bpifrance, which has taken over state export guarantees activity from Coface), Euler Hermes and UK Export Finance – are still unable to guarantee financing for Airbus aircraft because of an ongoing criminal investigation into Airbus by the UK's Serious Fraud Office. The aircraft manufacturer is being investigated in connection to inaccuracies in some of its export credit applications.

George Paterson, head of the Paris office of Norton Rose Fulbright and lead for the Paris aviation team, says: "There has been less activity in the export credit market over the past year due to the situations involving both Airbus and Boeing. However, we have acted on a large number of Export Development Canada transactions in 2016, as well as transactions involving Sace as well as Coface [now Bpi]."

William Glaister, global head of asset finance, Clifford Chance, London, adds: "The absence of active ECA financings for Airbus and Boeing aircraft has resulted in ground-breaking products."

More recently, the absence of the Airbus and Boeing ECAs has seen an increasing number of deals in which an ECA which would not traditionally guarantee financing of the assets do so. For example, UK Export Finance has started financing 787 aircraft. Although 787s are primarily made in the US, the UK ECA is able to get around this because the aircraft run with Rolls-Royce Trent engines.

Also, as a result of the ECAs being inactive, a new insurance-guaranteed product has emerged in the market, with ING closing the first deal for a 747-8I with Korean Air Lines in April.

Rising **Stars**

Airfinance Journal recognises eight of the most promising legal associates for 2016.

Amanda Darling

K&L Gates

Charleston, South Carolina

I transformed my ship finance experience into aviation finance and went from strength to strength.

Amanda Darling, K&L Gates

As a science undergraduate at Melbourne's Deakin University, Amanda Darling used to sneak in to her then-boyfriend's law classes in her free time, enjoying a break from her science classes, which she enjoyed less.

Immediately after graduation, she enrolled in a Graduate Entry Bachelor of Laws at Queensland University of Technology in Brisbane and started working as a paralegal. She relocated to London in 2006 and continued paralegal work, and kept on studying via distance learning, before landing a role with Norton Rose's ship finance team. By 2010, she found an opportunity with Ince & Co in Singapore and relocated there, but eventually returned to Australia to study her Masters of Law.

When she was three-quarters of the way through this degree, a recruiter called her and asked if she would be interested in relocating to Tokyo to work in aviation finance for White & Case.

"I had never been to Japan and had done only minimal work in aviation at this stage – but it seemed like a great opportunity and one not to turn down without exploring in full. I flew to Tokyo for the interview – and the rest, as they say, is history."

She adds: "I transformed my ship finance experience into aviation finance experience and went from strength to strength. For me, there was no turning back; aviation finance gave my job satisfaction I didn't know was possible."

Because of a change in personal circumstances, Darling left White & Case and moved to K&L Gates.

While Darling says it is difficult to choose one single transaction as her favourite, the one that stands out is probably being at the ground level of a Dreamliner component financing transaction, whereby a large international airline group would purchase spare part components for the Dreamliner and would then sell these to a third party and lease them back (under an umbrella sale and leaseback agreement).

Other deal highlights for Darling include representing a syndicate of lenders led by BNP Paribas Singapore for the Japanese operating lease with call option financing of three A320 aircraft to ICBC Leasing on long-term lease to Garuda Indonesia; representing Tokyo Century Corporation as junior lender in the capacity of lead attorney on a portfolio purchase and financing transaction between AerCap (as seller and continuing servicer) and subsidiaries of Magnetar; and representing Minsheng Financial Leasing Corporation as lead English law adviser in its portfolio acquisition and financing of aircraft on lease to various airlines.

Grace (Yichun) Li

Baker McKenzie

Shanghai

Grace (Yichun) Li, Baker McKenzie

Shanghai-native Grace (Yichun) Li feels lucky to be working in the aircraft financing and leasing industry in China.

"When I first started in China, you could only get lessee-oriented work because the PRC [People's Republic of China] law didn't permit Chinese companies to do finance leasing or operating lease business, so airlines could only lease from international lessors," she tells *Airfinance Journal*.

"That changed in 2006 when the CBRC [China Banking Regulatory Commission] promulgated a new law saying the Chinese banks can set up their own subsidiaries to do operating leasing. After that, the domestic business was really booming."

Li studied at the East China University of Political Science and Law from 2000 to 2004, and then decided to go to Durham University in England for further study of International Trade Law.

On her return to China, her goal was to find a job in the foreign direct investment or mergers and acquisitions area, and she found a job with Chinese firm Fangda Partners, focusing on initial public offerings and private equity. However, the working style there turned out to be far from ideal.

"The lifestyle was crazy; I had to stay up for 24 hours one to two days per week. So I decided I needed to change," says Li.

She found an opening with Baker McKenzie in Shanghai and started work under the supervision of aviation partner Harvey Lau.

"He is one of the few lawyers who worked in PRC-related aviation work back to the early '90s," says Li.

