Airfinance Journal MARCH 2016

Airfinance JOURNAL

MARCH 2016 ISSUE Number 384

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EDITOR'S LETTER

New aircraft, new markets and new deals

Aircraft financiers have a busy time ahead as manufacturers forge on with new aircraft programmes.

As *Airfinance Journal* went to press, Embraer rolled out its first E190-E2 aircraft during a ceremony at its manufacturing facility at Sao José dos Campos in Brazil. Rollouts provide a great opportunity to market an aircraft and Embraer did not miss this one.

The regional jet was presented to more than 600 financial partners, lessors, customers, suppliers and media, plus a crowd of over 1,000 employees.

The significance of the first appearance of a new type from the final assembly hangar can be overstated and there is still a demanding programme ahead before the aircraft is delivered to its launch customers. Embraer's latest rolled out aircraft is only the first of four prototypes that will be used in the type's certification campaign. The E2's first flight is not scheduled until the second half of 2016 and its entry into service not until 2018. Competitors such as Bombardier and Mitsubishi can testify there is potential for problems even after the first flight of an aircraft. However, Bombardier's problems may have receded slightly with Air Canada's order for CSeries aircraft *(see Lifeline for Bombardier? page 17)* and Mitsubishi remains bullish about the prospects of the MRJ, which received a new order at the Singapore Airshow, despite recently announced delays to the programme *(see Aerolease commits to MRJ, page 11)*.

But Embraer's management is confident there will be no delays, and Paulo César Silva, president and chief executive officer, Embraer Commercial Aviation, said at the rollout ceremony: "I'm sure that as a result of this event, the market's interest in the E2 will grow even further."

As we detail elsewhere in this issue, the Brazilian manufacturer is not alone in celebrating a significant milestone in the development of a new aircraft programme. Boeing and Airbus both have good stories to tell (see Next generation coming of age, page 18). An entry into service (A320neo) and two first flights (737 Max 8 and A321neo) taking place in the space of less than a month is probably a first in the modern era of commercial aircraft.

Of course, like the E190-E2 rollout, none of these events guarantees success, but they are major milestones that suggest the manufacturers will soon be delivering new fuel-efficient aircraft in line with what Airbus chief operating officer John Leahy describes as an ambitious expansion in production *(see 'Our goals for 2016 are ambitious', page 22)*.

The manufacturers remain confident they are not overproducing and believe that the capacity will be absorbed by a combination of the replacement of older aircraft and growth to satisfy increasing passenger numbers. According to most forecasts, a substantial part of this growth will come from new and developing markets. This may be true, but as our detailed look at Iran shows, large pent-up demand does not mean that delivering and financing new aircraft are straightforward tasks *(see Talking to Tehran, page 33)*.

So, it looks as though aircraft financiers will be looking for new deals for new aircraft types in sometimes challenging new markets. New aircraft finance deal structures do not get the widespread attention that is afforded to the first appearance and first flights of new aircraft, nor are they analyzed in the same detail as emerging markets, but they will be in the spotlight as *Airfinance Journal* presents its annual awards in Miami on April 18. If the quality of deals that our judging panel has been deliberating over is anything to go by, there will be no shortage of innovative structures to meet the market's requirements.

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Printed in the UK by Buxton Press, Buxton, Derbyshire.

(ISSN 0143-2257).
Airfinance Journal (USPS No: 022-554) is a full service business website and e-news facility with printed supplements by Euromoney Institutional Investor PLC .

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REGULARS

NEWS

People

Iberia names chief technical officer

Spanish flag carrier Iberia has named André Wall as its new chief technical officer.

Wall joins the carrier from SR Technics, where he was president and chief executive officer. He has also worked at Jet Aviation, Rolls-Royce and MTU, the German engine manufacturer.

He will be responsible for the maintenance, repair and overhaul of Iberia's fleet, as well as the third-party customers at Iberia Maintenance.

BOC Aviation hires Credit Suisse's Ross

BOC Aviation has appointed Credit Suisse Singapore's Timothy Ross as its new head of investor relations, according to sources.

His current role at Credit Suisse is managing director, equity research.

Ross will head up the investor relations team, which includes Claire Leow and Kelly Kang.

Willis Lease gets interim CFO

Willis Lease Finance Corporation has brought in Ernest Furtado as its interim chief financial officer.

Brad Forsyth, the previous CFO, stepped down from his position on February 18, according to an SEC filing by the engine lessor.

Furtado will fill the role during the search for a permanent replacement. He joins the company after retiring as the senior vice-president, chief financial officer and chief accounting officer at Textainer Group Holdings, which leases shipping containers.

Brotherton leaves BLP Singapore

David Brotherton, an asset finance partner at Berwin Leighton Paisner Singapore, has left the firm, sources have told *Airfinance Journal*.

BLP set up its aircraft finance practice in its existing office in Singapore in 2009. At that time, Brotherton was working as a senior associate under then partner Tom Budgett.

Hawaiian appoints Schaefer

Hawaiian Airlines has appointed Jay Schaefer as vice-president and treasurer.

Schaefer joins the airline from Amazon, where he worked in transportation finance roles. He previously spent 13 years at Alaska Air Group, where he had roles as a manager, director and vice-president.

Schaefer will oversee Hawaiian's corporate finance, fleet financing, cash management, fuel and foreign exchange hedging risk.

New president for Boeing Japan

Boeing has appointed Brett Gerry as president of Boeing Japan, effective April 1. He succeeds George Maffeo, who will retire from the company after nearly 40 years.

Gerry will be based in Tokyo, reporting to Marc Allen, the president of Boeing International.

He worked for seven years as vice-president and general counsel for Boeing Commercial Airplanes (BCA), where he led the legal function. Before joining BCA, he was chief counsel for Boeing Network & Space Systems.

Gerry moved to Boeing after holding positions in the US Department of Justice and the White House.

Pansadoro in place at HFW

Barbara Pansadoro has joined Holman Fenwick Willan (HFW) as a senior associate in the firm's London office.

Airfinance Journal understands she joined the firm in January, and will work with partners Shyamal Jeewoolall and Leigh Borrello and consultant Zohar Zik.

Pansadoro joins HFW from law firm Gide. Her previous clients include Turkish Airlines (THY) and SunExpress. She advised THY on its 2014 export credit agency-guaranteed tax lease for two A330s, which won Tax Lease Deal of the Year in *Airfinance Journal*'s 2014 Deals of the Year Awards. She also advised the airline on an export credit agency-backed Japanese operating lease with call option (Jolco) that won Tax Lease Deal of the Year 2013.

Her practice areas include predelivery financings, export credit-backed financings, commercial debt financings, tax-based cross-border financings, securitizations and financing transactions in general.

Pansadoro qualified as a solicitor in England and Wales and as an Avvocato in Italy.

Delta CEO in May exit

Delta Air Lines chief executive officer Richard Anderson will step down in May to become executive chairman of the board of directors, according to a company announcement.

Ed Bastion, the airline's president, will replace Anderson. Glen Hauenstein, the carrier's executive vice-president.

Will replace Bastion.

Delta also announced the immediate promotion of Gil West to senior executive vice-president and chief operating officer.

Doric Investment appoints managing director

Doric Investment, Doric Group's alternative investment fund management company, has appointed a new managing director.

Tanja Kisselbach will be responsible for risk management. Over the past 11 years, Kisselbach has held several senior roles at the Doric Group. Most recently, she was responsible for working in fields of compliance and risk management.

Kisselbach previously was managing director of Citigroup's German fund administration firm.

Bernd Reber, a Doric Group founder and shareholder, has stepped down from his position as Doric Investment's managing director. As managing director of the group's holding company, Reber will take responsibility for the group-wide management of risk.

HKAC's Hubbard moves to Avation

Russell Hubbard, Hong Kong Aviation Capital's (HKAC) former head of trading, has joined Avation as the company's new global head of aircraft trading.

Jeff Chatfield, Avation's executive chairman, said the company was recruiting for the position for "several months".

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NEWS

People

Short heads up Investec technical services

Investec has appointed a head of technical services for its aviation team, according to a statement from the bank. Colin Short will be based in Investec's London office.

Short was previously chief technical officer at KV Aviation, where he was responsible for the technical asset management of the KV portfolio, coordinating and managing all pre-purchase and mid-lease inspections, aircraft deliveries and re-deliveries, as well as drafting and negotiating technical lease documentation.

He spent six years as the technical manager for Airclaims Limited (now McLarens Aviation), where much of his time was involved in the asset management of large portfolios of aircraft for major lessors such as BAE Systems and Airbus, as well as providing aircraft inspection and advisory services to banks, financiers and lessors.

Sun joins Holman Fenwick Willan

Justin Sun, a partner and director of China business development at Berwin Leighton Paisner's Hong Kong office, is joining Holman Fenwick Willan as a partner, according to sources.

Airfinance Journal understands Sun is likely to remain in Hong Kong to focus on clients in China.

Milbank Singapore hires Clifford Chance associate

Milbank, Tweed, Hadley & McCloy has appointed Giles Fogwill as an associate in its Singapore office, the firm tells *Airfinance Journal*. Fogwill joins the law firm from Clifford Chance's asset finance practice, at which he also spent time on secondment with SMBC Aviation Capital in Dublin and Gecas in Singapore. He specializes in transportation finance, and has experience acting for a variety of operating lessors, airlines and financiers. Fogwill focuses, in particular, on cross-border asset financing, aviation sale/leasebacks, aircraft portfolio sales and general and structured financings. He also has experience working on operating leases, lease novations, enhanced equipment trust certificate offerings and asset-backed securitizations. Paul Ng, head of transport and space group for Asia at Milbank, tells *Airfinance Journal*: "Over the last 18 months we have almost doubled the size of our aviation team and have attracted very high-quality candidates like Giles. We are delighted he has joined us."

Lieblein joins Southwest board

Southwest Airlines has appointed Grace Lieblein as a member of its board of directors.

Lieblein is the former vice-president, global quality, at General Motors Corporation.

NEWS

Airlines

Lion Group considers more airline listings

One or more of Lion Group's airlines could be opened up to public investors through an initial public offering (IPO), says John Duffy, the chief commercial officer of Transportation Partners, Lion Group's lessor.

Speaking to *Airfinance Journal* at the company's Orchard Road offices in Singapore, Duffy said: "The consolidation of businesses in the group now comprises one MRO [maintenance, repair and overhaul], one leasing platform and five airlines. At some point, one or more of these businesses could be opened up to an IPO or external capital."

The five airlines in the Lion Group are Lion Air, Thai Lion Air, Batik Air, Wings Air and Lion Bizjet.

Airfinance Journal understands from market sources that Thai Lion would be a good candidate to list first, because of the country's tourism market being favourable to the airline, but Duffy would not comment on which airline could or should list first.

Delta wins investment-grade rating

Moody's has upgraded most of Delta Air Lines' debt ratings. Explaining its decision, Moody's noted Delta's debt-reduction efforts, competitive operating margins and free cash-flow position. The agency expected the carrier's credit metrics to improve further in 2016.

In a statement, the agency said it had upgraded the carrier's senior unsecured rating to Baa3 from Ba3; its senior secured rating to Baa2 from Baa3; and upgraded the ratings for most of Delta's enhanced equipment trust certificates and term loans secured against aircraft.

Delta had aimed for an investment-grade rating by deleveraging its balance sheet. The carrier's adjusted net debt declined $600 million to $6.7 billion in 2015, and since 2009 it had reduced its debt by more than $10 billion.

Jonathan Root, Moody's senior credit officer, said: "The upgrade of the senior unsecured rating to Baa3 is based on the expectation of continued debt reduction, building on the significant deleveraging of the balance sheet that Delta has achieved since 2009, as well as ongoing stability in Delta's operations that we believe will enable Delta to continue to handle the industry's volatility."

He added: "We believe that Delta will continue to effectively manage its network and operations, and build on the capital-efficient growth strategy to sustain a competitive operating margin with free cash flow that leads the industry and compares favourably to other companies rated investment grade."

The agency also stated that if fuel prices increase, US carriers are unlikely to sustain their strong credit ratings unless they reduce their debt burden to the same extent as Delta.

US carriers to apply for Cuba slots

US carriers may begin applying to operate flights between the US and Cuba, after the re-establishment of scheduled flights between the two countries.

A joint agreement was signed by US and Cuban officials. Each country is now allowed to operate up to 20 daily round-trip flights between the US and Havana, and up to10 daily round-trip flights between the US and each of Cuba's nine other international airports.

The US Department of Transportation (DoT) will select in March which US carriers can operate Cuban flights, and from which US airports.

US carriers welcomed the signing of the agreement. American Airlines chief executive officer Doug Parker said the airline would submit a service proposal to the DoT.

JetBlue also praised the announcement. Rob Land, its senior vice-president governmental affairs, said: "We hope the next dots on our Caribbean route map will be regularly scheduled services to and from Cuba."

Island Air share sale gets approval

The US Department of Transportation has approved the sale of a controlling stake in Hawaiian carrier Island Air.

Ohana Airlines Holdings (OAH), which is owned by US billionaire Larry Ellison, will sell a stake to PaCap Aviation Finance and Malama Investments. Local investment firm PacifiCap owns both companies.

OAH will retain a non-controlling interest in the airline.

Les Murashige has been appointed president and chief executive officer at the carrier. He previously served as president at the airline from 2012 to 2013.

David Uchiyama will become chief commercial officer and Rob Mauracher, who previously served as chief executive officer of Island Air between 2004 and 2007, will become chief operating officer.

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NEWS

Airlines

AirBaltic receives €132m investment

AirBaltic has received a €132 million ($147 million) investment after the Latvian government and German investor Ralf-Dieter Montag-Girmes signed an agreement.

In November, the Latvian Cabinet of Ministers approved the sale of a 20% stake in airBaltic to German investor Montag-Girmes, who is investing €52 million into the airline. The Latvian government is investing a further €80 million into the flag carrier

The €132 million will be injected into the modernization of airBaltic's fleet, according to a statement from the Latvian carrier.

Icelandair to phase out 757s

Icelandair is to start removing Boeing 757s from its fleet by late 2018, with a view to phasing them all out by 2025, according to an airline source.

The carrier added two 767-300ERs to its fleet in the second half of last year, having paid for one in cash from Icelandair Group, the airline's parent company, with another leased from Gecas.

Icelandair has 16 737 Max 8s on order, which begin delivery in 2018. A source says they want to keep the Max deliveries mainly on its balance sheet.

SeaPort Airlines files for bankruptcy

SeaPort Airlines has filed for Chapter 11 reorganization with the US Bankruptcy Court.

In an online statement, the carrier also stated that Rob McKinney had resigned as its president and chief executive officer. Timothy Sieber, the executive vice-president, has been appointed the airline's president.

The bankruptcy filing comes after the airline reduced its route network because of a shortage of pilots for its fleet of Cessna 208 Grand Caravan aircraft.

SeaPort Airlines has interline partners with both Alaska Airlines and Hawaiian Airlines. In its statement, it added that normal operations would not be interrupted by the Chapter 11 filing.

American outlines 2016 capex plans

American Airlines' capital expenditure and predelivery payments will total about $4.47 billion this year, according to the airline.

The company plans to take delivery of 55 mainline aircraft in 2016. These comprise 25 A321s, 20 737-800s, two 777-300s, four 787-8s and four 787-9s.

For its regional fleet, the company expects to add 49 aircraft: 18 CRJ-900s, seven CRJ-700s and 24 E175s.

American Airlines raised $1.07 billion with the first enhanced equipment trust certificate of 2016. The offering – which featured an AA tranche with a coupon of 3.57% – was used to refinance 22 recently delivered aircraft.

ANA aims for 300 aircraft by 2020

Japan's All Nippon Airways Group (ANA Group) is aiming for a net increase of about 40 aircraft by fiscal year 2020, according to a statement from the company.

This would bring the company's total fleet to 300 aircraft, three-quarters of which will be fuel-efficient models, according to the statement.

The Japanese airline group outlined the plan in its full-year 2016-2020 corporate strategy.

The company also said it wanted to achieve available seat-kilometre capacity of 318% compared to full-year 2015 for its low-cost carrier Vanilla Air and to establish the airline as the number one low-cost carrier in the Tokyo Metropolitan area.

ANA will also introduce the three A380s it has ordered from Airbus on the popular Tokyo-Honolulu route.

SkyWest to spend $44m cash on E175s

SkyWest will use about $44 million of cash in its purchase of 11 E175s delivering in the first half of 2016.

As of December, the company operated 45 E175s, on behalf of United Airlines and Alaska Airlines. It will take delivery of a further 11 aircraft in the first half of 2016, and an additional 26 in the second half.

In its fourth-quarter and full-year financial results, the company also revealed it made a capital investment of $8 million to buy two new E175s that delivered in the last quarter. It also issued $46 million of long-term debt to finance the aircraft.

NEWS

Manufacturers

Boeing forecasts 3,750 new aircraft in South-East Asia

Boeing has projected a demand for 3,750 new aircraft, valued at $550 billion, in South-East Asia over the next 20 years.