Under Lau, Li acted on many transactions for lenders, lessors and airlines. These include acting for China Construction Bank (Asia) in the financing with CCB Financial Leasing Corporation for five aircraft on lease to Shenzhen Airlines with a deal volume of $83 million. On the lessor side, she acted for Bank of Communications Financial Leasing in the financing with Deutsche Bank, Singapore Branch as lender for one A330 aircraft on lease to Singapore Airlines with a deal volume of $38 million.

On the airline side, she acted for Air China in the lease termination for 27 aircraft in 2016 and 2017 with different underlying financing structures, with ING, HSBC, Société Générale, BNP Paribas and Natixis as counterparties.

Having worked for Baker McKenzie for more than 10 years, Li recognises her language skills as a key advantage to her work. She speaks fluent Mandarin Chinese, English and Shanghainese, the local Shanghai dialect.

She says: "Traditionally, the business has been based mostly in Hong Kong or Singapore with English speaking lawyers, but we can speak Chinese to our clients in China and English to our clients outside China. Most of the Chinese leasing companies are either in Beijing or Shanghai, so I can speak Shanghainese to the local lessors here."

Chris Marrable
Holman Fenwick Willan
Singapore

When I started working, I got a real interest in travelling to Asia.

Chris Marrable, Holman Fenwick Willan

Hailing from the English county of Suffolk, Chris Marrable always dreamt of working in Southeast Asia. As a child, he travelled extensively with his parents because his father was involved in Formula One racing as a marketing director. His first trip to Asia was to Japan as an eight-year-old for the Japanese Grand Prix.

Before joining the Singapore office of Holman Fenwick Willan (HFW) two years ago, Marrable spent eight years at law firm Osborne Clark in London.

"Increasingly, I was doing private equity with a focus on asset-backed lending, and started building up the asset finance team there. The partner's main practice was rolling stock but also some aviation," he says.

However, his career goal was always to work in Asia, so he started reaching out and looking for options in that part of the world.

"When I started working, I got a real interest in travelling to Asia. From 2005 onwards, I started making regular trips there," he says.

Fortunately, he was able to find a job with HFW and relocate to Singapore.

"It's a fantastic city, Singapore. It has a combination of the best of Asian cities, but is one of the most developed cities at the same time. My wife and I have got a little boy who is just coming up to five years old, so it's a fantastic place for him."

Marrable has worked on many transactions over the past 12 months, including acting as counsel to BNP Paribas, Cathay United Bank and Taipei Fubon Commercial Bank in a limited recourse financing to Deucalion in the financing of two A330 aircraft on lease to China Airlines. He also advised BNP Paribas on a limited recourse financing to AWAS in the financing of one A320 aircraft on lease to VietJet.

Besides being a seasoned traveller, Marrable is also a keen scuba diver with an Advanced Open Water qualification and has made dives in Indonesia, the Philippines and elsewhere. Surprisingly, his hobby has even led to him furthering his professional network.

During one dive, his diving partner turned out to be an employee of Lufthansa Technik in Singapore and they ended up trading business cards – presumably once they were out of the water.

Nai Ying Kwok
King & Wood Mallesons
Sydney

Nai Ying Kwok, King & Wood Mallesons

Sydney-based Nai Ying Kwok began his career as an aviation finance lawyer at the time of the 2008 global financial crisis (GFC) – something he actually considers lucky.

"It was good as a young lawyer," he recalls. "If I had started pre-GFC when Mallesons was doing lots and lots of aviation deals with all kinds like Allco [Financial Group], who were one of Mallesons' biggest clients, I would have been working on a really long series of transactions, but because of the GFC, I think I managed to get involved in a much more varied number of transactions."

He only came into law "a little bit later in life", having initially completed a degree in information technology (IT). After working in IT for a couple of years, he became interested in intellectual property. Wanting to explore law more, he did a Juris Doctor at Melbourne University, before spending a year in Japan working for Anderson Mori & Tomotsune.

After that, he joined Mallesons Stephen Jaques (one of the firms that later merged into King & Wood Mallesons).

"I think our practice at Mallesons, especially in the Sydney office, is quite aviation focused and I think John [Canning] has got a very strong aviation finance and lender practice in Australia," says Kwok.

At King & Wood Mallesons (KWM), Kwok has worked on many significant transactions, including acting for Investec Bank as investment manager to Goshawk Aviation Fund on the purchase, financing, leasing and novations of leases of more than 14 Boeing and Airbus aircraft leased to airlines in various jurisdictions, including Australia, Spain, Brazil, Kazakhstan and Indonesia.

He also acted for Goldman Sachs (the structuring agent and bookrunner) as part of its Australian counsel team in the $800 million enhanced equipment note offering by Virgin Australia.

Kwok plans to relocate to KWM's Hong Kong office this summer.

When he is not working, Kwok enjoys travelling with his partner.

"We are looking at a trip to South Africa this year. We have really done as much travelling as we can all over the world. We have been to Iceland to look at the Northern Lights," he says.

Kwok has not completely forgotten his IT background and still enjoys playing computer games.

"I still have a little bit of a nerdy side to me and I'm still interested in that kind of stuff," he says.

Kwok describes his Nintendo Switch – a home games console-cum-tablet computer – as a "godsend".

"In the legal practice, how much time do you have to commit to play computer games? With the Switch, you can take it out of your bag and play it. Over the last five to six years, we have all been really time poor and I have found you have not been able to spend a lot of time on hobbies."

Asked whether he thinks he is not alone in his penchant for video games in the aviation finance law community, Kwok says: "I think all of them enjoy a game of FIFA*, especially the younger ones."

*A football-based video game series

Luke Elliott
Allen & Overy
London

Durham History graduate Luke Elliott went straight from university to a training contract with Magic Circle firm Allen & Overy, rising from a trainee to senior associate. He had no particular previous interest in aviation, but fell into the industry through an asset finance seat under partner Harry Upcott.

"I very much enjoyed that seat and I asked to qualify here," he tells *Airfinance Journal*. "It surprises you what takes your interest and captures your imagination."

Since then, he reckons aviation has been about the majority of his practice and, over the past few years, he has become increasingly specialised in the aviation field. In 2015, Elliott spent a year seconded to UK Export Finance (UKEF), which gave him "a lot of perspective from a lot of different angles".

“The nature of UKEF being a sub-department of the Treasury means you get to see the political aspect of these things.”

Luke Elliott, Allen & Overy

“The nature of UKEF being a sub-department of the Treasury means you get to see the political aspect of these things,” he says.

“Being the civil service, they are much more egalitarian in their approach, so they give you more access to the commercial side of the transactions,” he adds.

At Allen & Overy, a highlight transaction for Elliott was acting for BNP Paribas as arranger and placement agent as note trustee on the world’s first euro-denominated export credit agency bond issuance for the refinancing of five ATR aircraft on lease to Avianca Group. Also, he advised Arab Banking Corporation on the lease financing of four Airbus A320 aircraft on lease to Saudi Arabian Airlines.

Elliott, who comes from the south-west London district of Wimbledon and used to spend part of his summers working at the world-famous tennis event hosted there, is an avid sports fan, and plays squash, tennis and hockey.

He also has an interest in drama, having most recently watched the play The Goat, or Who Is Sylvia? at The Old Vic theatre in London.

He lives in Balham, London, with his wife and young son, Ludo, who is nearly two years old.

Marcus Pyke

Bird & Bird

London

Marcus Pyke, Bird & Bird

Bird & Bird associate Marcus Pyke enjoys the fast-paced transactional nature of aviation finance work. Having aspired to become a lawyer since he was a child, he qualified as a general banking lawyer working at Herbert Smith Freehills, but quickly found his dream position with a law firm in Paris, utilising the French he had mastered at university.

The work at this firm, Simmons & Simmons, turned out to be nearly all aviation finance, and Pyke thoroughly enjoyed this new field, despite being exposed as a child to the tragic side of the industry by his grandfather, who worked as an air accident investigator.

“I think aviation finance is a great area to be in because it is so international, but in terms of the insurance side of things, I don’t think I have the patience for the long drawn-out litigation process. I’m very much more into the fast-paced transaction side of things," he tells *Airfinance Journal*.

After his stint in Paris, Pyke moved back to London with Simmons & Simmons, where he spent five years, before moving to Bird & Bird in 2016.

There, he has worked on operating lease, export credit and commercial financing transactions. A highlight for Pyke was advising Etihad on the sale and leaseback of two A320s from Natixis – which won *Airfinance Journal*'s Sale and Leaseback Deal of the Year 2016.

"We have got a good team and a lot of guys with experience in-house. I think that really comes across when people have a real passion for the industry, and that is really infectious," he says.

As part of his role, Pyke serves as Bird & Bird's main representative to the European Regions Airline Association, which gives him insight into the state of regional carriers in Europe.

"Business there is pretty much all up for grabs and keeps us very busy," he says.

Outside of law, Pyke's "big passion" is cricket, and in the summer months he tries to play the sport as many weekends as he can in Kent, a county in the south-east England. He likes a spot of golf as well, "when the wife allows". Pyke lives in Lincolnshire, commuting into London each day, and has an 18-month-old daughter.

Rakhi Savjani

Pillsbury

London

I found the work interesting and intellectually stimulating.

Rakhi Savjani, Pillsbury

Rakhi Savjani studied law at the London School of Economics and Political Science.

Having trained at DLA Piper, she qualified into asset finance in 2011 because she "found the work interesting and intellectually stimulating and particularly enjoyed the global nature of the aviation industry". She moved to Pillsbury with partners Graham Tyler and Debra Erni and three other lawyers in May 2014.