The company presented its South-East Asia Current Market Outlook (CMO) in Singapore, ahead of the biennial Singapore Airshow, forecasting the region will continue its strong annual traffic growth at 6.5%.

"South-East Asia continues to be an important market for Boeing and we expect airlines in the region will need 3,750 new airplanes worth $550 billion over the next 20 years," said Dinesh Keskar, senior vice-president of Asia-Pacific and India sales, Boeing Commercial Airplanes.

The annual forecast projects three-quarters of South-East Asia's new deliveries will be for growth rather than for fleet replacement, with largest demand being for single-aisle aircraft such as the next-generation 737 and 737 Max.

The forecast also predicts a demand for 800 widebody aircraft, such as the 777, 777X and the 787 Dreamliner family. The number of low-cost carriers is expected to increase to more than 45% of the total south-east Asian market.

AIRBUS STARTS A350-1000 FINAL ASSEMBLY

Airbus has started final assembly of the first A350-1000 in Toulouse, France.

The aircraft is one of three flight-test aircraft that will be built, and its maiden flight is planned before the end of 2016. Airbus says deliveries will start in mid-2017.

The A350-1000 is the largest member of the A350 family, and will be powered by Rolls-Royce Trent XWB-97 engines.

The A350-1000 seats 366 passengers in a typical three-class configuration and has a range of 8,000 nautical miles. The aircraft sits between Boeing's 777-8 and 777-9 in

terms of capacity. The Boeing aircraft are scheduled to enter service in 2020.

Airbus has 181 A350-1000 orders from 10 customers.

NEW LARGE WIDEBODY AIRCRAFT KEY DATA

Model	777-8X	A350-1000	777-9X
Typical seats	350	366	410
Typical range (nautical miles)	9,300	8,000	8,200

Rolls-Royce yearly profits drop 12%

Engine manufacturer Rolls-Royce has announced its profits for 2015 fell by 12%, to £1.4 billion ($2 billion), compared to the previous year. Profits from its civil aerospace products, which account for more than half of the company's business, were down 14%.

The decline in profits from civil aircraft engines and related services came despite a 3% increase in revenues from the sector. Industry sources suggest this drop in profits reflects increased competition. The company recently won a $2.7 billion order from Norwegian for the airline's Boeing 787 fleet, but such orders are won in the face of strong competition from US rival General Electric, which also supplies engines for the Boeing aircraft.

Rolls-Royce is the sole supplier for a number of Airbus's newest aircraft, but the UK manufacturer admits that it faces some short-term issues with its products for the European airframe manufacturer. In particular, the company cites changing demand for its Trent 700 engine as Airbus moves production from the current generation of its A330 models. The transition will impact on demand and pricing of the remaining Trent 700s to be delivered before the build-up of deliveries of Trent 7000s and Trent XWBs for the A330neo and A350, respectively.

However, the company says it is confident of increasing its share of the civil aerospace market and highlights 4% growth in its order book for the sector, which was valued at £67 billion at the end of 2015.

SIA and Airbus sign A380 support agreement

Singapore Airlines (SIA) has signed a flight-hour services contract with Airbus. The manufacturer will provide full component support, line and base airframe maintenance, as well as fleet technical management services for SIA's 19 A380s.

SIA Engineering Company, an Airbus-affiliated maintenance repair and overhaul facility, will link up with the manufacturer to support the 10-year agreement.

NEWS

Financiers

Aerolease commits to MRJ

Mitsubishi Aircraft Corporation has announced the signing of a letter of intent for 10 MRJ90 aircraft with US lessor Aerolease. The aircraft are scheduled for delivery in 2018.

The deal includes options for an additional 10 aircraft.

Founded in 1986, Miami-based Aerolease previously has dealt only in used commercial aircraft, but with this order has decided to move into new aircraft.

"It gives us another leg on the stool," says Jep Thornton, a partner at Aerolease.

"Over the years we have specialized in different types of aircraft," he says, adding that this started in the 1980s with Douglas DC-8s and moved into A300 cargo aircraft and, since 2010, 757 aircraft.

Thornton said that Aerolease and Mitsubishi came to the basic terms of the deal in December, just before the Christmas holidays.

Thornton told *Airfinance Journal* after the announcement that he had spoken to banks in the US, Asia and Europe about financing the aircraft. He said that Aerolease likes debt financing and securitizations, as well as working with equity partners, but added that because the deliveries are scheduled for 2018, it is too early to say which financiers or financial structures Aerolease will use.

Thornton added that Aerolease's goal was to expand the user base of the MRJ.

"We are not here to lease aircraft to ANA [All Nippon Airways] or do high-profile deals," he says.

Thornton said that the recent delays to the MRJ programme obviously concerned Aerolease but he believed the aircraft would be a success.

He added that Aerolease was "realistic" that an "aircraft like this with new technology – it's a new airframe with a new engine" would have delays. "Boeing had them with the 78[7 Dreamliner], Airbus had it with the A380. We've seen it many times."

Avation second-half profits fall

Singapore-based lessor Avation has posted a net profit of $4.8 billion for the six months ended December 31 2015 compared to $6.3 billion in the same period last year.

Executive chairman Jeff Chatfield says: "Avation has preserved cash raised from the $100 million unsecured notes issued under a global medium-term note programme to support the funding of further aircraft acquisitions."

Aircastle spent $1.4bn on aircraft in 2015

US lessor Aircastle bought $1.4 billion-worth of aircraft with an average age of five years in 2015, the lessor announced in its full-year results.

The company also sold 31 aircraft, with an average age of 15.5 years, for net proceeds of $562.5 million.

In 2015, Aircastle bought, or committed to buy, 10 narrowbodies for $380 million. It also announced a separate deal at the Paris Air Show for the order of 25 E2s with options for a further 25.

The lessor reduced its widebody exposure to 11 aircraft, or 10% of the net book value of its fleet.

Aircastle also raised $800 million of new financing throughout the year. This included $500 million of senior unsecured notes, $150 million in secured commercial loans from Japanese banks and an increase in the size of its revolving credit facility.

Haite Group launches lessor

China's Haite Group, an integrated aerospace company, has established an aircraft leasing arm which wants to acquire narrowbody aircraft.

SinoSinga Aircraft Leasing, which has its headquarters in Beijing, started operations in January after being established by Haite Group's board.

"The board of the Haite Group decided [on] further growth and they started to move into the aircraft lessor business," the lessor's chief executive officer Donald Liu tells *Airfinance Journal*.

"Haite has a unique background compared to other lessors [with] a strong technical backlog compared to other lessors, including aircraft heavy maintenance and parting out."

SinoSinga has no aircraft yet, but is looking to acquire 737-800s and A320-200s, with a target of about 10 aircraft.

Liu says that, because Haite is a publicly listed rather than a state-owned company, SinoSinga has more flexibility in its fleet planning, so this aircraft number could change.

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NEWS

Financiers

SinoSinga plans to do direct leasing of aircraft with airlines through sale/lease-backs, purchased slots and, eventually, speculative orders.

The lessor set up a platform, Sinosinga Aircraft Leasing Company Limited, in Ireland in January. SinoSinga also has a platform in Singapore which acts as the holding company. The lessor also plans to establish another platform in China's Tianjin Dongjiang Free Trade Zone.

Donald Liu is the company's only member of staff, but he is looking to bring in other people.

Alafco enters strategic partnership with GIC

Aviation Lease and Finance Company (Alafco) has entered a strategic partnership with Gulf Investment Corporation (GIC), according to a statement from the Kuwaiti lessor.

Ahmad Alzabin, chief executive officer and vice-chairman of Alafco's board, said the company welcomed the additional $100 million investment made by GIC.

Alzabin added that the additional capital would help Alafco expand its leased aircraft portfolio and meet its global expansion targets.

Alafco's portfolio includes 50 aircraft leased to 14 airlines around the world. Additionally, the company has signed deals with Boeing and Airbus to buy 117 new aircraft valued at $14.9 billion, which will be delivered between 2017 and 2021.

LEASES IN BRIEF

Airberlin takes three Q400s

German low-cost carrier airberlin will lease three new Q400s from Gecas.

The first aircraft will deliver in September, while the other two will arrive in October and November.

The aircraft are part of Gecas' existing order book with Bombardier.

Sata receives A330-200

Portuguese airline Sata International has taken delivery of one A330-200 on long-term operating lease.

The jet is owned by one of FPG Amentum's investor customers.

Airfinance Fleet Analyst states the aircraft is 2008 vintage, and that Sata has a fleet of two A310s, two A320s, one A330 and six Q400s.

Emirates gets A380-800 for 12 years

Emirates has closed an operating lease transaction for a new A380-800.

The jet will be on lease for 12 years.

Investec acted as the sole arranger for both the financing and leasing elements of this transaction.

The National Bank of Abu Dhabi and Qatar National Bank acted as joint senior underwriters of the senior financing. South Korean institutional investors provided mezzanine financing.

Virgin Atlantic extends term on A340

Virgin Atlantic has extended its lease for an A340 by 18 months to July 2018.

The aircraft was delivered new in 2006, and was financed through Doric Flugzeugfonds – a fund issued by Doric – which owns the aircraft. The initial lease term for the jet was 10 years.

The aircraft is used on routes between London and Los Angeles, New York and San Francisco, among other destinations.

Air Vanuatu leases 737-800

Air Vanuatu has taken delivery of a 737-800 from Air Lease Corporation (ALC).

The airline signed a long-term lease agreement for the aircraft in July 2015. The aircraft comes from ALC's order book with Boeing.

NEWS

Deals

Air Côte d'Ivoire takes EDC-financed Q400s

Ivory Coast flag carrier Air Côte d'Ivoire is taking four new Q400s, with financing from Export Development Canada (EDC).

The Canadian export credit agency provided 80% of the financing for the aircraft, while the rest of the financing was provided by the airline, according to Réné Décurey, chief executive officer of Air Côte D'Ivoire. He added that the airline had paid for all the predelivery payments.

Stephenson Harwood and in-house counsel advised the airline on the transaction.

Air Côte D'Ivoire plans to issue a request for proposal (RFP) to fund the acquisition of narrow-body aircraft.

Décurey told *Airfinance Journal* that the RFP would be used to finance a mixture of five aircraft, comprising A319s and A320ceos, but the exact numbers had not yet been finalized.

He added that the airline and bank were trying to arrange for Coface, the French export credit agency, to finance two or three of the aircraft.

DVB Bank is advising the airline on the RFP process.

Aegean takes A320-200 on sale/leaseback

Greek carrier Aegean Airlines has taken delivery of one new A320-200 as part of a sale/leaseback agreement with Kuwaiti lessor Alafco.

The jet is part of a deal for two new A320-200s. The first jet was delivered in July 2015.

Alafco leases a total of four aircraft to Aegean.

Aegean Airlines is the largest carrier in Greece, operating a fleet of 45 aircraft, comprising A320-200s and A321-200s.

Braathens Aviation signs loan for three ATR 72-600s

Stockholm-based Braathens Aviation has signed a commercial loan to finance three new ATR 72-600s.

Crédit Agricole Corporate and Investment Bank (CA-CIB) and DVB Bank are the mandated lead arrangers. CA-CIB acted as the agent.

Latam in talks with Ping An for four A321s

Latam is in talks to take four A321s on sale/lease-back from Chinese lessor Ping An Leasing.

The aircraft will be on lease for 10 years. The

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NEWS

Deals

DELIVERIES IN BRIEF

Air Macau closes four-aircraft deal with Calc

Air Macau has taken delivery of an A320 and an A321 from China Aircraft Leasing Group (Calc).

The combined deliveries close a deal agreed between Macau's flag carrier and the Hong Kong lessor in May 2015 for one A320 and three A321s.

Calc is financing the two most recently delivered aircraft with Shanghai Pudong Development Bank's Hong Kong branch.

ANA takes delivery of 737-800

All Nippon Airways (ANA) has taken delivery of a 737-800 from SMBC Aviation Capital.

A statement by the lessor says the aircraft is on lease, but does not reveal more information about the terms of the deal.

In another statement, SMBC revealed that it has sold one leased 737-800 to an Asian airline.

Norwegian takes first 787-9 on lease

Norwegian has taken delivery of its first 787-9 on operating lease.

The aircraft is on lease from MG Aviation for 12 years.

The carrier will take a further three 787-9s on operating lease this year.

The airline plans to lease all the 787s it is taking in 2016 and 2017.

Saudia gets four widebodies

Saudia took delivery of three 787-9s and one 777-300ER in February.

The carrier ordered eight 787-9s in 2010.

SAS takes third A330 from Bocomm

SAS took delivery of a third A330-300 from Bocomm Leasing in February.

The aircraft are on 12-year sale/leaseback agreements, according to a source.

The transaction was closed by JY Aviation Leasing Ireland, Bocomm's Dublin-based subsidiary.

Aerolíneas to receive E190s

Aerolíneas Argentinas is set to receive four E190s on lease from Jetscape, *Airfinance Journal* has learnt.

The aircraft will be operated by its regional sister company, domestic airline Austral Líneas Aéreas.

The first two aircraft are scheduled for delivery before the end of March. Both aircraft are from Jetscape's existing portfolio.

The other two aircraft will deliver in the second and third quarters. These aircraft are both new, and were ordered by Jetscape in late 2015, *Airfinance Journal* understands.

All four of the aircraft are on long-term leases.

first delivery is scheduled for April.

Latam also signed letters of intent for four other A321s earlier this year. All eight of the A321s will deliver in 2016.

Brazilian law firm Pinheiro Neto Advogados and Clifford Chance are acting for Ping An. Latam is using in-house counsel.

Alitalia closes $121m facility to fund five aircraft

Alitalia has closed a $121 million facility to finance one A330-200, two E175s and two E190s.

The facility consists of a $111 million senior loan and a $10 million junior loan.

A source familiar with the deal told *Airfinance Journal* that the facility was being used after a bridge loan to buy back the five aircraft from lessors. The source added that Alitalia was not looking to buy back any more leased aircraft from lessors for the time being.

Last September, Alitalia announced its intentions to buy back some of its leased aircraft, bringing its owned fleet from 20% to 35%.

The deal was structured through Challey group, an Ireland-based special purpose company wholly owned by the Italian flag carrier.

The E-Jets will be operated by Alitalia's regional subsidiary airline Alitalia CityLiner. The A330s will be operated by Alitalia.

The facility has a tenor of eight years.

DVB Bank and Investec Bank acted as joint underwriters of the transaction. DVB Bank acted as sole arranger and agent.

Clifford Chance London and William Fry acted as legal counsel for the lenders. Norton Rose Fulbright Milan and A&L Goodbody acted as the borrower's counsel.

NEWS

Deals

Allegiant Air finances A319s with Japanese banks

Nevada-based airline Allegiant Air has secured financing for two used A319s from Development Bank of Japan (DBJ) and Tokyo Star Bank, according to sources.

Airfinance Journal understands the financing for the two narrowbodies is five-year recourse debt structured as a mortgage loan split 50-50 between the two banks. The deal closed in late January.

DBJ has been making efforts to introduce Japanese regional banks into aircraft finance transactions. In January, DBJ was involved in a $200 million equivalent unsecured syndicated yen loan with 15 Japanese regional banks.

Tokyo Star Bank, based in Tokyo, is sometimes referred to as a super regional bank because of its size.

According to a US SEC filing, Allegiant Air raised $28 million in debt secured by two A319 aircraft in December in what is understood to be a separate transaction to the DBJ-Tokyo Star Bank transaction. The airline also entered into a senior secured revolving credit facility under which it will be able to borrow up to $56 million.

SECONDARY MARKET NEWS

Minsheng sells A330s

Minsheng Financial Leasing has sold two A330-300s to a joint-venture special purpose company (SPC) owned by DVB Bank's Deucalion Aviation Funds and CLSA Capital Partners, according to sources.

The SPC, Aircraft Leasing (Cayman), bought the two A330s. Both aircraft have leases to Taiwanese flag carrier China Airlines attached.

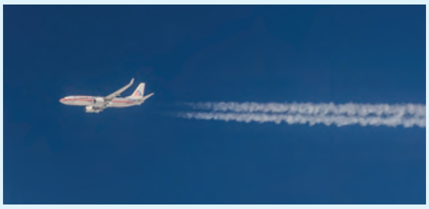
BNP Paribas Singapore supported the transaction with senior debt.

Airfinance Journal understands that the special purpose company was established in December solely for the purpose of acquiring these two aircraft. DVB Bank is the investment adviser to the SPV, and there are no other aircraft involved.

CLSA Capital Partners is the alternative investment arm of Credit Lyonnais Securities Asia, a Hong Kong-based equity broker whose parent company is Chinese investment bank Citic Securities.

The aircraft will be managed by DVB Bank.

Chishima purchases 737 from Avolon



Japanese lessor Chishima Real Estate has purchased one 737-800 from Avolon.

The aircraft was sold with the lease attached to American Airlines. A source close to the deal said the lease would run through to November 2022.

This is the first aircraft the Osaka-based lessor has purchased from Avolon and Chishima's second aircraft on lease to American Airlines.

The purchase was completed in December. The source said Chishima paid for the aircraft with cash, as it typically does when purchasing aircraft.

Aviation Management Services acted as exclusive adviser to Chishima. K&L Gates acted as Chishima's legal counsel.

Swiftair buys ATR 72-500

Spanish carrier Swiftair has bought an ATR 72-500 from Nordic Aviation Capital.

Airfinance Fleet Analyst indicates the aircraft is 1997 vintage.

Emirates to close A380 Jolco

Dubai-based airline Emirates is expected to close a Japanese operating lease with call option (Jolco) financing for one A380, according to a source.

Natixis, Société Générale and DBS Bank are acting as senior lenders. IBJ Leasing and CIC are junior lenders.

Century Tokyo Leasing, IBJ Leasing and Mitsubishi UFJ Lease & Finance are providing equity.

Swiss pays cash for first 777-300ER

Swiss International Airlines has taken delivery of its first 777-300ER.

Swiss has eight more 777-300ERs on order from Boeing. An airline source told *Airfinance Journal* that the carrier is looking to keep most or all of the orders on its books, but is considering some sale/leasebacks.

The first six 777s will deliver this year and the remaining two in 2017.

Asked about the 20 Bombardier CSeries aircraft it is due to receive this year, the source said that the airline "is currently open to different forms of financing".

Swiss also has 10 A320neos, six A321neos and one A330 on order, according to Airfinance Fleet Analyst.

DEAL OF THE MONTH

EasyJet closes €500m debut eurobond

After a spate of issuances in 2015, the UK carrier becomes the latest airline to tap the European capital markets. Jack Dutton reports.

US investors make up the lion's share of aviation capital markets deals but, over the past year, an increasing number of airlines have been tapping the European capital markets.

In December, Norwegian opened up its investor base after issuing its debut eurobond. In March 2015, Ryanair returned to market with its second eurobond, with a coupon of 1.125%, setting a record for the aviation industry. With a strong credit rating of Baa1/BBB+ stable, it was easyJet's turn to step up to the plate.

"I think we have been able to price a transaction that's captured the attention of the market," Brendon Moran, global co-head of corporate origination, debt capital markets at Société Générale, tells *Airfinance Journal*.

The banker, who worked on the bond, explains why. "One reason for this is its success, in what have been incredibly tricky markets that have been and remain quite difficult to read," he says. "We had continuing weakness going into this deal throughout January, particularly in equity markets, and I think fixed-income markets looked a little bit shaky."

The UK low-cost carrier's offering is a seven-year bullet repayment with a coupon of 1.75%, payable annually. The initial price expectations were 165 basis points (bps) to 175bps over seven-year euro mid-swaps, but the bond priced at 147bps over mid-swaps.

The mandated lead arrangers were Bank of America Merrill Lynch, Barclays and Société Générale.

Allen & Overy acted for the arrangers and Herbert Smith Freehills acted for the airline.

Soaring investor demand

The road show for the bond took place in the second week of January, during which the airline visited cities in Europe, including London, Edinburgh, Amsterdam, Paris and Munich.

"EasyJet went through a formal road show, meeting with fixed-income investors across the continent in the areas where you find big pockets of liquidity for corporate bonds. They got out there, on the back of having their ratings announced – Baa1/BBB+ stable – which is always a good story to show," says Moran.

The airline opened the book on February 2. It received a soaring oversubscription of just over €5 billion ($5.5 billion), which was reduced to €4.8 billion after price tensioning.

The book included about 400 investors from France (23%), UK and Ireland (21%), Germany

(21%), Luxembourg (9%), Italy (7%), Nordic countries (5%), Switzerland (7%) and other European countries (7%).

The proceeds from the bond will be used to pay back £182 million ($257 million) of existing commercial debt maturing this financial year. Proceeds will also be used to finance new aircraft deliveries.

Pipeline of issuance

"We intend this to be a pipeline of issuance. We can see ourselves coming to market every 12 to 18 months, at a similar size, provided the economics still work for us," Mike Hurst, group treasurer at easyJet, tells *Airfinance Journal*.

He adds: "What's driving that requirement is the 20 to 30 new Airbus aircraft that we've got arriving per annum over the course of the next four to five years."

EasyJet's incoming Airbus aircraft include both A320ceos and A320neos. The Ceos are delivering now and the Neos will begin delivering in 2017.

According to Hurst, one of the main tenets of the Moody's report that underpins easyJet's credit rating is the carrier's move towards bringing new aircraft onto the balance sheet unencumbered. As at September 30 2015, easyJet had 241 aircraft, 114 of which were unencumbered – 47% of the carrier's fleet.

"And obviously this is a strategic move to open up a source of unsecured funding, so when new aircraft come onto the balance sheet, the number of unencumbered aircraft grows over time. This is one of the key pillars of our credit, and it is why we have been able to obtain the credit rating we have with Moody's," says Hurst.

He adds: "What drives these sort of deals is the credit quality. To really do this well, you have to have a solid, investment-grade credit rating, which we do. If you look at where the rest of our peer group are in terms of credit rating, there are relatively few who could achieve this. Many airlines quite frankly, don't have the credit quality to be able to issue unsecured at this size in these markets at this level of pricing."

CSERIES

Lifeline for Bombardier?

Air Canada has announced an order for up to 75 CSeries jets. The deal is good news for Bombardier, but there are still questions over the fate of the programme.

Air Canada's announcement of an order for up to 75 Bombardier CS300 aircraft is welcome news for the manufacturer. The CSeries programme has struggled to gain orders on a similar scale to the latest-technology offerings by Boeing and Airbus.

Industry sources have long said that without a boost to its order book, Bombardier may struggle to recoup the substantial development and production costs for the CSeries.

Even with Air Canada's order, Bombardier's CSeries order book lags far behind those of the A320neo and the 737 Max. However, this new order could be a turning point in the aircraft's fortunes.

The two parties have signed a letter of intent (LoI) for 45 firm orders plus 30 options. The airline has the option of substituting some of the aircraft with the lower-capacity CS100.

The deliveries are scheduled to begin in late 2019 and extend until 2022. Air Canada says the first 25 aircraft to be delivered will replace its mainline fleet of E190s. The remainder will be used to support growth.

Break even

The order is a welcome boost to the CSeries programme, but it has not solved Bombardier's problems.

The manufacturer still has a backlog of only 243 firm orders, plus 435 other commitments. By comparison, Boeing's order book for the 737 Max stands at over 3,000 firm orders, while Airbus's backlog for the A320neo totals more than 4,500.

It is not clear how many aircraft Bombardier would need to sell to break even, but the figure is certainly much higher than the firm orders it has collected so far. Some sources have suggested to *Airfinance Journal* that Bombardier would need to sell as many as 900 aircraft in order to do so.

Stephen Trent, a director at Citi Research, stresses that the Air Canada announcement is simply a letter of intent. A firm order of this size would be much better news for Bombardier, because LoIs can be reduced or cancelled.

He says: "While I can certainly understand why it created excitement, it's not a firm order but a letter of intent. I think it's the first time in 16 years covering the sector that I've seen a press conference about a letter of intent."

He adds: "In terms of sending out a good signal, it certainly does. But at the opposite end of the spectrum, I'm having trouble understanding why certain segments of the market are so bullish - it's not like the competitive pressure from the larger OEMs has suddenly disappeared."

Neither Air Canada nor Bombardier will reveal the price of the deal, which is standard practice for aircraft orders. But it is certain that Bombardier has offered the carrier a discount from its list prices, given the size of the agreement. Trent says: "This thing wasn't done at list; it was done at a discount."

Government involvement

Some observers have questioned whether the state had a hand in this deal. It comes after the regional government of Quebec stepped in to help the manufacturer in November, when it agreed to take a $1 billion (49.5%) stake in the CSeries programme.

The natural question is whether the government has again given the company a helping hand, perhaps by offering subsidies to Air Canada in exchange for a large CSeries order.

But when questioned about this by *Airfinance Journal*, Air Canada described the deal as a "commercial agreement between the two companies", and denied state involvement.

David Tokoph, chief operating officer at Morton Beyer & Agnew, says the order may simply be a case of an airline choosing the right product for its fleet.

He says: "Whether Air Canada was pressured to make the order or not, I don't know. But they tend not to toe the line and do what is best for them, historically speaking. I think the CS300 will be a good airplane. I don't think it's selling a sub-par product to a local team. It's selling a good product to a domestic company."

He adds: "It's good for Bombardier, obviously, but it's also good for Air Canada."

NEWS ANALYSIS: NEO VERSUS MAX

Next generation coming of age

The beginning of 2016 has seen notable milestones in the single-aisle market. Geoff Hearn looks at how the competing Neo and Max families are matching up.

The delivery of the first A320neo to Lufthansa on January 22 marked the start of the transition between generations of single-aisle aircraft. In another symbolic move, the first A321neo completed its maiden flight on February 9. Sandwiched between these two events, Boeing's 737 Max 8 took to the air for the first time on January 29.

Symbolic as these events are, their importance can be overstated. The current fleet of single-aisle aircraft is close to 15,000, so the initial impact of the first new-generation models will be limited, even at the production rates to which the manufacturers aspire. To add some perspective, there are more than 2,000 outstanding orders for current-generation aircraft – so the transition has a long way to go.

But the flurry of activity is a sign that the time for theoretical comparisons is past and that the manufacturers will have to start delivering on promises.

The cost savings offered by the shiny new models have already been eroded by the reduction in fuel price, which is one-third of what it was at the height of the order frenzy for the new-generation aircraft. The reduction in savings from fuel burn will focus attention on the maintenance costs of the new models. The airframe and engine equipment manufacturers (OEMs) have factored in improved maintenance costs in their sales pitches, but maintenance costs are notoriously difficult to predict and there is no substitute for in-service experience. Many airlines have transferred the risk back to the engine manufacturers, in particular, by signing up to OEM schemes, but this comes at a price.

If the in-service performance of the aircraft falls below promised levels, airlines will wonder if their new found profitability is being wasted on unnecessarily expensive aircraft. Lessors with unplaced aircraft will be even more concerned, with the risk that they will find it difficult to convince operators it is worth replacing current-generation models.

The manufacturers say these are unfounded fears and that continued growth in passenger travel would continue to fuel healthy demand, as well as sustaining the existing fleet. The OEMs are no doubt comforted by forecasts that indicate huge levels of demand. The figures are striking. Boeing's Current Market Outlook 2015–2034 predicts demand in the single-aisle category alone for 26,730 aircraft over the 20-year period, worth a staggering $2.8 trillion. Airbus's figures are broadly similar.

Sharing the spoils

Despite the efforts of Bombardier, Comac and Irkut, the vast majority of this potential market looks set to be shared between Boeing and Airbus. The two leading manufacturers, however, show no signs of resting on their laurels, and the battle for market share between the current 737 and A320 families looks set to continue between the Neo and Max variants.

The two manufacturers are adept at presenting data to show they are winning the battle for market share. At first sight Airbus appears to have a clear lead (about 900 more orders) in the contest between current engine option (Ceo) A320s and the 737NG family. However, there is nearly a decade between the entry-into-service dates of these competing families and there is a strong argument that the classic generation of 737s should be counted in this direct comparison.

There are, however, some notable similarities in the contest between the latest-generation aircraft and their predecessors.

Boeing's initial reluctance to launch a re-engined aircraft allowed the A320neo a head start, although this time the gap (about a year) is much smaller than it was for the previous generations.

KEY DATA FOR AIRBUS NEO AND BOEING MAX FAMILIES

Model	A319neo	737 Max 7	A320neo	737 Max 8	737 Max 9	A321neo
Maximum seats	145	149	180	189	220	220
Typical seats	124	126	150	162	180	185
Entry into service	2017	2019	2016	Q3 2017	2018	Q4 2016
List price** ($m)	98.5	90.2	107.3	110.0	116.6	125.7
Backlog as of Feb 15	50	55	3,327	2,615*	418	1,094

**Includes 100 737 Max 200 orders.*

***2016 for Airbus; 2015 for Boeing aircraft.*

Source: Airfinance Fleet Analyst

“Boeing’s initial reluctance to launch a re-engined aircraft allowed the A320neo a head start.”

As was the case with the 737-800, Boeing’s core model – the 737 Max 8 – has fared relatively well against the baseline A320 variant. However, unlike the 737-800, it still lags behind its direct competitor. Airbus holds a key advantage in the contest between the larger models, where the A321neo has outsold the 737 Max 9. This advantage contributes to giving Airbus a 60% market share when the complete families are compared. The order numbers for the smallest models in the respective families are strikingly low. The Max 7 and A319neo have sold just over 100 aircraft between them. This equates to less than 2% of total sales for the new-generation aircraft – a clear sign there has been a shift in the optimum size of aircraft in the market.

The 60% market share enjoyed by Airbus will probably not be significantly dented in 2016, not least because the total order numbers are so large that any overall change in market share would require a huge order imbalance in Boeing’s favour during the year. That is not impossible in these days of mega orders, but with the two manufacturers continuing to fight over every sales campaign, it is unlikely.

Operating cost

A direct cost comparison between the various Boeing and Airbus models is difficult because the two product ranges are not aligned in terms of seat count. The 737-800/737 Max 8 typically accommodate between 5% and 10% more seats than the A320ceo/A320neo.

It is nonetheless clear that both the Neo and the Max models show significant savings in cash-operating costs compared with the current-generation aircraft *(see Neo gets its nose in front,* Airfinance Journal, *June 2014 page 26).*

However, the reduction in fuel prices since that analysis was carried out has reduced the advantage. At a fuel price of $3 per US gallon, which was used in our June 2014 analysis, the A320neo enjoys a cash-operating cost advantage of about 9% compared to its predecessor. At current fuel prices, *Airfinance Journal’s* analysis suggests the advantage is eroded to about 4%. Similar differences apply between the respective generations of the Boeing models.

BOEING 737 MAX TAKES TO SKIES

Boeing’ s 737 Max programme achieved a major milestone on January 29 when the Max 8 model took to the skies for the first time. CFM International Leap-1B engines powered the aircraft. The 737 Max family does not offer a choice between engine manufacturers, unlike the Airbus A320neo family.

The US manufacturer says the milestone was achieved on schedule. The first flight marks the start of an extensive flight-test programme before certification and delivery. According to Boeing, first delivery to Southwest Airlines in the third quarter of 2017 is on track.

Three other 737 Max 8s that are due to join the flight-testing programme are in different stages of final assembly.

A321NEO COMPLETES MAIDEN FLIGHT

The first A321neo completed its maiden flight on February 9, from Hamburg. Leap-1A engines powered the aircraft, making it the first CFM variant of Airbus’s new family to take to the air.

The first flight of the A321neo was originally planned to be with a Pratt & Whitney geared turbofan (GTF) engine, which has already flown on the A320neo. Airbus declined to comment on the reason for switching to CFM engines for the initial A321neo flight. The move looks unusual because the Pratt & Whitney variant of the A321neo is due to enter service before the version with CFM engines.

One source suggested to *Airfinance Journal* that current problems with the GTF appear to be teething issues, but that Airbus might have thought it prudent to allow Pratt & Whitney to concentrate on fixes for the A320neo.

Airbus maintains the change of powerplant for the first flight has no impact on plans for deliveries of the respective models, with the Pratt & Whitney-equipped A321neo still expected to reach customers at the end of 2016 and the CFM-equipped version in early 2017.

The claims of both manufacturers suggest the savings associated with their new-generation models are greater than *Airfinance Journal*’s analysis indicates. Most of the difference comes from the maintenance cost advantages claimed by the manufacturers for the new-generation aircraft. As the new models enter service, the merit of these claims will be put to the test among the other promises made by the manufacturers.

INTERVIEW: JOHN LEAHY

'Our goals for 2016 are ambitious'

Airbus's chief operating officer tells Jack Dutton about order targets for this year, consolidation in the leasing community and the future of the A380.

***Airfinance Journal:* What are Airbus's main points of focus this year? Where do you see as the major growth areas for your products globally?**

John Leahy: This year the company will deliver an ambitious expansion in production. Airbus's overall target for the year will be to deliver more than 650 aircraft. In the A320 programme, we will build towards rate 50 [a month] in early 2017, just one year from now. Our task for the A350 is equally challenging. We want to deliver at least 50 this year compared to 14 delivered in 2015. In the A380 programme, our goal is to break even again, as we deliver a similar number of aircraft to 2015. In the A330 programme, we are at rate seven during the current transition phase to the A330neo. Our goals for 2016 are ambitious. To meet them, we must sharpen our supply chain management and improve the efficiency of our own production processes.

In terms of orders for 2016, we must be realistic. In recent years we've attracted a huge number of orders. Even with low oil prices, they can't continue at this rate forever. Moreover, our backlog now stands at 10 years at current production rates, an industry record. That's why we target a book-to-bill ratio of one.

But I do have clear commercial priorities for 2016. I expect the sales teams to attract more orders for our widebody aircraft and to solidify our position in what our competitor likes to call the "middle of the market", in other words for our A330 and A321LR aircraft – where Boeing has no competitive offering. So I am optimistic about Airbus's 2016 prospects. We have a compelling, competitive product portfolio and a solid company strategy and an ambitious but attractive roadmap for the future.