Savjani says she enjoys the "variety and quality of work and clients from all over the world". She adds that "no two deals are ever the same and there is always a new and interesting challenge in different jurisdictions and between different contracting parties".

Savjani acts for clients across the aviation industry, including several operating lessors, major Middle Eastern airlines and financial institutions. Among other deals, Savjani has played a leading role in the firm's team advising Emirates as the lessee on the listing of AA4+ on the LSE specialist fund market, which previously won *Airfinance Journal*'s Editor's Deal of the Year.

Another deal highlight for Savjani is representing a major Irish-based lessor in lease restructuring arrangements regarding four A320 aircraft subject to lease suspension arrangements and new lease agreements (in lieu of a more typical subleasing structure) and registration in a new jurisdiction involving substitute Asian and Indian airlines. This transaction included producing bespoke documents and some of the aircraft were also the subject of Japanese operating lease with call option financings, which "added a layer of complication and extra coordination into the mix".

Savjani says one of the highlights of her career was attending a delivery in Toulouse on behalf of an airline client where she had to work through various challenges in the delivery room because the lessor did not have its funds in place and the airline needed to ferry the aircraft to enter into commercial operation in a short period of time. She enjoyed making use of her analytical, commercial and free drafting skills, and recalls that "seeing the tangible asset that I had been working on documentation for was exciting".

Graham Tyler, co-head of Pillsbury's asset finance practice, says: "Seeing a lawyer transform from a trainee solicitor to a superbly effective senior associate is always rewarding. Rakhi has distinguished herself not only through her legal knowledge, but also through her exceptional client service. Rakhi always brings a common sense, practical and thoughtful approach to the different issues that we face on our deals and is a pleasure to work with."

Savjani is a keen traveller and one of her hobbies is Bollywood dancing, which taps into her Indian heritage.

Rebecca Quayle

Berwin Leighton Paisner

London

Rebecca Quayle, Berwin Leighton Paisner

Rebecca Quayle always wanted to be a lawyer and so took the traditional path to qualifying, studying law at University of Waikato in New Zealand, before practicing at Simpson Grierson in Auckland.

Two years after qualifying, Clifford Chance was recruiting for finance lawyers, providing the opportunity to move overseas. Quayle was offered a role in the firm's aircraft finance team. The role and transition into aviation took her around the world, allowing her to travel extensively for transactions and work in Hong Kong, as well as in the London office.

One of the most interesting deals Quayle has worked on recently has been the introduction of Sukhoi SuperJets to CityJet's fleet.

"The documentation and the negotiation of the transaction was incredibly interesting as there were many additional issues to consider which arose from CityJet being the first western European operator of the aircraft," she tells *Airfinance Journal*.

"We had to consider a number of different matters that you don't usually have to think about when you are working with an aircraft which is already well-established in the market, and I enjoyed gaining more of an insight into the technical and operational considerations."

She adds that one of the highlights of the transaction was having the opportunity to visit the SuperJet International hangar in Venice during negotiation meetings.

"We saw the aircraft at various stages, from when it was a green aircraft until it was fully kitted out. It was a working reminder of when we had to have the documentation agreed by," she says.

Another deal highlight for Quayle was acting for CCB Financial Leasing negotiating and documenting the sale and leaseback of 11 A321 aircraft for Wizz Air.

Quayle says that one thing she likes about the industry is that people tend to stay in it.

"I had a long career break while my children were very small and when I returned to the industry many of the same faces were still there, albeit in different places," she says.

Quayle enjoys reading, supporting the New Zealand wine industry, running and spending time outdoors and with her friends and family. She lives near Richmond Park in south-west London. She is married with three children, aged 12, 10 and eight.

Ireland's aviation **excellence**

Matheson partners, **Rory McPhillips**, **Stuart Kennedy**, **Gerry Thornton** and **Kevin Smith**, who have advised numerous Chinese state-owned enterprises and other market entrants in establishing their leasing platforms in Ireland, assess how Ireland's commercial and regulatory environment has allowed it to become a dominant force in aviation and continue to attract new leasing platforms.

Ireland continues to build on its reputation as a centre of excellence for aircraft financing and leasing, and its position has been further enhanced in recent years. There are a number of reasons why Ireland attracts investment in this area. These include its favourable tax regime, a wide double tax treaty network, ease of access to the EU and OECD, a well-developed common law legal system, professional expertise and a competitive business environment.

In addition, Ireland boasts a highly skilled and motivated workforce coupled with an exceptional third level educational system. This is emphasised by the UCD Michael Smurfit Graduate Business School offering the only master's degree in Europe in aviation finance and the Law Society of Ireland offering a diploma in aviation leasing and finance.

These factors combined with a government which is committed to growing and supporting the industry mean that Ireland has become the obvious location through which to finance and lease aircraft.

> *"Ireland boasts a highly skilled and motivated workforce coupled with an exceptional third level educational system."*

Taxation developments: 12.5% tax corporation tax rate

The Irish government has repeated its commitment to maintaining the 12.5% corporation tax rate for active trading companies. This commitment has been welcomed by the aircraft financing and leasing community. The 12.5% corporation tax has continued to attract aircraft investment to Ireland, and the Irish leasing market has been very active in recent years, with strong investment from the US, China and Japan in particular.

Some of the larger investments structured through or from Ireland in the past year are as follows:

- Chinese lessors continue to be attracted to Ireland and there are now at least seven Chinese leasing companies with operations in the country, all of which benefit from Ireland's favourable tax regime, its professional expertise and its location in the European Union. Most recently Ping An Aircraft Leasing and SinoSinga commenced operations in Ireland, and there are several others currently exploring opportunities;
- Avolon Holdings Limited, the Irish-based leasing company, announced in April that it had completed its $10.38 billion acquisition of CIT Group Inc's aircraft leasing business. The acquisition resulted in Avolon becoming the third-largest aircraft lessor with a combined fleet of about 868 aircraft valued at more than $43 billion;
- In April, Dubai Aerospace Enterprise announced that it had reached agreement with Terra Firma, alongside co-investors and Canada Pension Plan Investment Board, to acquire the Dublin-based aircraft lessor AWAS. After the acquisition, Dubai Aerospace Enterprise will have an owned, managed and committed aircraft fleet of 394 aircraft with a total value of more than $14 billion; and
- CIT Group Inc announced in March that it had sold its 30% ownership stake in the commercial aircraft leasing joint ventures TC-CIT Aviation Ireland Limited and TC-CIT Aviation US, Inc to its joint-venture partner Tokyo Century Corporation. The joint-venture entities have been renamed TC Skyward Aviation Ireland Limited and TC Skyward Aviation US, Inc, respectively.

In addition to Ireland's 12.5% Irish corporation tax rate, Irish lessors carrying on a trade in Ireland may also claim a tax credit for foreign withholding taxes on lease rentals where there is no tax treaty relief available. The relief is granted on a unilateral basis by Irish domestic law.

This tax credit has positioned Ireland as an attractive leasing jurisdiction for leasing aircraft and other assets into jurisdictions which do not have a wide tax treaty network, and has opened up new markets for Irish lessors.

Aircraft securitisation

Ireland has also developed a vibrant aircraft securitisation industry, which allows airlines and investors access to alternative funding from capital markets sources on a tax-efficient basis. Some of the larger capital markets aircraft transactions in the past year were as follows:

- Castlelake, an alternative investment firm specialising in aircraft, priced its $916 million asset-backed security in August. The transaction was backed by 52 aircraft and one aircraft engine;
- in May 2016, Norwegian Air Shuttle raised about $349.1 million in an enhanced equipment trust certificate transaction to finance 10 aircraft through Torefjorden DAC, a wholly owned subsidiary of Arctic Aviation Assets Limited, which in turn is Norwegian Air Shuttle's wholly owned Irish leasing subsidiary. This represented NAS's first public EETC transaction;
- in February, Elix Aviation Capital priced the first all-turboprop asset-backed securitisation. Proceeds from the loans will be used to acquire a portfolio of 63 turboprop aircraft that are initially leased to 17 airlines located in 12 countries with an initial total value of about $545.1 million; and
- Dubai Aerospace Enterprise, announced its inaugural aircraft securitisation in February. Falcon Aerospace and Falcon Aerospace USA will issue $410 million of asset-backed secured term loans. Proceeds of the loans will be used to purchase 21 in-production, narrowbody aircraft. Dubai Aerospace Enterprise (DAE) will act as servicer for the transaction.

Expansion of double tax treaty network

Ireland has signed 72 double tax treaties (all of which are now in force). Its most recently signed double tax treaties include treaties with Thailand, Zambia, Botswana, Uzbekistan, Ukraine, Kuwait, Qatar, Bahrain, Saudi Arabia, Armenia, Egypt and Ethiopia.

The Irish tax authorities are very active in increasing the number of treaties to which Ireland is a party, particularly with emerging market and Middle East jurisdictions. In particular, negotiations for new double tax treaties with Azerbaijan, Ghana, Kazakhstan, Oman and Turkmenistan have concluded and these double tax treaties are expected to be signed shortly.

Cape Town Convention and Aircraft Protocol

Aviareto Limited, an Irish limited liability company which is a joint venture between the Irish government and SITA, the air transport communications and information technology specialist, was, in 2016, reappointed as the registrar to the International Registry for a further five years.

Ireland was one of the first contracting States to the International Registry and Aircraft Protocol and this has been another reason why lenders favour Ireland as a jurisdiction for aircraft financing.