Considering all these orders, is there a risk of overproduction and airlines not being able to finance large speculative orders well into the future?

We do not build white tails or build speculatively. Throughout the industry's various downturns – and subsequent upturns – our production vision coupled with our careful orderbook management has consistently proved correct. In short, our forecasts and production planning have matched the real long-term demand curve for aircraft deliveries. So the often-repeated suggestion of an order bubble is simply not borne out.

With all these new players entering the market, is there a risk the leasing community is becoming overcrowded?

It's not overcrowded, but it is a dynamic market that is, and always has been, survival of the fittest. We do see some merger activity and there has been some consolidation – as some bigger ones get bigger, there is a pool of smaller ones which come and go as the market conditions change. In addition, there are different lessors with different specialities, including widebodies, single aisles, new aircraft, middle-life and older used ones, and so on. So it's a big market, which has room for many players who recognize that aircraft are a good investment.

Right now fuel is only $30 a barrel. What are the positives and negatives of these low prices for Airbus? How will an inevitable rise in fuel price affect your business?

When airlines buy an aircraft you buy it for a minimum of 12 years. They do not buy it on the bet that the cost of fuel will remain low for 10 to 15 years. It may continue to go down but for how long? And when airlines' biggest cost is always the fuel, then there is a constant need to reduce it. Moreover, when the fuel price is low, airlines have more cash and make more profit, which they can invest in their fleet renewal. Better fuel efficiency also means the aircraft don't need to carry as much fuel for a given payload and range, or with the same fuel they can carry more payload and fly further – bringing in even more revenue and profit.

Leahy: Airbus backlog is 10 years, an industry record.

Why would a new narrowbody customer choose the Neo over the Max?

The market is overwhelmingly choosing the A320neo family, which reached a market share of 68% in 2015 – with only 40% of all sales controlled by the 737 Max since sales first began. In fact, the largest member of the A320neo family, the A321neo, has no competition at all – it completely dominates the large single-aisle market (about 200 seats) and its offers a range of up to 4,000 nautical miles.

Airlines prefer the A320neo family's better fuel efficiency, economics, its cockpit and fly-by-wire commonality with other Airbus [aircraft], and the best cabin comfort in any single-aisle family. They also like the A320's correctly proportioned landing gear, which allows the aircraft to sit higher off the ground than the 737, which enables an optimum engine fan-diameter – so its engines are more fuel efficient than the Max's. As a result, we are significantly better than the Max in terms of overall economics.

For example, the A320neo enjoys an 8% lower fuel burn per seat than the 737 Max 8. And for the A319neo and A321neo the differences are even greater – around 14% better fuel burn per seat than the Max 7 and Max 9, respectively. The A320 also has the widest cabin of any single-aisle airliner on the market (seven-inch advantage over the 737), offering unmatched comfort with 18-inch seats standard.

"We do not build white tails or build speculatively."

What do you think will happen to the CSeries programme? Do you think its prospects are likely to improve?
It's a nice looking plane, but the single-aisle market has moved on with the A320neo and the Max, and the airlines have got out their cheque books and made their choice. I think they'll have to look very hard at how they want to position that plane. It's not a member of a family.

Is there any danger of the A330neo eating into the market share of the A350? You had airlines such as TAP and Aeroflot changing their A350 orders to A330neo orders. Why do you think this is?
The A350 is a very popular aircraft and continues to attract orders – Philippine Airlines just signed with us at the Singapore Airshow for six A350-900s plus six options. Regarding TAP and Aeroflot, of course it is not uncommon for customers to sometimes readjust their fleet plans. Fortunately, as our airliner products span every segment, we always have a solution to meet their evolving needs.

Overall, the A350's order book is strong with 777 firm orders, representing more than 10 years of production – so we are very satisfied. And we're only one year into EIS [entry into service] and we see a market demand for up to 8,100 aircraft in this segment for the next 20 years, so the A350 and A330neo are long-term programmes designed for the next 30 to 40 years.

Have you got plans for the A350-800, with it only having 16 orders?
We have two -800 customers left and we are working with them to find solutions.

Apart from Iran Air and ANA, where are the new customers for the A380 coming from?
There are several promising campaigns ongoing – but we obviously can't disclose those. There are also likely to be follow-on orders from Asia, the Middle-East and Europe. In the next few years, we have high hopes to sell A380s in the US and also to new customers in China and Latin America.

Overall, the A380 remains the best solution for responding to increasing traffic while airport infrastructure remains congested. It is reliable and profitable and passengers overwhelmingly prefer to fly on A380s. It carries high load factors, captures market share and frees up slots. For example, we're seeing airlines replacing two 777s with an A380, or replacing three 747s by two A380s.

A320 production will be stepped up to 50 aircraft a month.

For the next three years, we are fully booked on A380. In addition, we have come a long way both in production capability but also in lowering the programme's break-even, and we will achieve break-even this year as well. The case for A380 is very solid, and although it's a smaller market, we're dominating it with 90% share.

Is it true the recent ANA A380s were from Skymark's original order book?
No they are not. The ANA A380 orders are new with fresh delivery slots that weren't previously assigned.

What's your plan for A380s in the secondary market? What do you think will happen when the first ones come off lease with Singapore Airlines next year? How are you going to deal with the expenses of remarketing them?
The A380 is a young programme. Its operator base will continue to expand with both new and used aircraft. We are working closely with our customers. We see a market developing over the next few years for second-hand A380s, like any other aircraft type, and Airbus is working to facilitate this. Overall, worldwide, A380s will be in increasingly high demand as air travel continues to rise exponentially.

How will used A380s affect lease rates of new A380s?
Used A380s would not compete with new A380s, but they will compete with new 777s. For the same monthly lease as a new 777-300 an operator will be able to lease a 12-year old A380, with its superior cabin and economics. We see this as a great opportunity for new entrants with new business models to start operating the A380.

Are you likely to introduce a stretch A380 or an A380neo?
We are not in a hurry to build an A380neo. There is still a lot of untapped potential for the current A380. There must be a solid business case for any aircraft evolutions. We have a lot of potential to increase the current A380's efficiency further. Only the Airbus Group board of directors can make this decision, based on a sound business case. Personally, I believe that we will evolve the A380, and some upgrades such as re-engining and maybe a small stretch would make sense. However, when we believe it is time to do it on the A380, we would see a business-driven decision – just as with any other programme.

CFO INTERVIEW: AEROLÍNEAS ARGENTINAS

The four-year plan

Pablo Miedziak became chief financial officer at Aerolíneas Argentinas, the struggling South American flag-carrier, in December. He caught up with Joe Kavanagh last month to set out his plan to break even by 2019.

Pablo Miedziak took over as chief financial officer at Aerolíneas Argentinas just weeks before the Airfinance Dublin conference in January. The conference is a notoriously busy time for delegates. It tends to shoot past in a blur of presentations, meetings and late nights. However, by anyone's standards, Miedziak had an especially busy week. In just two-and-a-half days, he says, the airline executive had 27 meetings with a range of industry figures.

The purpose of these meetings was to convince prospective partners about the airline's attempts to become profitable, and to remind them of the recent steps that the country has taken to reassure investors.

Straight away, he states, the reception was positive. Speaking about his meetings with industry heads, he says: "They were above expectations, and I had big expectations."

Miedziak adds: "I had meetings and private lunches with the owners of the most important leasing companies. All the people saw that the country and the company are really going to improve; that access to the financial markets is going to be important.

"Argentina is not within Cape Town, and it's something that I think we will try to push for within the next year, which will be very good for making lessors feel more confident that they can do business within Argentina."

His main problem is likely to be the tough macroeconomic setting in which the airline operates (see Argentinian renewal?). Latin America has proven volatile in recent years, even forcing established carriers such as Latam to defer aircraft deliveries as passenger demand slows down.

Miedziak says: "Latin America is like a roller coaster." As far as his airline is concerned, the question is, can Aerolíneas begin climbing to profitability, or is it headed for a bumpy ride?

Aiming for break-even

Miedziak tells *Airfinance Journal* that the airline's plan is to break even by the end of 2019 – an ambitious target given the carrier has posted substantial losses in its recent history.

Aerolíneas Argentinas has not released financial results for 2015, but data collected by The Airline Analyst shows that the average annual loss over the last five publicly available years of results is $466 million.

So just how will the airline try to reverse its fortunes? As Miedziak describes, the carrier will seek to make savings through refinancing efforts, and will also try to boost revenues through increasing its operational success.

Pablo Miedziak, CFO of Aerolíneas Argentinas.

"We have to work a lot on the financial aspect for the fleet, but what I see is that there is a lot of improvement to be made on our operational side," he says.

The operational improvements will involve cutting some of the airline's less profitable routes and making parts of the business, such as customer check-in, more efficient, adds Miedziak.

But in terms of financing, the first step is to see if any of the airline's debt can be reissued at better rates.

"One of the things we are going to do is revaluate the current loans that we have, and the current debt, to see whether there is a chance to refinance at a much better rate," he says.

It is fair to assume that the carrier has paid relatively highly for its debt in the past: an unprofitable airline in a volatile region is too great a risk for banks to take on at a cheap price.

Indeed, in March last year, the airline was forced to access bridge financing. Last year, the airline took delivery of new A330-200s on its order book using eight-year finance leases from Airbus Financial Services.

"One of the things we are going to do is revaluate the current loans that we have, and the current debt, to see whether there is a chance to refinance at a much better rate."

Bridge financing is typically used by airlines only as a last resort. It tends to show that the borrower was not able to secure commercial financing in time for the delivery of the aircraft, perhaps because it could not issue debt at attractive enough rates, or because too few lenders were interested in providing debt.

The capital markets have proven very useful for airlines in recent months. Many carriers are taking advantage of increased investor appetite to finance their incoming deliveries.

For Aerolíneas, the matter is more complicated. The airline's unprofitable history, combined with Argentina's national problems, has made it all but impossible for the carrier to tap the capital markets in a meaningful way.

However, with a new political regime in place, which has signalled its openness to international markets by departing from the policies of its predecessors, Aerolíneas may now be able to bring down the cost of servicing its debt.

When asked what options the airline is considering, Miedziak replies that the carrier has not yet decided. Options on the table include bank debt, capital markets deals and perhaps even an enhanced equipment trust certificate (EETC).

Fleet changes

Part of the carrier's strategy includes streamlining its fleet by eliminating the operation of certain aircraft types, explains Miedziak.

He says, for example, that the carrier plans to have no more A340s by its break-even target of 2019. Instead, the airline will operate A330s – four more of which are scheduled for delivery this year. At the time of going to press, Aerolíneas operates seven A340s and five A330s. By the end of 2016, the numbers will be six and nine, respectively.

The airline will also end the year with four more Embraer aircraft, finishing 2016 with a total of 26 jets. It recently signed a four-aircraft deal for E190s with regional lessor Jetscape. The first two aircraft deliver in the first quarter, while the second and third deliver in the second and third quarters. They will be operated by its regional sister company, domestic airline Austral Líneas Aéreas.

The carrier will end the year with 41 Boeing narrowbodies in its fleet, just one more than its current total. However, this year the carrier is redelivering four of the -700 variant while taking delivery of -800s, so its overall capacity will increase.

Might the fleet changes include tweaking Aerolíneas's existing order for 737NGs, to include the latest-technology 737 Max? Aerolíneas has 20 unfilled orders for the 737-800NG, according to Boeing's latest figures, the first of which is scheduled for delivery in October.

Miedziak confirms that the airline is in talks with the manufacturer over the potential upgrade of its aircraft on order.

He says: "Right now, we are discussing the contract. We are discussing whether some of them are going to be Maxs or not. There is the potential for us to replace some with the Max."

Because they are more fuel efficient, these aircraft would increase the airline's operating efficiency. However, the higher capital costs involved might prove difficult to manage. But it is hard to evaluate the carrier's chances of managing the costs without access to up-to-date financial information.

Airfinance Journal understands the airline is planning to release financial results soon, having ordered an external audit. Once the information is public, investors will be able to make decisions about the carrier more easily.

Turning a struggling airline around is no mean feat. In Miedziak's case, the solution will be not only to sort out the carrier's finances after years of heavy loss making, but also to convince outsiders about its viability. Miedziak is optimistic, but he has his work cut out.

ARGENTINIAN RENEWAL?

Aerolíneas Argentinas's recent struggles are in part because of the wider problems facing Argentina. A recent history of sovereign debt defaults and stagnant GDP growth has made investors cautious about backing Argentinian companies.

The key question at the start of 2016 is whether Mauricio Macri, Argentina's new president and the former mayor of Buenos Aires, can kick-start a new phase of economic normality.

In his first few months in power, the new leader has signalled a more market-friendly attitude than his predecessors. In February, for example, the country offered to pay $6.5 billion in cash to some of its creditors, in a move that could solve one of the most notorious sovereign debt disputes in recent history.

In December 2001, after a three-year recession, Argentina defaulted on about $100 billion of external debt. After restructuring proposals, many investors agreed to take a "haircut" on their investments, but a number of investors refused to settle for less than they were owed. The so-called "vulture funds" have been pursuing Argentina ever since.

Although repaying these bondholders is a burden for Argentina, whose dwindling foreign exchange reserves means it will struggle to part with the cash, the move will allow the country to access the capital markets more freely. The country has been blocked from accessing financial markets because of the fallout from the sovereign debt problems.

What is more immediately relevant to Aerolíneas, however, is GDP growth. Airline performances are closely tied to the GDP growth of the markets they serve. GDP growth is the most important drivers of growth in passenger demand – which itself is one of the most important metrics that determines an airline's success.

UNDER NEW MANAGEMENT

In December, Aerolíneas Argentinas underwent a leadership change. The following appointments were made to the senior management team:

Chief executive officer Isela Costantini
Chief financial officer Pablo Miedziak
Sales Diego Garcia
Human resources Daniel Maggi
IT Abel Sierra
Head of operations Diego Sanguinetti
Investor relations/comms Felicitas Castrillo

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REGIONAL REPORT

Japanese market stays on track

Ahead of the 5th Annual Japan Airfinance Conference, Michael Allen reflects on the key events for the country in the past 12 months and looks at what 2016 might have in store.

Last year provided an intriguing 12 months for Japan's aircraft finance market. Discussion about the future of Japanese operating leases (Jolcos) dominated market gossip – and will surely be discussed further at *Airfinance Journal*'s upcoming conference in Tokyo – but verifying information on this notoriously opaque market remained troublesome.

Skymark's restructuring plan, proposed by Airbus and ANA Holdings, became binding, and the market will be watching the airline closely in 2016 to see if it can move back to profitability.

The country's low-cost carrier market continued to suffer from declining population and competition with the Shinkansen high-speed railway, but this did not stop several airlines in the sector from expanding.

Market sources say that US airlines could be closer to tapping Japanese banks for financing again in 2016, something they have rarely done since the September 2001 terrorist attacks (see US carriers eye Japanese financing, below).

Jolcos fears lifted – for now

Uncertainty over the future of the Jolco market has been causing jitters in the market for years. Those who have been in the Japanese market since the days of the Japanese leveraged lease will clearly recognize the cycles of panic and relief that come with any pending government announcement surrounding the tax benefits of the structure.

The Japanese government made an announcement in December stating that the use of the declining balance method for certain assets will be abolished, but aircraft will not be among them.

This came as a relief to the industry, because the Jolco market for aircraft financing is still strong. Emirates, Finnair, Lufthansa, Turkish Airlines, British Airways, Vueling and flydubai are among the carriers which have used the financing structure over the past six months.

Many of the major carriers have a history of involvement with the Jolco market, but new names also figure in recent transactions. Last year SunExpress closed its first Jolco to finance

US CARRIERS EYE JAPANESE FINANCING

US airlines could tap Japanese financial institutions this year for some of their aircraft deliveries, Japanese market sources tell *Airfinance Journal*.

The big three US airlines – Delta, United and American Airlines – could use their yen revenues to tap a market that, since the terrorist attacks of September 11 2001, has largely been unused by North American carriers.

"All of the [big] three US carriers are interested in tapping the Japanese market," says one Japanese banking source.

"United is closer to the actual deals, but I think American is also interested. Delta is cash rich, so I'm not sure if they want the deals with the Japanese institutions."

Another Japanese banking source says that because US carriers have huge yen revenues, they want to be able to service a portion of their debt using these revenues in terms of their balance of foreign exchange.

Now that US carriers are in better financial shape than previous years, Japanese lenders could be given a confidence boost to finance these airlines, says the source.

One issue, however, is that the margins Japanese banks can get by financing US carriers is low. Japanese lenders also need to think about whether US carriers are sustainable in the long term.

One Japanese banker says: "If they take into account US carriers' credit that's one [issue], and the second is if you look at the history of US carriers, sometimes they were very good and sometimes they were very bad, so the key question is whether Japanese lenders can convince themselves if US carriers are sustainable in the long term in terms of performance – the tenor is 12 years."