If the borrower and mortgagor are located in Ireland, the lenders will obtain the benefit of the Cape Town Convention and Aircraft Protocol. The added protection afforded under the Cape Town Convention

> *"Ireland was one of the first Contracting States to the International Registry and Aircraft Protocol."*

and Aircraft Protocol has been increasingly relied on by lenders and in certain transactions has replaced traditional local law mortgages where obtaining such mortgages was inefficient from a time and cost perspective.

In addition, the International Interests in Mobile Equipment (Cape Town Convention) (Aircraft Protocol) Order 2017 signed on 2 May adopted into Irish law the Alternative A insolvency provisions of the Aircraft Protocol to the Cape Town Convention. This is similar to the US Section 1110 insolvency remedy and will provide that, in the case of an insolvency-related event of a lessee, mortgagor or conditional purchaser, the lessor, mortgagee or conditional seller will be entitled to the return of the aircraft within 60 days unless certain criteria are met.

Irish Aviation Authority

Many aircraft that are operated in countries such as Russia, Italy, Norway, Spain and Mexico, among others, are registered with the Irish Aviation Authority. Owners and lenders choose Ireland as the state of registration to remove deregistration risk and protect the residual value of the aircraft by having the aircraft registered with a European Aviation Safety Agency (EASA) registry.

This trend has continued in recent years and has been further bolstered by the fact that registration of an aircraft in a contracting state to the Cape Town Convention and Aircraft Protocol satisfies one of the connecting factors under the Convention and Protocol to create an international interest.

Further protection can be afforded through registration of an IDERA (irrevocable deregistration and export request authorisation) with the Irish Aviation Authority.

Conclusion

Ireland's reputation as a centre of excellence for the aircraft financing and leasing sector remains strong. It has seen a continued growth in the number of new leasing platforms being established and in lessors participating in capital market and securitisation transactions to finance their leasing activities. These trends are expected to continue.

Ireland adopts the Alternative A insolvency remedy under **Cape Town Convention**

Catherine Duffy, head of aircraft finance, A&L Goodbody, discusses the impact of Ireland adopting Alternative A insolvency remedy.

Alternative A of the Cape Town Convention now has the force of law in Ireland, after the signing of an order by the Irish government on 10 May. The Cape Town Convention creates an international uniform body of law applicable to interests in aircraft assets for the protection of financiers, lessors and conditional sellers, and to establish basic remedies available to them under agreements relating to the aircraft assets. A&L Goodbody has been advising on the Cape Town Convention for more than 10 years, since it was ratified by Ireland in 2006.

What is Alternative A?

By giving force of law to Alternative A, Ireland will apply a regime substantially similar to the long-established Chapter 1110 insolvency remedy in the US. It will apply to aircraft assets that are the subject of a lease, a security agreement or a conditional sale agreement registered on the international registry such that:

- within 60 days of an insolvency or threatened insolvency of a lessee, mortgagor or conditional purchaser, the lessor, financier or conditional seller will either get the aircraft asset back or all defaults (other than the default occasioned by the insolvency itself) will have been cured and an undertaking given as to future obligations;
- the aircraft will be preserved and its value will be maintained during the 60-day period; and
- Irish administrative authorities will cooperate in the exercise of remedies subject to aviation safety requirements.

Why is Alternative A important?

Giving force of law to Alternative A in Ireland is important because it:

- confirms the Irish government's continued support and commitment to Ireland as a leading jurisdiction for aircraft financing;
- gives Irish leasing companies and airlines access to reduced cost funding;
- augments Ireland's legal and fiscal regime and enhances Ireland's position as a leading location for financing and leasing aircraft; and
- facilitates particular types of financing structures in the aviation sector including non-US enhanced equipment trust certificates (EETCs), bond issuances and other capital market and structured finance transactions.

What does it mean for Ireland?

With the introduction of Alternative A, Ireland meets all of the key elements to execute a successful and competitively priced EETC, including:

- having an established rule of law;
- being a Cape Town Contracting State with Alternative A adoption; and
- having a favourable fiscal and legal regime which is sufficiently flexible to support the structure and liquidity profile of a US EETC to access and optimise the established investor base.

While EETCs are airline based, the change in Ireland will not just benefit the Irish airlines but will potentially benefit other airlines based in Europe, Asia and the Middle East. It will particularly benefit those which have ratified and implemented the Cape Town Convention, including Alternative A, by providing the opportunity to locate the issuer vehicle in Ireland to avail of our legal and fiscal regime, as well as maximise the pricing and return to investors.

Looking ahead, as the capital markets evolve and the investor base expands and becomes more comfortable with non-US airlines and the non-US legal environment, we would hope to see more non-US EETCs through Ireland and perhaps even non-US dollar-denominated issuances.

For further detail on Ireland's adoption of Alternative A, or any other aircraft finance queries, please contact an A&L Goodbody aircraft finance partner: Catherine Duffy, Seamus O'Croinin, Marie O'Brien, Maireadh Dale or Maria McElhinney. With five dedicated aircraft finance partners, A&L Goodbody has the largest aircraft finance team in Ireland, and it is recognised by the international aviation industry as the Irish law firm of choice for experienced and sophisticated advice on aircraft financing.

"By giving force of law to Alternative A, Ireland will apply a regime substantially similar to the long-established Chapter 1110 insolvency remedy in the US."

Catherine Duffy, head of aircraft finance, A&L Goodbody

Bermuda aircraft portfolio securitisations – a better structure

Jason Piney, director of the corporate department at Conyers Dill & Pearman, looks into the benefits of choosing Bermuda as a jurisdiction for aircraft transactions.

Since the resurgence of the aircraft asset-backed securitisation (ABS) in 2011, there have been 29 ABS transactions raising an aggregate total amount of $15.4 billion, according to data from Kroll Bond Rating agency.

ABS deals have evolved since the transactions that completed before the 2008 financial crisis with more innovative deals being successfully completed on the basis of diverse pools of aircraft, such as regional jets and turboprops.

As the market continues its resurgence, Bermuda has remained the preferred jurisdiction for structuring ABS deals with an offshore component.

This was demonstrated most recently in February, with Elix Aviation Capital launching its $411 million debut ABS deal through Prop 2017-1 Limited, a Bermuda company. This is the first ABS to be secured entirely against turboprop aircraft.

In December, GE Capital Aviation Services' sponsored $709 million acquisition financing of 20 commercial passenger aircraft and related notes issuance was launched through Labrador Aviation Finance, a Bermuda company.

This is the first ABS to sell an equity certificate into Asia, specifically into South Korea. This transaction was named *Airfinance Journal*'s Editor's Deal of the Year 2016.

This article examines the reasons why Bermuda remains the ideal jurisdiction for structuring ABS deals and notes some recent developments in the jurisdiction.

Why Bermuda?

Before 2008, several ABS holding companies and issuers established in Bermuda, including Aircastle, Fly Leasing and Genesis Lease, which all successfully launched on the New York Stock Exchange.

After the financial crisis in 2008, GECAS's June 2011 $290 million aircraft engine securitisation transaction, Rotor, was the first ABS placed into the capital markets since 2007. Bermuda has been the venue for all of GECAS's securitisation transactions since the Rotor transaction.

ABS structuring

Several key structuring objectives of an ABS deal are considered below, together with an examination of how Bermuda vehicles can be used to help achieve these goals:

- off balance sheet;
- bankruptcy remoteness;
- separateness;
- certainty of security interest priority; and
- rating agency-approved insolvency regime.

Off balance sheet

Often an ABS transaction will require an orphan special purpose vehicle (SPV), meaning that it is not part of the originator's corporate group. By selling the asset to the orphan SPV, the asset is removed from the originator's balance sheet. When an orphan is required, the SPV is incorporated with all the shares issued to a trustee (also offshore) pursuant to a charitable or purpose trust. A Bermuda purpose trust is of particular benefit in an ABS transaction structured in this manner, as the purpose trust is a trust designed to fulfil purposes rather than one for beneficiaries.

The purposes of the trust and, therefore, the duties of the trustees, can be clearly linked to the contemplated transactions – namely, to subscribe for shares of the SPV, retain those shares and support the activities of the SPV in the transactions.

A charitable trust has charities as the beneficiaries where, depending on circumstances, a conflict of interest may arise, or where the trust could be open to challenge that the trustees are really acting in the interests and for the benefit of those who benefit from the structure.

Bankruptcy remoteness

The SPV is usually created in such a way that it is bankruptcy remote, which means that the aircraft sold to the SPV are not at risk if either the originator becomes insolvent. As the SPV should not be permitted to incur indebtedness other than the asset-secured loans, the SPV is unlikely to become insolvent as a result of its own activities.

"As the market continues its resurgence, Bermuda has remained the preferred jurisdiction for structuring ABS deals with an offshore component."

Jason Piney, Conyers Dill & Pearman

Operating under a flexible corporate regime, the following protections are generally put in place for a Bermuda SPV:

- the SPV's objects and powers are limited to entering into the specific transactions related to the securitisation;
- the trustee, pursuant to the purpose trust, is not allowed to sell the

shares, merge or amalgamate the SPV, continue the SPV into another jurisdiction or make any other structural changes to the SPV, such as amending its constitutional documents. If a purpose trust is used, these requirements can be set out in the trust deed, whereas if a charitable trust is used, the trustee must enter into a separate undertaking. This is a further advantage of using a purpose trust whereby everything can be set out in one document; and
- it is important to ensure that the SPV will not be petitioned into winding up (bankruptcy) and the trustee of the purpose trust, together with the note holders, indenture trustee and other service providers will agree not to petition the SPV into bankruptcy.