Yasuhiro Nakauchi, vice-president of Mizuho Securities' strategic solutions department, IB products group, says he was surprised to hear about this trend, when contacted for comment by Airfinance Journal.

"If it's a financier who doesn't have that much experience in that aviation market… the general impression we take from American airlines [is] they usually go to the Chapter 11 [bankruptcy]," he says.

"My general impression is that US airlines are not interested in funding [in] Japanese yen. Japanese debt providers have historically been one of the big lenders for US carriers, but after 9/11 Japanese banks have had a troubled experience and most people have withdrawn from that market.

"We had approached some US airlines but they didn't have much interest… Japanese yen's portion is so small and it doesn't make sense for them to use Japanese yen as their finance source."

> "The perception of an airline's status remains an important facet of the Jolco market."

a new 737-800. The Turkish carrier is not one of the more familiar names to Japanese investors, although being a joint venture of Turkish Airlines and Lufthansa improves its image in the eyes of cautious Jolco investors. The perception of an airline's status remains an important facet of the Jolco market.

The recent star of the market is Aeromexico, which has mandated Sumitomo Mitsui Finance and Leasing Company and Sumitomo Mitsui Banking Corporation on one 787-9, as well as Nomura Babcock & Brown and Natixis on a second 787-9. SkyWorks Capital is advising the airline on the deal.

A Japanese banking source told *Airfinance Journal* that the recent lowering of Japan's corporate tax rate has encouraged small and medium enterprises to invest some of their extra income into Jolcos, and therefore lower-tier airlines – such as Aeromexico – are now able to access this market.

But, as with the SunExpress deal, investors were probably reassured by the equity holding of an established top-tier carrier. *Airfinance Journal* reported in November that Delta Air Lines planned to buy an additional 32% stake in Aeromexico and, including its pension trust, had an option to purchase an additional 12.7%. If it completes the offer, Delta and its pension trust would own or have an option to own up to 49% of the airline's outstanding shares.

Regional banks

Japan's regional bank market shows no sign of reducing its appetite for aircraft investment. BNP Paribas (BNPP) Japan and Development Bank of Japan (DBJ) have been encouraging these banks to enter the market, this includes hosting an annual seminar on the subject in Tokyo.

The two banks agreed a $200 million unsecured syndicated loan with US lessor Aviation Capital Group, with 15 Japanese regional lenders getting involved in the transaction. BNPP and DBJ did a similar transaction in 2014, but that time only eight regional banks got participated. In January, DBJ also worked with regional bank Tokyo Star Bank to provide a five-year recourse mortgage loan to finance two used A319s for US carrier Allegiant Air.

"We don't want to become active trading financiers, but regional banks are expecting DBJ to transfer some of the loans to them," Masao Masuda, the bank's head of global aviation team, told *Airfinance Journal* in October.

"If regional banks join on a primary basis, sometimes the process can be a bit difficult or time consuming or not so efficient so, from a customer perspective, it's also better for them to see DBJ coming to the transaction alone and, after DBJ takes some portion, regional banks join the transaction by way of transfer."

Miyazaki-based Solaseed Air also completed a financing for a 737-800 in July 2015 with seven Japanese regional banks by purchasing the aircraft back from its lessor Gecas and selling it to a special purpose company owned by Fuyo General Lease, which also arranged the equity. Other financiers and related companies will certainty want to tap into the regional bank market, but foreign companies may face hurdles doing business with the regional banks because of their comparatively lower levels of English than their Tokyo-based international-facing counterparts.

Skymark

Bankrupt airline Skymark's rehabilitation plan became final and binding on September 1, after a majority of creditors voted in favour of the ANA and Airbus proposal.

A rival proposal led by Intrepid Aviation, which teamed up with Delta Air Lines, failed to gain enough creditor votes. Intrepid had at least 15% of its fleet leased to Skymark in February 2015, and had planned to lease nearly 25% of its total fleet to Skymark by the end of 2015.

Japan's Nikkei newspaper reported in late December that ANA had ordered three A380s. The market was rushing to confirm the order, which Nikkei learned of from undisclosed sources, but which Airbus and ANA declined to confirm until late January, when Airbus finally announced the order. It is generally understood that the orders will take the place of slots originally allocated to Skymark.

MRJ RESUMES FLIGHT-TESTING

The entry into service of Mitsubishi's regional jet is scheduled for 2018.

Japanese aircraft manufacturer Mitsubishi announced on February 10 that it had resumed flight-testing of its MRJ regional jet. A company statement said: "During about [a] 1.5-hour flight test off the Pacific coast, we confirmed the upgrades carried out on the aircraft."

The resumption of flight-testing comes after an announcement by Mitsubishi at the end of 2015 that delivery of the first MRJ would be delayed by one year, with a new target for entry into service of 2018.

The delay was put down to engineering issues that were recognized as the flight-test programme was accelerated.

The 2018 entry-into-service date means the Japanese aircraft will lose its lead over the second generation of Embraer's E-Jet family because the E190-E2 is also scheduled to enter service in 2018. However, Mitsubishi maintains this delay is not critical because the MRJ will still have a lead over its direct competitor from the Embraer family – the E175-E2.

On February 16, at the Singapore Airshow, Mitsubishi Aircraft president, Hiromichi Morimoto, revealed that the first MRJ flight had increased interest from "potential" customers in the Asia-Pacific.

He said: "Certainly [the] Asia-Pacific region market is quite promising for us."

Mitsubishi has 223 orders (plus 184 options) for the MRJ. Of these, 53 (and 14 options) are from Asia-Pacific-based carriers.

JOLCO SURVEY – MARKET COMMENT

A popular and broad-based structure

Airfinance Journal has solicited market opinion on both the state of the Jolco and its future.
Michael Allen reports on the findings.

There were a number of key themes that emerged about the Japanese operating lease with call option (Jolco) from respondents to *Airfinance Journal*'s survey of deals done in 2015.

It remains popular
The Jolco's popularity mainly stems from its low financing cost – meaning airlines are able to finance their aircraft at cheap rates while investors in the structure also reap tax benefits.

But there are other benefits to the structure, too.

Mario Jacovides, global head of Allen & Overy's structured asset finance group, says: "The Jolco remains a popular form of aircraft financing and one of the few structures in the market that provides airlines with 100% financing."

It covers a broader range of airlines
Japanese investors prefer top-tier, well-known airlines to invest in, and therefore the structure has mostly been closed off to lower-tier airlines. In 2015, however, new names such as Aeromexico and SunExpress entered the market.

"The set of tier-one airlines that Japanese investors typically invest in has broadened over the years and we are now seeing Japanese equity also participating in operating lessor transactions," says Jacovides.

One law firm, which asked not to be named, said that "bullish" market conditions in recent years have led equity underwriters to look at a wider range of lessees.

Bob Melson, a partner at K&L Gates' Tokyo office, said: "The market remains exceedingly vibrant, with Jolco equity demand continuing to outpace available assets from Tier 1 airlines. This has allowed some non Tier 1 airlines to have access to the Jolco market for the first time. As for the JOL market, we are seeing airline credits across the spectrum active in the market."

Equity underwriters are more aggressive
One banker who works on Jolcos, but who asked not to be named, says: "The equity underwriters aggressively underwrote the equity in 2015 and, as far as we are aware, they have syndicated their backlogs successfully in a short period of time, probably quicker than what they had expected."

He adds: "We assume this trend will continue in 2016, subject that there would be no material adverse change in the Japanese and the worldwide economy."

Malaysia Airlines' restructuring is causing jitters in the Jolco market.

Non-bank institutions are upping their game
We continue to see an uptick in debt provided by non-bank financial institutions such as Japanese leasing companies that have Money Lending Licenses," says K&L Gates' Melson.
"We also see such institutions taking mezzanine debt positions in Jolcos."

Malaysia Airlines restructuring
Malaysia Airlines' restructuring is causing jitters in the Jolco market.

The restructuring of Malaysia Airlines (MAS) has seen the airline ask creditors for concessions on lease rentals and financing terms. Because the airline was a user of Jolcos, Japanese arrangers are closely watching MAS to see what will happen to those leases agreed before the airline went into restructuring.

One law firm, which also asked not to be named, explains: "The Japanese arrangers are concerned about the impact of the proposed restructuring of the MAS Jols/Jolcos on confidence in the Japanese investors if

> “Japanese investors prefer top-tier, well-known airlines to invest in.”

such investors are squeezed. The current approach from MAS appears to be that the Japanese investors will not be squeezed in order to preserve that market open for the restructured MAS.”

The market is still perceived as relatively closed

Market sources often describe the Jolco market as a closed-door game in which new players struggle to establish themselves in a notoriously closed market.

One banker says: “Eligible lenders are generally limited to the Japanese banks, Japanese branches of the non-Japanese banks, and such banks benefited with the tax treaty. Thus, the availability of the debt would be one of the key issues in the transactions.”

Airlines need to be educated on the aircraft redelivery

K&L Gates’ Melson says: “When working with a lessee that is new to the JOLCO product, the biggest challenge is educating about why they should not fight over redelivery conditions/redelivery location, etc. as they are supposed to purchase the aircraft. JOLCO debt is priced similar to finance lease debt and the equity is priced even better so airlines should not expect better terms on redelivery than they do in a finance lease.”

JOLCOS IN CHINA

Law firm Baker & McKenzie provides its view of the Jolco market as it relates to Chinese airlines.

Airlines in the People’s Republic of China (PRC) have utilized Japanese operating lease with call option (Jolco) structures since 2008, and there have been Jolco deals involving PRC airlines almost every year since then.

Obviously the availability of the Jolco structure heavily relies on the tax rules and equity investor appetite and availability. All major PRC airlines are willing to use Jolco structures if the commercial terms are attractive.

For certain other countries, Jolco structures cannot be used because of the local legal constraints – in Thailand, for instance, a purchase option cannot be used.

Jolco structures for PRC airlines have become somewhat commoditized because there are only a small number of Japanese equity investors which regularly participate in PRC Jolco deals. Assuming this remains the case, we do not anticipate any major changes in the Jolco structure utilized in the PRC.

Alternative financing methods in the PRC – such as the free-trade zone structures, bond issuance, export credit deals and domestic financing – all offer competitive commercial alternatives to PRC airlines.

The fleet sizes of some PRC leasing companies have grown substantially. We expect that these PRC leasing companies, like the major PRC airlines, are willing to use Jolco structures if the commercial terms are attractive. Obviously, the availability of the Jolco structure to these PRC leasing companies heavily relies on the tax rules and equity investor appetite and availability.

JOLCO APPRAISER’S VIEW

Owen Geach, chief commercial officer at the International Bureau of Aviation (IBA), explains why most Jolco transactions require an appraiser’s report.

Most transactions require an appraiser and a technical adviser. All Japanese operating lease with call option (Jolco) appraisals must be performed by a certified Istat appraiser.

The style of the report provided has to meet the requirements of the Japanese tax authorities. It is not just a case of a one page letter saying your aircraft is worth X amount. It can easily run into 15 to 20 pages. The appraiser must have a strong track record and be acceptable to the arranger and syndicated lenders and to the Japanese Tax Authority.

The report must provide full details of the transaction, a detailed aircraft description and background and all relevant market characteristics.

The report must give the current market value and also the future residual values in – typically – 12 years’ time. Usually in a Jolco report the annual inflation assumption is low – sometimes 0%. The report must state all assumptions made about the future market. It also must show clearly the definitions used. Other details normally included would be global market considerations and outlook.

In addition, there are typically purchase options towards the end of the finance term – usually at two years before the end of the lease – so the report needs to provide values for each future year.

IBA, Ascend, Oriel, MBA, Aircraft Value Analysis Co and Avitas are among the companies which offer Jolco appraisal.

“Because the airline was a user of Jolcos, Japanese arrangers are closely watching MAS to see what will happen to those leases agreed before the airline went into restructuring.”

JOLCOS REPORTED IN 2015

Client	Overall arranger/s	Debt provider/s	Equity provider/s	Law firms on the deal: Lessee	Lender	Lessor	Aircraft type *	Date closed
Air France	CA-CIB	CA-CIB	Confidential		Watson Farley & Williams	Squire Sanders	A320	01/03/2015
Air France	Asset Brok'Air, Veling	Natixis,CIC, BRED	Undisclosed	Undisclosed	Watson Farley & Williams	K&L Gates	777-300ER	01/04/2015
Air France	Natixis	Natixis, CIC, BRED Banque Populaire	Confidential		Watson Farley & Williams	K&L Gates	777-300ER	01/09/2015
Air France	CA-CIB	CA-CIB, Development Bank of Singapore, La Banque Postale	Confidential		Watson Farley & Williams		777-300ER	01/07/2015
All Nippon Airways	Mizuho Securities	Multiple	Century Tokyo Leasing			Mori Hamada & Matsumoto	787-8	30/07/2015
Asian flag carrier	SMBC, SMFL	SMBC	SMFL		Mori Hamada	Matsumoto	737-800	01/03/2015
British Airways	SMBC	SMBC / MUTB / COMX / SMTB	MUFL	Slaughter & May	Norton Rose Fulbright	Nishimura & Asahi	787-9	01/11/2015
British Airways	SMBC	SMBC / MUTB / LBP	SMFL	Slaughter & May	Norton Rose Fulbright	K&L Gates	787-9	01/11/2015
British Airways	SMBC	SMBC / MUTB / SMTB	YAMASA	Slaughter & May	Norton Rose Fulbright	Norton Rose Fulbright	787-9	01/02/2016
British Airways	SMBC	SMBC / MUTB	YAMASA	Slaughter & May	Norton Rose Fulbright	Clifford Chance	787-9	01/03/2016
British Airways	SMBC	SMBC / MUTB	SMFL	Slaughter & May	Norton Rose Fulbright	K&L Gates	787-9	01/02/2016
British Airways	SMBC	SMBC / MUTB	Fuyo General & Century Tokyo Leasing	Slaughter & May	Norton Rose Fulbright	Squire Patton Boggs	787-9	01/03/2016
China Eastern Airlines	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	Baker & Mackenzie	Clifford Chance	K & L Gates	A320-200	02/02/2015
China Eastern Airlines	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	Baker & Mackenzie	Clifford Chance	K & L Gates	A320-200	10/08/2015
China Eastern Airlines	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	Baker & Mackenzie	Clifford Chance	K & L Gates	A320-200	17/09/2015
China Eastern Airlines	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	Baker & Mackenzie	Clifford Chance	K & L Gates	A320-200	25/09/2015
China Eastern Airlines	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	Baker & Mackenzie	Clifford Chance	K & L Gates	A320-200	13/10/2015
China Eastern Airlines	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	Baker & Mackenzie	Clifford Chance	K & L Gates	A320-200	27/11/2015
China Eastern Airlines	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	Baker & Mackenzie	Clifford Chance	K & L Gates	B737-800	23/07/2015
Deutsche Lufthansa	BNP Paribas	BNP Paribas	Undisclosed	Freshfields Bruckhaus Deringer	Norton Rose Fulbright	Nishimura & Asahi	3 x A320-200	29/01/2015
Emirates	Asset Brok'Air, Veling	CA-CIB, SMTB, CIC, IBJL	Century Tokyo Leasing and Multiple	Dentons	Norton Rose Fulbright, Squire Patton Boggs	Nishimura & Asahi	A380-800	01/03/2015
Emirates	CA-CIB	CA-CIB	Undisclosed	Norton Rose Fulbright			A380	01/12/2015
Emirates	Asset Brok'Air, Veling	SG-CIB, Natixis, Bred	Undisclosed	Dentons	Norton Rose Fullbright	Nishimura& Asahi for Lessors	777-300ER	01/11/2015
Emirates	Veling	Natixis, Societe Generale, BRED	Century Tokyo Leasing and Multiple	Dentons	Norton Rose Fullbright	N&A	777-300ER	20/11/2015
Emirates	Asset Brok'Air, Veling	SG-CIB, Natixis, BRED	Undisclosed	Dentons	Norton Rose Fulbright	Nishimura& Asahi for Lessors	777-300ER	01/12/2015
Emirates	Veling	ING	Mitsubishi UFJ	Dentons	Norton Rose Fulbright	Nishimura & Asahi	777-300ER	22/02/2016
Etihad	SMBC, SMFL	SMBC	SMFL	Allen & Overy	Norton Rose Fulbright	Nishimura & Asahi	A321-200	01/09/2015
Etihad	SMBC, SMFL	SMBC	SMFL	Allen & Overy	Norton Rose Fulbright	Nishimura & Asahi	A321-200	01/10/2015
Etihad	SMBC, SMFL	SMBC	SMFL	Allen & Overy	Norton Rose Fulbright	Nishimura & Asahi	A321-200	01/11/2015
Etihad	NBB	ANZ, CA-CIB		Herbert Smith Freehills			787-9	01/06/2015
Etihad	SMBC	Sumitomo Mitsui Banking		Allen & Overy, Nishimura & Asahi		Norton Rose Fulbright	A321-200	30/10/2015

**single aircraft unless stated*

"The market remains exceedingly vibrant, with Jolco equity demand continuing to outpace available assets from Tier 1 airlines."