Separateness

Securitisation transactions are typically structured to avoid the risk of the SPV's assets being treated as belonging to the originator, to another third party, or to a creditor or liquidator of a third-party company, which has a claim on the assets. Maintaining this separateness can be achieved by using a Bermuda SPV:

- as a general rule, Bermuda law recognises the separate and distinct existence of a Bermuda company from its shareholders and subsidiaries. Save in very limited exceptions, a Bermuda court, a liquidator appointed by a Bermuda court or the official receiver of Bermuda, has no power under Bermuda law to consolidate assets; and
- separateness covenants which appear in the transaction documents can be reflected in the SPV's constitutional documents (including, for example, requiring that the SPV observes all corporate formalities necessary to remain a separate legal entity and maintains its assets and liabilities separate and distinct from unrelated parties).

Security interest priority

Security is paramount in an ABS transaction where the parties require certainty with respect to the security granted by the issuer or borrower and aircraft-owning entities in terms of perfection, priority and notice to third parties. Bermuda provides a statutory framework that ensures certainty of security interest priority with a public, central register of security interests.

Importantly, on registration of the charge, the charge will have priority in Bermuda over any unregistered charges and over any subsequently registered charges, in respect of the assets that are the subject of the charge, to the extent that Bermuda law governs the priority of a charge.

In certain other offshore jurisdictions, no public, central register is available and filings are made in internal registers that can only be searched at the registered office of the company.

Rating agency-approved insolvency regime

Rating agencies and lenders are familiar with Bermuda's insolvency regime, which provides a flexible framework, built on known jurisprudence of the UK and other Commonwealth jurisdictions for both debtors and creditors.

Bermuda's insolvency regime facilitates:

- the swift and inexpensive appointment of receivers by secured creditors;
- the use of schemes of arrangement to effect restructuring;
- restructuring through the use and court appointment of so-called light touch provisional liquidators, appointed by the court to work with the boards of companies or with Chapter 11 trustees (if there is a US element) or other foreign appointees to restructure Bermuda companies; and
- winding up through the appointment of liquidators with full powers to realise the assets of the company and make payment to creditors.

Benefits of Bermuda SPVs

There are a number of benefits that Bermuda can offer aircraft leasing companies.

Tax neutral: Bermuda is tax neutral. There are no income, profit or capital gains taxes in Bermuda, and the Minister of Finance will grant an assurance to Bermuda companies that they will not be liable to pay any such taxes before 31 March 2035. This is particularly attractive to holding companies with subsidiary operations in, or significant income arising from, more than one country, such as aircraft leasing companies.

Further, subsidiaries and orphan SPVs can use Bermuda's tax neutrality to establish a tax-efficient business structure.

Flexibility and expertise: Bermuda-exempted companies are extremely flexible and are routinely used as SPVs in structured finance, asset finance and leasing transactions. An SPV can be incorporated within one to two business days, and the ongoing statutory requirements of the SPV are straightforward and inexpensive.

Bermuda's corporate law is flexible and largely based on the corporate law of the UK, with a final appeal to the Privy Council of the House of Lords in England. Bermuda companies are listed on most major stock exchanges around the world, and the major stock exchanges are familiar with Bermuda's legal system and regulatory environment.

Recent developments

Cape Town: in August 2016, Bermuda passed the necessary domestic legislation to permit the UK to extend the Cape Town Convention to Bermuda, as one of its Overseas Territories. Such extension is expected to occur in the latter half of 2017. Accordingly, a creditor or secured party engaged with a Bermuda SPV will soon be afforded all the rights, benefits and protections afforded to creditors under the Convention.

Bermuda LLCs: Bermuda limited liability companies (LLCs) were introduced in late 2016. The central provisions of the applicable Bermuda legislation were closely modelled on the corresponding provisions of the Delaware LLC legislation. A Bermuda LLC can be used as a flexible and cost-effective aircraft-owning entity, with the same statutory framework applicable to security assets on the assets of a Bermuda LLC.

Bermuda Stock Exchange (BSX): the EU Market Abuse Regime (MAR) introduced wide-ranging additional administrative obligations (and possible civil and criminal sanctions) for issuers, including in connection with listed ABS deals. Issuers may consider listing on the BSX, which is not bound by or subject to any EU directives or regulations, including MAR and is considerably more flexible in its approach.

The BSX is a member of the World Federation of Exchanges and, in March, was awarded Acquisition International's Excellence Award, 2016 for Most Outstanding Offshore Stock Exchange.

Bermuda – the offshore jurisdiction of choice

Bermuda vehicles offer unique yet flexible structures that are capable of being used in today's innovative ABS transactions. In addition to an attractive infrastructure, Bermuda provides a statutory framework that facilitates structured finance transactions. In particular, Bermuda law is conducive for the SPV model because it ensures the integrity of bankruptcy remoteness, the separate legal personality of an SPV and the certainty of security interest priority.

In addition, Bermuda maintains a favourable reputation among investors, lenders, rating agencies and service providers. As a jurisdiction, Bermuda is ideally placed to support the parties to ABS deals with a commercial approach and considerable expertise.

Above & Beyond

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