Bob Melson, partner at K&L Gates

JOLCOS REPORTED IN 2015 (CONTINUED)

Airline	Overall arranger/s	Debt provider/s	Equity provider/s	Law firms on the deal			Aircraft type *	Date closed
				Lessee	Lender	Lessor		
ICBC Financial Leasing	BNP Paribas	DBJ, GE Japan, NAB	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	A320-214	18/09/2015
ICBC Financial Leasing	BNP Paribas	DBJ, GE Japan, NAB	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	A320-214	30/10/2015
ICBC Financial Leasing	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	A321-231	25/08/2015
ICBC Financial Leasing	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	A321-231	18/09/2015
ICBC Financial Leasing	BNP Paribas	BNP Paribas, DBJ, NAB	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	737-800	29/10/2015
ICBC Financial Leasing	BNP Paribas	BNP Paribas, DBJ, NAB	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	737-800	24/11/2015
ICBC Financial Leasing	BNP Paribas	BNP Paribas, DBJ, NAB	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	737-800	24/11/2015
ICBC Financial Leasing	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	737-800	26/06/2015
ICBC Financial Leasing	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	737-800	30/07/2015
ICBC Financial Leasing	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	737-800	26/06/2015
ICBC Financial Leasing	BNP Paribas	BNP Paribas, DBJ, GE Japan	Undisclosed	William KK Ho & Co.	White & Case	Nishimura & Asahi	737-800	29/06/2015
KLM	CA-CIB	DBS	Undisclosed	Vedder Price			777-300ER	01/04/2015
Lessor in Asia	CA-CIB	undisclosed	Undisclosed				A319	01/02/2015
Lessor in Asia	CA-CIB	undisclosed	Undisclosed				A319	01/03/2015
South American Airline	SMBC, SMFL	SMBC & SMTB	SMFL	White & Case	Clifford Chance	K&L Gates	737-800	01/03/2015
South American Airline	SMBC, SMFL	SMBC	SMFL	White & Case	Clifford Chance	K&L Gates	737-800	01/04/2015
South American Airline	SMBC, SMFL	SMBC	SMFL	White & Case	Clifford Chance	K&L Gates	737-800	01/05/2015
THY	SMBC, SMFL	SMBC	SMFL	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	737-900ER	01/02/2015
THY	SMBC, SMFL	SMBC	SMFL	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	737-900ER	01/03/2015
THY	SMBC, SMFL	SMBC	SMFL	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	777-300ER	01/04/2015
THY	SMBC, SMFL	SMBC	SMFL	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	777-300ER	01/09/2015
THY	SMBC, SMFL	SMBC	SMFL	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	777-300ER	01/12/2015
THY	BNP Paribas	DVB	Century Tokyo Leasing and Multiple	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	A321-231	23/03/2015
THY	BNP Paribas	DVB	Undisclosed	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	A321-231	27/04/2015
THY	BNP Paribas	DBJ	Undisclosed	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	A321-231	13/07/2015
THY	BNP Paribas	BTMU, Commerzbank	Century Tokyo Leasing	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	A321-231	03/08/2015
THY	BNP Paribas	BTMU	Undisclosed	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	A321-231	27/08/2015
THY	BNP Paribas	BTMU, SMTB	Undisclosed	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	A321-231	28/08/2015
THY	BNP Paribas	Shinsei	Century Tokyo Leasing and Multiple	Gide Loyrette Nouel	Clifford Chance	Nishimura & Asahi	A321-231	14/09/2015
THY	Mizuho Securi-ties	Shinsei Trust Bank	Century Tokyo Leasing	Pillsbury	N&A	N&A	A321-200	28/09/2015
TUI	SMFL	Natixis/DBJ	SMFL	Dentons	Allen & Overy	Nishimura & Asahi	787-8	01/03/2015
TUI	NBB	CA-CIB		Clifford Chance			737-800	01/03/2015
Vueling	BNP Paribas	BNP Paribas	NTT Finance Corporation	Allen & Overy	Norton Rose	Nishimura & Asahi	A320-200	13/05/2015
Vueling	BNP Paribas	BNP Paribas	Undisclosed	Allen & Overy	Norton Rose Fulbright	Nishimura & Asahi	A320-232	27/05/2015

**single aircraft unless stated*

IRAN

Talking to Tehran

On January 16, Iran was liberated from UN sanctions that had crippled its aviation industry for the past two decades. With manufacturers rushing to announce aircraft deals with the country, Jack Dutton explores whether there is cause for optimism.

Iran Air, the national flag carrier of Iran, owns three of the last four 747-200Ms in existence. Aged between 35 and 40 years old, the antiquated aircraft are believed to be among the oldest passenger 747s in the world. The fact that they are still in Iran Air's fleet signifies a wider-spread problem with the country's aviation industry, a problem that is believed to be the cause of hundreds of air crashes and disasters since the mid-'90s.

For two decades, sanctions from the UN and the US crippled Iran's aviation industry, banning new aircraft and equipment from being taken in by the Middle Eastern country. The lack of new kit caused Iran's fleet to age – its 273 commercial aircraft have a combined average age of 23.8 years. Instead of through traditional means, Iranian carriers often acquire aircraft, devoid of the latest technology, on the black market.

But the future is looking brighter. On January 16, Iran was finally liberated from the nuclear-related sanctions it had been bound by since 1979. The sanctions were lifted in compliance with the Joint Comprehensive Plan of Action (JCPOA) agreed by Iran, China, France, Germany, the Russian Federation, the UK and the US.

It was the day on which the International Atomic Energy Agency (IAEA) confirmed that Iran had met the milestones set in JCPOA. After Iran reduced its stockpile of low-enriched uranium by 98%, the United Nations Security Council and the European Union relieved the sanctions.

This gave a new freedom to Iranian aviation. US sanctions imposed in 1995 had prevented aviation companies from selling aircraft and spare parts to Iranian airlines. Despite not being completely exempt from all the aviation sanctions, Iran was able to do business with some of the key aerospace manufacturers and revamp its ageing fleet. There was no doubt that international interest in Iran's aviation industry had started to boom, but it was unclear whether the country was able to carry out the business to match this interest.

Manufacturers open doors

The original equipment manufacturers (OEMs) were the first to step forward, with Airbus agreeing to sell 118 jets to Iran on January 28, only 12 days after the sanctions were lifted. The deal, which was signed in the presence of presidents Hassan Rouhani of Iran and France's François Hollande, was for 21 A320ceo-family aircraft, 24 A320neo-family aircraft, 27 A330ceo-family aircraft, 18 A330neos, 16 A350-1000s and 12 A380s.

ATR was quick to join Airbus in doing business. Iran Air, the national flag carrier, signed a deal with the French-Italian turboprop manufacturer for up to 40 ATR 72-600s on February 1. The deal, valued at €1 billion ($1.1 billion) at list prices, included firm orders for 20 aircraft and 20 options.

Along with the ATRs, Iran Air agreed to purchase 45 of the A320 single-aisle aircraft, 45 A330 widebodies, 16 A350s and the 12 A380s from the Airbus order.

Later in February, Boeing was given clearance by the US government to hold talks with Iranian airlines about potential aircraft deals. Other manufacturers including Embraer and Sukhoi have also expressed an interest in doing business in the country.

The Airbus and ATR aircraft are expected to begin delivery towards the end of this year, with the A380s beginning to arrive in 2019. The majority of the ATRs and Airbus aircraft will deliver before 2020 and some, including the A380s, will deliver by 2022.

With the sanctions lifted, it made sense that the manufacturers took advantage of Iran's ageing aviation industry. Iran is the second-largest country in the Middle East, has a population of 80 million people and is home to more than 60 airports.

Although the ATR deal was announced as a firm order plus options, the Airbus deal is not yet a firm commitment, with some sources believing it may be a little premature to be overly optimistic about Iran's aviation industry.

Political hurdles

With all these new deliveries, it has not been fully revealed how Iran will pay for these aircraft. It is expected that many of them will be financed through sale/leasebacks, although Airbus said it might also provide some temporary financing. ATR did not comment on how Iran Air intends to finance the 20 aircraft it has on firm order when contacted by *Airfinance Journal*.

Although the manufacturers and the Iranian government are taking the necessary steps to renew the country's museum-vintage fleet, they will undoubtedly encounter several political and financial hurdles. The main problem for aviation finance is that it is predominantly a dollar-dominated industry – and current US sanctions ensure that no transactions in Iran can be dollar-denominated.

Banks that mainly work in euros are likely to be the initial beneficiaries of the UN sanctions relief in Iran, alongside the manufacturers and Iran. With the dollar account sanctions remaining in place and nervousness around US banks, aircraft financiers need to take extra care to avoid transacting in dollars.

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“It will take time to build the trust needed to restore the aviation industry in a country that has been disconnected from the international community for 20 years.”

“You are going to have currency moving that doesn’t touch the US banking system at all and you’ve got to pay for it all. So how do you arrange the money and how do you get that money out?” says Nick Ogden, partner, infrastructure group, at law firm Pinsent Masons.

Ogden is sceptical of the Airbus order. “I’d be surprised if there was a commitment to buy 118 aircraft in euros that doesn’t touch the US banking system at all. With delivery of 118 aircraft very soon, it would strike me as an ambitious deal to do at this particular point in time. I think politically it sends a strong message, but probably not a great deal more than that.”

Willingness on both sides

With a lack of foreign investment and an ageing fleet, the Iranian market for used aircraft and spare parts may seem attractive to foreign aviation companies. But prospective sellers need to be aware that most aircraft have at least 10% of US content on them, so they will need to go through the US Office of Foreign Assets Control (Ofac) to approve any sales. This rule applies also to new aircraft – and Ofac is yet to approve the Airbus and ATR aircraft deals with Iran.

“We’re still a long way from closing a first deal, but the good thing is that according to Asghar Fakhrieh Kashan, the deputy transport minister, Iran is in contact with Ofac on an almost daily basis to try to facilitate the execution of the transaction,” Bertrand Grabowski, managing director of aviation finance, bank director and member of the board of managing directors at DVB Bank, tells *Airfinance Journal*.

“The first deal was with Airbus, but Iran has said that they want to do business with Boeing as well,” he adds. “So, I think there’s willingness on both sides and certainly from Ofac and the US administration to clear the air around what could be the first lease or financing into Iran. It’s complicated, it’s going to take time – probably longer than we think – but there’s willingness on both sides, absolutely.”

Iran also needs to ensure that its infrastructure is updated to accommodate space for its delivery stream of new aircraft. The Iranian government has plans to redevelop existing airports, to build new airports and to create new commercial zones to meet its ambitious infrastructure requirements.

To be a success story, Iran will need to raise money, attract investment in and be able to give foreign investors comfort that they will repatriate the money. It will take time to build the trust needed to restore the aviation industry in a country that has been disconnected from the international community for 20 years.

Illegal transactions

Lessors also need to be cautious when considering doing business in Iran. “If you talk to the lessor, question number one is “how am I getting paid?” Question number two is “what are my ownership rights?” Question number three is “what if my transaction becomes illegal again. How can I repossess my aircraft?” Grabowski tells *Airfinance Journal*.

“Those questions for the time being have been unanswered. The problem we have is that Airbus wants to start delivering some of the aircraft in 2016 and frankly for me that will be a big challenge.”

One risk that could make any Iranian aviation transaction illegal is snap back – the possibility of Iran violating the conditions of the sanctions, leading to lessors having to repossess their aircraft. In such a case, lessors will have 65 days to repossess their aircraft from a jurisdiction that has yet to define thoroughly its own legal framework on repossession rights.

Because of issues such as snap back, lessors may be reticent when considering the possibility of leasing aircraft to Iran. Some aviation specialists who do business in the country believe that lessors will lease aircraft into Iran, but will begin wet leasing aircraft before dry leasing them.

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1979

As a result of the hostage crisis in 1979, the US government froze Iranian government assets in the United States and US banks overseas. The freeze expanded to a full trade embargo until an accord with Iran was signed in 1981.

1987

US imposes new embargo on Iranian goods and services.

1995

US sanctions imposed on doing business with Iranian aviation companies.

2006

The UN Security Council passes Resolution 1696, imposing sanctions on Iran after it refused to suspend its uranium enrichment program.

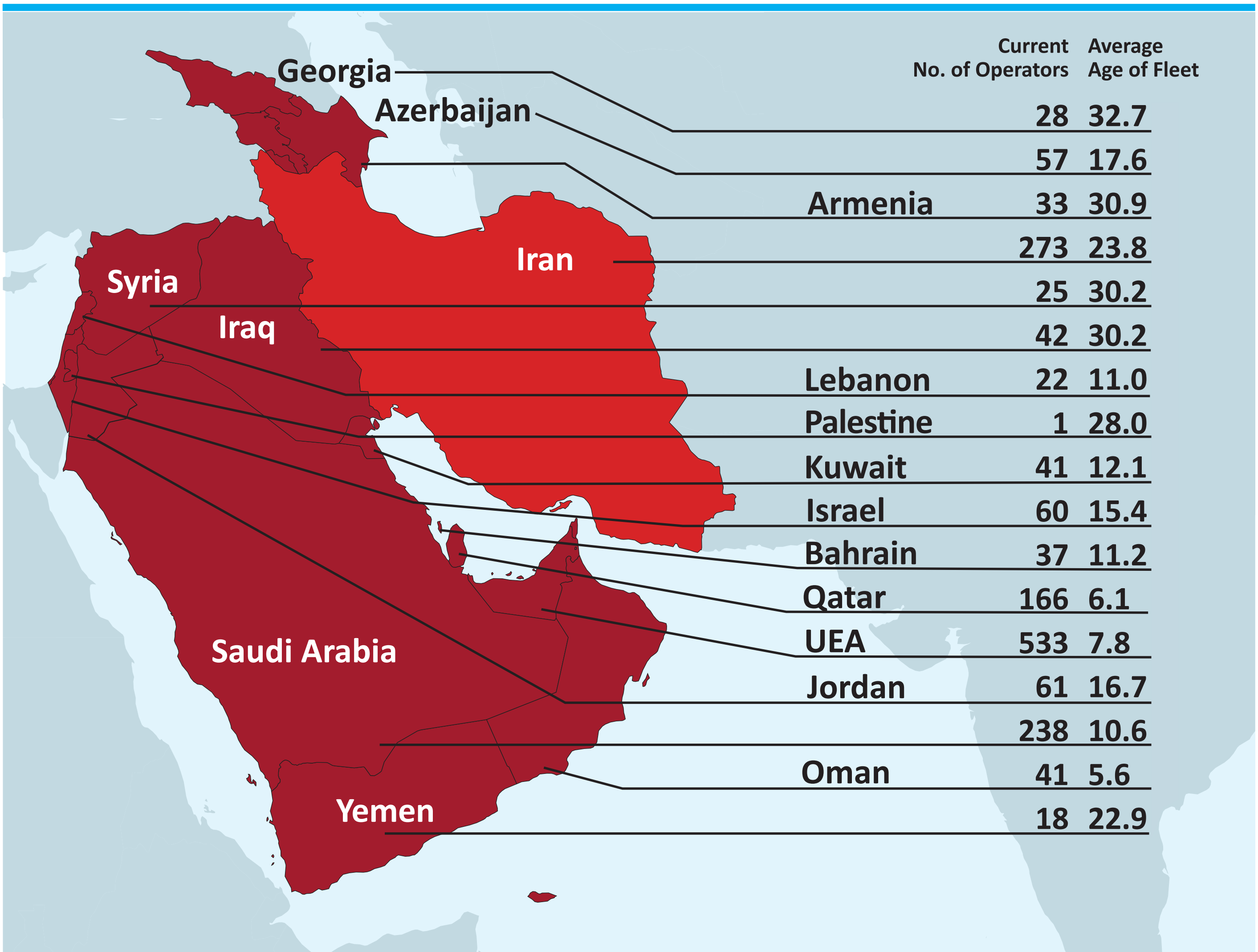
2015 May 11th

Mahan Air, Iran’s second biggest carrier, acquires nine Airbus aircraft under the sanctions enrichment program.

“I’d be surprised if there was a commitment to buy 118 aircraft in euros that does not touch the US banking system at all. I think politically it sends a strong message, but not a great deal more than that.”

Nick Ogden, partner, infrastructure group, Pinsent Masons

REGIONAL FLEETS IN THE MIDDLE EAST



2016 January 16th
UN sanctions are lifted, some US sanctions remain.

24th
Airbus in talks to sell 127 jets to Iran.

28th
Airbus agrees to sell 118 jets to Iran (not a firm order).

February 1st
Iran Air firm orders up to 40 ATR 72-600s from the manufacturer.

16th
Brazilian manufacturer Embraer says it sees market potential in Iran at the 2016 biennial Singapore Airshow.

Late 2016
Airbus and ATR aircraft begin delivery into Iran.

2019
A380s to begin delivery into Iran.

"I think that most first-tier operating lessors will remain reluctant in the next few months to book deals with Iranian carriers directly, mainly due to the unknown legal position of a foreign lessor"

Marian Pistik, CEO of Aerotask

IRAN - THE KEY SANCTIONS

Activities By EU Companies	Permitted Under EU Sanctions?	Permitted Under US Sanctions?
Sale of spare parts, software and/or technology for a civil aircraft to an Iranian person/entity?	**YES** as long as it does not involve listed persons under the remaining EU-Iran sanction regime.	**YES** if the item is not greater than 10% US-origin by value, no US persons involved, US financial system not involved, and no Specially Designated Nationals (SDNs) involved. **OFAC licensing considered case-by-case** if greater than 10% US-origin by value, or US persons involved, or US financial system involved. **NO** if SDNs are involved.
Export of spare parts, software and/or technology for a civil aircraft to an Iranian person/entity?	**YES*** as long as it does not involve listed persons under the remaining EU-Iran sanction regime. ***Note:** where the good concerns a dual-use item, export is subject to prior authorisation.	**YES** if the item is not greater than 10% US-origin by value, no US persons involved, US financial system not involved, and no Specially Designated Nationals (SDNs) involved. **OFAC** licensing considered case-by-case if greater than 10% US-origin by value, or US persons involved, or US financial system involved.
Brokering by a party in the EU regarding the sale of a civil aircraft or spare parts or technology to Iran?	**YES*** as long as it does not involve listed persons under the remaining EU-Iran sanction regime. ***Note:** where the good concerns a dual-use item, export is subject to prior authorisation.	**YES** if the item is not greater than 10% US-origin by value, no US persons involved, US financial system not involved, and no Specially Designated Nationals (SDNs) involved. **OFAC licensing considered case-by-case** if greater than 10% US-origin by value, or US persons involved, or US financial system involved. **NO** if SDNs are involved.
Transfer of funds to Iranian entities involved in the aviation sector of Iran?	**YES** as long as it does not involve listed persons under the remaining EU-Iran sanction regime.	**YES** if not involving goods or technology greater than 10% US-origin by value, no US persons involved, US financial system not involved, and no SDNs involved. **OFAC licensing considered case-by-case** if greater than 10% US-origin by value, or US persons involved, or US financial system involved. **NO** if SDNs are involved.
Establishing a joint venture with an Iranian person/entity in the aviation sector of Iran?	**YES** as long as it does not involve listed persons under the remaining EU-Iran sanction regime.	**YES** if no US persons involved, US financial system not involved, and no SDNs involved. **OFAC licensing considered case-by-case** if US persons involved, or US financial system involved. **NO** if SDNs are involved.
Opening of a branch, subsidiary or representation office in the aviation sector of Iran?	**YES** as long as it does not involve listed persons under the remaining EU-Iran sanction regime.	**YES** if no US persons involved, US financial system not involved, and no SDNs involved. **OFAC licensing considered case-by-case** if US persons involved, or US financial system involved. **NO** if SDNs are involved.

Marian Pistik, chief executive officer of Dubai-based aviation consultancy Aerotask, a provider of aviation solutions to airlines in Iran, and lessors and lenders intent on doing business with the country, thinks lessors and financiers will approach Iran in a similar fashion.

"I think that most first-tier operating lessors will remain reluctant in the next few months to book deals with Iranian carriers directly, mainly due to the unknown legal position of a foreign lessor," he says. "But I think they will agree to or even encourage to facilitate wet leases through their existing lessees based in regions of excess capacity, such as Russian or Turkish charter airlines."

Hurdles to overcome

Although some Iranian airlines have told *Airfinance Journal* they are still experiencing some hesitation from lessors, other lessors have expressed their intentions to do business in Iran.

"Iran's need for modernizing its current fleet and adding to it to meet a growing need is undeniable," says Firoz Tarapore, chief executive officer of Dubai Aerospace Enterprise, a Middle Eastern lessor.

"Once they have determined the total number of aircraft from all OEMs, they will have to decide how many of these are best suited for an operating lease solution. Airlines in Iran can benefit from leasing mid-life aircraft for the next six to eight years till the newly ordered aircraft begin to arrive."

"Foreign banks are still hesitant and their return to the Iranian market is proving much slower than some may have anticipated, while local banks have limited liquidity."

An executive source at a private airline in Iran.

Tarapore says that he sees good progress on the regulatory side in Iran. He believes there are many hurdles still to be overcome before lessors can be fully comfortable but feels "it is only a matter of time" before they will.

When referring to the lifting of the aviation sanctions in Vietnam in the mid-'90s, lessors initially started to wet lease aircraft. With wet leasing, lessors can lease the aircraft for a short period and use their own pilots, giving them optimum flexibility to move or repossess the aircraft. As years progressed, and lessors became more confident with leasing aircraft in Vietnam, most airlines in the south-east Asian country ended up dry leasing aircraft for longer terms. The transition from wet leasing to dry leasing was followed by increased support from the export credit agencies (ECAs).

Like they were in the case of Vietnam, the ECAs have appeared to be active since the Iranian sanctions have been lifted.

Gordon Welsh, head of aerospace UK Export Finance (Ukef), the UK's ECA, tells *Airfinance Journal*: "The moment sanctions were lifted, Ukef reintroduced cover to support UK companies seeking to compete for business in Iran and has engaged with companies on projects in a number of sectors. We are also working directly with the Iranian Ministry of Economic Affairs and Finance and the Export Guarantee Fund of Iran. The aviation sector has been an early focus for Iran, and Ukef is on hand to help businesses take advantage of the economic opportunities available in this and other sectors."

DVB's Grabowski does not see many alternatives to ECA financing in Iran at this point in time.

"We will see how the first Airbus aircraft will be financed," he says, "but for the time being, I don't think commercial lending into Iran is easy now, so it has to come from support from the ECAs. Apart from that, I don't see how any financing could be arranged today. There's still a number of uncertainties when it comes to mortgage rights or ownership rights, so all this has to be clear. We are very far from a first deal from that standpoint."

Unknown but exciting

Iranian airlines seem slightly more optimistic than Grabowski. An executive at a state-owned Iranian carrier, who asked not to be named, says: "With our government's support, we are in direct talks with the major OEMs. We have also been negotiating with some of the key lessors, but there is still some hesitation there. We would like to see faster responses from the operating lessors in accessing the Iranian market with reasonably priced deals."

Some private carriers in Iran have a different view, and see paying for aircraft in cash to be the better option.

One executive source at a private airline in Iran, who also chose to remain anonymous, tells *Airfinance Journal*: "As a private carrier, we are interested in more affordable used equipment. Obviously, there is a lot of interest in obtaining finance but frankly it still seems to be a long shot even despite the removal of the sanctions. Foreign banks are still hesitant and their return to the Iranian market is proving much slower than some may have anticipated, while local banks have limited liquidity."

Iranian carriers also need to be wary of competition from established foreign carriers that already fly routes into Iran, such as flydubai and Emirates.

Ogden at law firm Pinsent Masons believes that if Iran's aviation industry is to garner the foreign investment it desperately needs, businesses will have to collaborate.

"I think that international organizations going into Iran will have to go in with a local partner. It will have to support the local supply chain. There will be good businesses in Iran that can provide a lot of the technical skills, but they won't have access to international standards and international finance," he says.

"Iran has to do a lot – it has to reform the legal system, it has to update and reform its banking system and it has to demonstrate that it's serious and that snap back is not really a risk, but that's only going to happen over time. We think it's a really interesting opportunity and a lot of our clients are thinking the same way, but it also is a challenging one. You could probably make a lot of money if you get it right, but you could probably also lose a lot if you get it wrong. It's a bit unknown in many ways, but it's very exciting," adds Ogden.

Hossein Jaberi, founder and managing director of Katkan Company, an Iranian aviation business that specializes in consultancy and airport infrastructure, is looking to take that risk, by trying to start up his own private airline in Iran. He is looking to acquire a mixture of commercial narrowbodies and cargo aircraft and is awaiting approval from the Iran Civil Aviation Organization before he can establish the airline. Jaberi has been in contact with a few foreign banks about financing incoming aircraft but these discussions have not reached any conclusion yet.

Speaking to *Airfinance Journal* from Tehran, he says: "During the sanctions, Iran experienced several challenges: some of our aircraft were outdated, they lacked spare parts, but we still managed to handle them."

Iran's new freedom to buy aircraft and spare parts will likely make Jaberi's job at running an airline in Iran easier. Although there is still a lot of work to be done, hopefully Jaberi will not have to resort to using 747-200Ms when he finally gets his airline off the ground.

AIRCRAFT PROFILE

Jury still out on A380

Airbus's largest aircraft has failed to live up to the manufacturer's expectations.

The Airbus A380 is the largest passenger aircraft built and the only one to feature two complete passenger decks. The aircraft was targeted at breaking Boeing's dominance of the very large passenger aircraft market and provided about 25% more seats than the 747-400.

According to Airbus's figures, the A380 had an 800-nautical mile range advantage over its Boeing competitor and offered 17% better operating economics. Boeing's launching of the 747-8 has narrowed the advantages, but to what extent is a matter of debate between the two manufacturers.

The baseline A380-800 passenger version was originally planned to be part of a family that would include a freighter model and a stretched passenger version, but these variants have been shelved.

After several delays and rescheduling of early production targets, the first A380 entered service in late 2007. In an attempt to overcome the early issues with the aircraft, Airbus has been improving the weight of the aircraft and there have been a number of technical upgrades. Despite these improvements, sales of the aircraft (and its Boeing competitor) have been lower than Airbus's forecasts.

Future developments

There has been much discussion and speculation about the possibility of an improved new engine (Neo) version of the A380. Emirates, the aircraft's biggest customer by some margin, has publicly encouraged Airbus to build an updated version, but there have been mixed messages from the manufacturer, which appears to be undecided as to whether there is a sufficiently large market to justify the investment.

AIRCRAFT CHARACTERISTICS

Capacity/range	
Max seating	853
Typical seating	525 (three-class configuration)
Max range with 525 passengers	8,500nm (15,700km)
Technical characteristics	
MTOW	560 tonnes
OEW	277 tonnes
MZFW	361 tonnes
Fuel capacity	320,000 litres
Engines	4 x GEnx-2B, or 4 x Trent 900
Thrust	70,000 lbf (311 kN)
Fuels and times	
Block fuel 1,000nm	26,590kg
Block fuel 2,000nm	50,580kg
Block fuel 4,000nm	104,290kg
Block time 1,000nm	146 minutes
Block time 2,000nm	265 minutes
Block time 4,000nm	501 minutes
Fleet data	
Entry into service	2007
Delivered	180
Operators (current)	13
On order	139
Customers	19
Built peak year (2012)	30
Average age	3.5 years

Source: Airfinance Fleet Analyst

Indicative maintenance reserves	
C-check reserve	$160-$165 per flight hour
Higher checks reserve	$145-$150/flight hour
Engine overhaul	$190-$195/engine flight hour
Engine LLP	$195-$200/engine cycle
Landing gear refurbishment	$200-$205/cycle
Wheels, brakes and tyres	$565-$570/cycle
APU	$155-$160/per hour
Component overhaul	$575-$580/flight hour

Source: Air Investor 2016

“Despite recent orders by Iran Air and ANA, after the type’s two-year order drought, deliveries continue to exceed orders.”

Angus Mackay, Principal, ICF International

ISTAT APPRAISERS’ VIEWS

ICF International
Angus Mackay, Principal

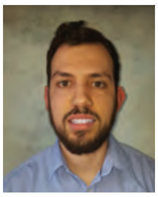
The A380-800 programme has enjoyed moderate success, with 319 firm orders and a backlog of 139 aircraft. There are 19 customers, some of which have re-ordered the type. The aircraft is in service with 13 operators, and the total operating fleet stands at 181 aircraft.

The operator base is highly concentrated, with Emirates flying nearly 40% of the in-service aircraft fleet and accounting for more than 50% of the firm order backlog. Although the A380-800 has outsold the competing Boeing 747-8 aircraft, the overall market remains small, with few operators able to finance and profitably exploit its high-volume operating efficiencies. However, with a full passenger load, the aircraft is quite profitable and given the large interior allows major flag carriers to offer a unique inflight experience for premium passengers.

Despite recent orders by Iran Air and All Nippon Airlines (ANA), after the type’s two-year order drought, deliveries continue to exceed orders and the level of deferrals and cancellations suggests that little real order growth will occur in the near future.

A380-800 demand, values and lease rates may be impaired disproportionately versus smaller twin-engined widebodies should global economic conditions soften and passenger traffic growth diminish. In addition, given high reconfiguration costs, it is unclear which the secondary operators of the A380 will be.

Further clouding the secondary market question, there is no passenger-to-freighter modification in development or imminent launch of a stretched A380-900 variant. Therefore, caution is warranted with respect to current market values, lease rates and residual values, particularly if the remarketing of Malaysia Airlines and Skymark aircraft proves challenging.



IBA
Youcef Berour Minarro, aviation analyst

The Airbus A380-800’s first flight was in April 2005. Singapore Airlines was the launch customer, taking its first delivery in 2007, followed shortly by Emirates and Qantas.

The A380-800 has two engine options, the Rolls-Royce Trent 900 (Trent 970/972) and Engine Alliance GP7000 (GP7270). There are more GP7270-powered A380s in service than Roll-Royce-powered aircraft; however, the Trent 970 has a larger operator base (see Engine choice).

Boeing’s slow-selling 747-8I, which entered service in 2011, is the key competitor to the A380. In terms of sales, the A380 has performed better than the 747-8I, which has only received about 50 orders and has a backlog of only about 20 aircraft. In IBA’s view, the 747-8 is a niche aircraft with a small operator base (Air China, Korean Air and Lufthansa).

The majority of the A380’s backlog is with existing operators and the type has not seen orders from new operators for a number of years. The majority of demand has come from existing airlines and lessors, such as Emirates and Amedeo. After the formal cancellation of Vietnam Airlines’ order for four aircraft, as well as the collapse of Transaero, which had a backlog of four aircraft, it was difficult to gauge if the operator base would increase.

There are some airlines that have reportedly ordered the type (including Virgin Atlantic and Air Austral) but to which deliveries have not taken place as expected.

According to IBA’s JetData database, the two former Skymark A380s remain parked (apparently at the factory in Toulouse).

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VALUES

A380-800 current market value ($m)

Build year	2008	2010	2012	2014	2016
IBA view	123	142	169	205	240
ICF view	109	128	151	179	213

Assuming standard Istat criteria.

A380-800 indicative lease rates ($m/month)

Build year	2008	2010	2012	2014	2016
IBA view	1.15-1.30	1.32-1.50	1.50-1.70	1.67-1.90	1.75-2.00
ICF view	1.05-1.25	1.15-1.35	1.35-1.45	1.50-1.70	1.75-1.90

“There are some airlines that have reportedly ordered the type… but to which deliveries have not taken place as expected”

Youcef Berour Minarro, aviation analyst, IBA

Recently, however, it seems as if the operator base for the type may increase because ANA signed a purchase agreement for three, and the recent Airbus orders in Iran, after the lifting of sanctions, include a number of A380s.

The aircraft has proved popular with passengers. Thanks to its size, it has allowed Middle Eastern operators such as Emirates and Etihad to feature luxurious suites, bedrooms and showers. However, the aircraft's size is one of the aspects that is causing questions to be asked about its future in the secondary market.

The main area of concern for the type in this context is that remarketing such an aircraft is not an easy task. There are relatively few operators that have the network capacity requirements and the ability to find the investment capital required. In addition, many airports around the world are unable to accommodate the A380, which may limit potential route networks.

Another factor to consider is cabin reconfiguration costs, which are likely to be very high if an airline wishes to customize a second-hand aircraft seating and interior layout.

In terms of future developments, speculation still exists surrounding a potential new engine option (Neo) version, which Emirates has been pushing for. A re-engined version would also probably incorporate a stretch to increase capacity with a view to reducing seat-mile costs for the airline. However, it is too early to say whether the A380neo will be launched, especially if it is only for a single airline, namely Emirates.

The Airbus A380-800 remains Airbus's flagship aircraft and is considered as a major attraction for passengers because of its size. IBA's value range is $230 million to $250 million for new examples. New A380s typically come with high levels of buyer-furnished equipment.

IBA sees a good value profile for the Airbus A380-800 at present but if, as the programme advances, there is no improvement in remarketing prospects, values may be affected.

ENGINE CHOICE

The battle between the A380's engine suppliers is intense.

The A380 offers a choice of engine supplier, with the possibility to equip the aircraft with either Rolls-Royce or Engine Alliance powerplants.

Rolls-Royce offers variants of the Trent 900 from its family of widebodyngines. Engine Alliance, a 50-50 joint venture between General Electric Aviation and Pratt & Whitney, offers the GP7200, which is developed from the GE90 and PW4000 families.

The competition between the two suppliers is intense and evenly balanced. Until April 2015, Engine Alliance held the advantage in terms of total orders, although Rolls-Royce had more customers. However, an order for 50 Trent 900s from Emirates changed the momentum and gave Rolls-Royce the edge.

Although the order only gave Rolls-Royce a slender lead in market share (53% of announced orders), the airline's decision to select the Trent was significant because its current fleet is equipped with GP7200 engines.

A380 ORDERS AND FLEET BY ENGINE MANUFACTURER

Manufacturer	Aircraft orders	Aircraft in-service	Aircraft backlog	Customers	Operators
Rolls-Royce	152	76	76	11	8
Engine Alliance	134	104	30	6	5
Unannounced	33	–	33	3	–

DEAL WATCH

LOANS/FINANCE LEASES

Borrower	Country	Asset	Amount	Structure/status (closed unless stated)	Arranger	Debt/Equity
February 2016						
Emirates	Dubai	1xA380	$221m (CMV*)	Jolco/closing expected	Natixis, Société Générale, DBS/Closing expected	
Braathens Aviation	Sweden	3xATR72-600	$61m (CMV*)	Commercial loan	CA-CIB, DVB Bank	
Allegiant Air	US	2xA319 (used)	Undisclosed	Five year recourse debt	Development Bank of Japan (DBJ), Tokyo Star Bank	
ACG	US	Unsecured loan	$200m (approximately)	Unsecured syndicated yen loan	BNP Paribas, Development Bank of Japan	15 Japanese regional banks
January 2016						
Goshawk	Ireland	17 narrowbodies	$470m	Recourse facility	Natixis	
ICBC FL	China	1x737-800	$48m (2015 CMV*)	French tax lease	CA-CIB, National Australia Bank	
THY	Turkey	4x737-800	$188m (CMV*)	Jolco	BTMU, Century Leasing	BTMU/Century Leasing
THY	Turkey	4xA321-2000	$210m (CMV*)	French tax lease/ mandated	CIC	
THY	Turkey	2xA321-2000	$105m (CMV*)	French tax lease/ mandated	CA-CIB	
Minsheng Financial Leasing	China	3xA320, 4x737-800	Undisclosed	Secured loan	DVB	
SAS	Sweden	5xA320neo (PDP)	Up to $46m	Revolving credit	DVB	
December 2015						
Intrepid	US	1xA330-300	$106m (2015 CMV*)	Secured commercial loan	Erste Bank	
Intrepid	US	1xA330-300	$106m (2015 CMV*)	Secured commercial loan	DVB	

EXPORT CREDIT DEALS

Borrower	Country	Asset	Amount	Structure	Arranger	Debt
January 2016						
THY	Turkey	2xA330-300	$209m (CMV*)	CHF-denominated loan	KfW Ipex	
THY	Turkey	8x737-800, 1x777-300ER, 1xGE90	$567m (CMV*)	euro-denominated French tax lease (Ex-Im)	BNP Paribas	
THY	Turkey	3x777-300ER, 1xGE90	$513m (CMV*)	euro-denominated French tax lease (Ex-Im)	BNP Paribas	

CAPITAL MARKETS

Borrower	Country	Asset	Amount	Structure	Arranger	Coupon
January 2016						
EasyJet	UK	Unsecured	€500m	7-year Eurobond	Bank of America Merrill Lynch, Barclays, Société Générale	1.75%
American Airlines	US	22 recently acquired aircraft	$1.07 billion	EETC		3.57%/AA
December 2015						
Norwegian Air Shuttle	Norway	Unsecured	€125m	Eurobond	Danske Bank Markets, DNB Markets and SEB	7.25%
Air Canada	Canada	5 Boeing widebodies	$537m (AA:$295m, A:$121m, B:$121m)	EETC	Morgan Stanley, Credit Suisse	AA:3.75%, A:4.25%, C:5.0%/ AA:A1, A:A3, C:B+ (Moody's)

*Current market value (as per Air Investor 2016 unless stated).

DEAL WATCH

SALE/LEASEBACKS

Borrower	Country	Asset	Lessor/Arranger	Amount	Status
February 2016					
Aegean	Greece	1xA320	Alafco	$44m (CMV*)	Closed
Latam	Chile	4xA321	Ping An	$210m (CMV*)	Closed
January 2016					
Emirates	Dubai	1xA380	EMP	$222m (CMV*)	Closed
December 2015					
Aegean	Greece	1xA320	Awas	$44m (2015 CMV*)	Closed

Airfinance DEALS DATABASE

For more extensive deal coverage and lawyers details go to http://www.airfinancejournal.com/dealsdatabase

DEAL PIPELINE (MANDATES)

Borrower	Country	Asset	Structure	Amount	Status
December 2015 to February 2016					
Flydubai	UAE	16 aircraft	TBD	Undisclosed	Mandate expected
Biman Bangladesh	Bangladesh	2x777-200ER	Undisclosed	$131m (2015 CMV*)	RFP issued
IAG (Vueling0	UK/Spain	3xA320	Jolco	$131m (2015 CMV*)	RFP issued
Lufthansa	Germany	1xA380, 2xA321	Jolco	Undisclosed	RFP issued

** Current market value (as per Air Investor 2016 unless stated)*

RATINGS

AIRLINE FINANCIAL RATINGS

Airline	Fitch	Moody's	S&P
Aeroflot	B+(neg)	-	-
Air Canada	B+(stable)	B1(stable)	B+(stable)
Air New Zealand	-	Baa2(stable)	-
Alaska Air Group	BBB-(stable)	-	BBB-(stable)
Allegiant Travel Company	-	Ba3(stable)	BB(stable)
American Airlines Group	BB-(stable)	Ba3(stable)	BB-(stable)
Avianca Holdings - IFRS	BB-(neg)	-	B+(stable)
British Airways	BB+(pos)	Ba2(pos)	BB(pos)
Delta Air Lines	BB+(pos)	Ba2(pos)	BB+(stable)
Etihad Airways	A(stable)	-	-
GOL	CCC	Caa1(neg)	B-(neg)
Hawaiian Airlines	B(pos)	B2(stable)	B+(stable)
jetBlue	B+(stable)	Ba3(stable)	BB-(stable)
LATAM Airlines Group	BB-(stable)	Ba2(stable)	BB(neg)
Lufthansa Group	-	Ba1(pos)	BBB-(stable)
Qantas Airways	-	Ba1(pos)	BBB-(stable)
Ryanair	BBB+(stable)	-	BBB+(stable)
SAS	-	B3(stable)	B-(stable)
Southwest Airlines	BBB+(stable)	Baa1(pos)	BBB(stable)
Spirit Airlines	BB+(stable)	-	BB-(stable)
Turkish Airlines	-	Ba1(stable)	BB(stable)
United Continental Holdings	BB-(pos)	Ba3(pos)	BB-(pos)
US Airways Group	BB-(stable)	B1(stable)	-
Virgin Australia	-	B2(Stable)	B+(stable)
WestJet	-	-	BBB-(stable)

Source: Ratings Agencies - 22nd February 2016

LESSOR CREDIT RATINGS

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

Source: Ratings Agencies - 22nd February 2016

AVIATION COMPANY RATINGS

Company	Fitch	Moody's	S&P
Airbus Group	A-(stable)	A2(stable)	A(pos)
Boeing	A(stable)	A2(stable)	A(stable)
Bombardier	B(neg)	B2(neg)	B(neg)
Embraer	-	Baa3(stable)	BBB(neg)
Rolls-Royce	A(stable)	A3(stable)	A(neg)
United Technologies	A-(stable)	A3(stable)	A-(stable)

Source: Ratings Agencies - 22nd February 2016

AIRCRAFT ORDERS

COMMERCIAL AIRCRAFT ORDERS BY MANUFACTURER

	Gross orders 2016	Cancellations 2016	Net orders 2016	Net orders 2015
Airbus*	51	7	44	1,036
Boeing	70	2	68	768
Bombardier	45	0	45	35
Embraer	0	0	0	165
ATR	40	0	40	68

Based on Airfinance Journal *research and manufacturer announcements*
** Airbus figure excludes Iran order*

COMMERCIAL AIRCRAFT ORDERS BY CUSTOMER

Customer	Country	Quantity/Type
December 2015 to February 2016		
Air Niugini	Papua New Guinea	4x737Max
Air Canada	Canada	LoI for 45xCSeries
Philippine Airlines	Philippines	6xA350
Okay Airways	China	8x737Max8, 3x737Max9, 737-900ER
Iran	Iran	40xATR72-600
ANA	Japan	3xA380
Iran	Iran	MoU for73 Airbus widebody and 45 single aisle
Gulf Air	Bahrain	29xA320neo
Calc	China	2xA320ceo
Air China	China	6x777-300ER
BOC Aviation	Singapore	18xA320neo, 12xA320ceo
IAG	UK/Spain	15xA320neo
China Express	China	10xCRJ900
Ethiopian Airlines	Ethiopia	2xQ400
Braathens	Sweden	5xATR72-600
Spring Airlines	China	60xA320neo

CURRENT PRODUCTION AIRCRAFT PRICES AND VALUES ($ MILLIONS)

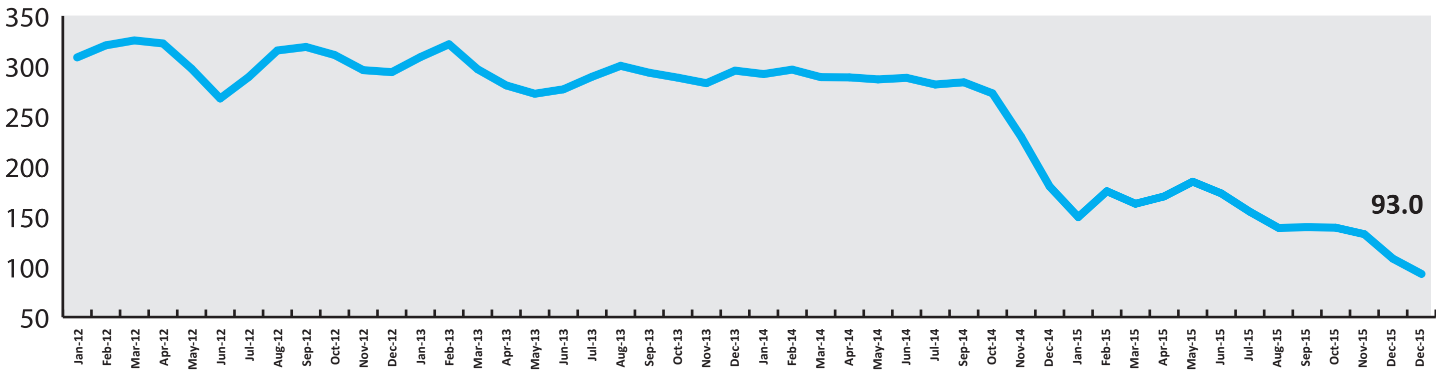
Model	List price	Current market value*
Airbus (2016 price)		
A319	89.6	37.0
A320	98.0	44.2
A321	114.9	52.6
A330-200	231.5	92.3
A330-300	256.4	104.4
A350-900	308.1	144.5
A380	432.6	221.4
ATR (2015)		
ATR42-600	21.6	16.4
ATR72-600	25.9	20.4
Boeing (2015)		
737-700	80.6	36.7
737-800	96.0	47.5
737-900ER	101.9	49.5
747-8 (passenger)	378.5	164.0
777-200LR	313.8	N/A
777-300ER	339.6	163.1
787-8	224.6	118.2
787-9	264.6	136.2
Bombardier (2015 Avitas BlueBook)		
CRJ700	41.0	22.3
CRJ900	46.0	26.3
CRJ1000	49.1	28.1
Q400	30.0	21.8
Embraer (2016)		
E170	41.2	26.9
E175	44.4	29.0
E190	49.1	33.1
E195	52.0	35.1

*Based on Istat appraiser inputs for Air Investor 2016

AIRCRAFT LIST PRICES - NEW MODELS

Model	$ millions
Airbus (2016 prices)	
A319neo	98.5
A320neo	107.3
A321neo	125.7
A330-800neo	252.3
A330-900neo	287.7
A350-800	272.4
A350-1000	355.7
Boeing (2015)	
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 (2015)	
CS100	71.8
CS300	82.0
Embraer (2016)	
E175-E2	50.8
E190-E2	58.2
E195-E2	65.6

US GULF COAST KEROSENE-TYPE JET FUEL (CENTS PER US GALLON)



Source: US Energy Information Administration

LEASE RATES ($000S)

Model	Low	High	Average
Airbus			
A319	230	240	235
A320	280	389	335
A321	360	460	410
A330-200	640	859	750
A330-300	900	1,242	1,071
A350-900	1,050	1,300	1,175
A380	1,175	2,028	1,602
ATR			
ATR42-600	135	167	151
ATR72-600	165	216	191
Boeing			
737-700	225	340	283
737-800	315	421	368
737-900ER	355	435	395
747-8 (passenger)	1,150	1,425	1,288
777-300ER	1,150	1,450	1,300
787-8	850	1,100	975
787-9	1,050	1,250	1,150
777-300ER	1,050	1,550	1,300
787-8	850	1,110	980
787-9	1,190	1,340	1,265
Bombardier			
CRJ700	175	214	195
CRJ900	190	240	215
CRJ1000	210	260	235
Q400	180	240	210
Embraer			
E170(AR)	180	210	195
E175(AR)	200	260	230
E190 (AR)	225	290	258
E195 (AR)	230	300	265

Based on Istat appraiser inputs for Air Investor 2015

PILARSKI SAYS

Is there a relationship between oil price changes and the stock market?

Strange things happen when the price of oil falls, and sometimes it is difficult to understand why, writes Adam Pilarski, senior vice-president at Avitas.

Since the dramatic drop of oil prices there has been a curious relationship between the direction of oil price changes and the Dow Jones stock index. Any time oil prices fell, the markets responded counter intuitively by also falling. Journalists picked up the trend and produced headlines such as "US stocks fall as decline in oil prices fuels pessimism", or even the more surprising "Oil price pain starts to spread".

The latter headline is reminiscent of developments a few years back when high oil prices caused real economic pain with higher inflation, lower incomes and other factors associated with a tougher life. Why "oil price pain" can be associated with falling oil prices is difficult for me to fathom.

To be fair, oil price declines are mentioned as a major reason for the fall in the Dow Jones, but other reasons are also stressed. One is the bad economic news from China (which I will address in this column next month) and the others are strange political developments in a constantly changing world. The bizarre election campaign in the US, uncertainties in the Middle East, the constantly grotesque behaviour of the leader of North Korea and unpredictable future political leaders in the UK, France and other places raise the prospects of a future that is difficult to predict, which naturally causes the markets to retrench.

Theoretically, the human race should rejoice and benefit immensely as one of the major cost components in our production process goes down in price. Oil is used for energy, so average products should cost less as its input price declines. Oil is also used in transportation, so the cost of moving, say, agricultural products to markets should also decline. Overall, world GDP has to go up with lower oil prices, which increases demand for all products. This together with airlines being able to charge less for flights should also increase demand for flying and for additional aircraft. This is proven by realities in our industry: in 2015, air fares fell, traffic increased substantially and airlines made record profits.

Of course, often there are elements of industry that do not benefit from certain developments. Should scientists discover a cure for cancer, the morticians will suffer as may some hospitals and cancer specialists. The stock market should not, though, decline because of such localized suffering. Obviously, as oil prices fall major oil-producing countries make less money, oil companies record lower profits and banks which loaned them money have a harder time.

All this is overwhelmed by those who benefit. The estimates are that the average American consumer gained $700 because of lower oil prices in 2015, leaving them more money to spend on other goods. It is the same for consumers in western Europe and around the world. Countries such as Japan, India and most European countries benefited immensely from lower oil prices, as did agricultural producers who work in a heavily energy-intensive industry. There are winners and losers with any changes in prices but almost all economists agree that the world overall benefits from lower oil prices.

So how come Wall Street and the Dow Jones index react in an unpredictable way? There are various explanations offered. One is a simple tautology. With lower oil prices the retirement accounts are down. This does not explain anything except that as the Dow Jones is down people's accounts are down. But how oil prices are related to all this is not clear.

Another set of explanations is that low oil prices cause oil companies' stocks, and those of the banks which loaned heavily to them, to come down. That is true, but at the same time the stocks of industries that benefited from lower oil prices, such as airlines, should go up. On average the winners should in this case outnumber the losers.

Another line of reasoning is that emerging markets are getting crushed. This is probably true for some countries which are heavily dependent on oil revenue. For every Venezuela or Nigeria (which in addition to dependence on oil revenue have many of their own particular problems) there is an India which is doing better, spending substantially less on oil imports. Finally, arguments are made that weak oil prices may be a symptom of an underlying weak world economy. This argument has some possible validity, although I do not buy it. Oil prices did not drop because of weakening demand but rather because of supply factors. It is a fact, though, that, as of March, the US has entered the 81st month of its recovery. This makes this the fourth longest of the 34 economic cycles since 1854. The economy has been quite anaemic, although with enough room to continue expanding, and I do not see an imminent recession on the way.

High oil prices have changed our industry profoundly. Many of these changes will not be undone – although in hindsight we might have avoided making them. Some who invested in new technologies will not reap all the benefits they hoped for but this is life in a dynamic industry.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