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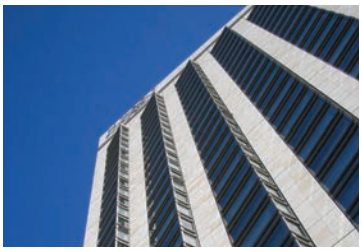

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EDITOR'S LETTER

Fed must tread carefully on interest rates

The US central bank should consider GE's retreat from finance when it meets to discuss borrowing costs.

The US Federal Reserve has signalled strongly that a second interest rate hike could happen this month. While the Fed was expected to increase borrowing costs four times this year, it appears the US central bank has adopted an even more gingerly approach, with just two hikes forecast in 2016.

Minutes released on 18 May from the Fed's April meeting, which members voted 11-1 to keep rates unchanged, highlight worries about the UK's 23 June referendum on whether to leave the European Union and China's management of its exchange rates.

Yet, the Fed's tone regarding the financial markets is optimistic, with members noting the "overall risk sentiment appeared to have improved" since its previous meeting in March.

While talk of rate increases in recent years has largely been premature, the chance of a second rate hike in June, or soon after, is feasible given the US elections in November – better to get the hike in now, and not appear political, than try to do so under a Donald Trump administration. Also, the move is a necessary one, because the Fed has used all the tools in its toolbox – with near zero rates, it cannot cut borrowing costs any lower when the economy does finally start to stutter.

A second interest-rate hike is important because the impact of such a move spreads beyond US borders. By increasing borrowing costs, too fast, too soon, the Fed could tip an already flimsy US economy into a recession that would weaken the global markets. The US has maintained ultra-low interest rates since 2009, so higher borrowing costs, no matter how small the increase, will indeed be a shock to the economy, which grew just 0.5% in the first quarter of this year and 1.4% in the fourth quarter of 2015.

While the move would come during a fairly robust time in aviation, there are areas of concern.

São Paulo-based Gol reported a R$757.1 million ($208.4 million) first-quarter net profit, reversing a R$672.7 million loss in the year-earlier period, but the improved result came after a series of measures, including a reduced delivery schedule "to overcome the recessionary environment" as Brazil's macroeconomic environment "has been negatively impacted by political instability and consequent economic volatility", its chief executive, Paulo Kakinoff, said in an earnings statement.

This forced the carrier to cut its 2016-17 aircraft delivery schedule from 15 units to one. Kakinoff also indicates the airline is in negotiations to reduce its leased fleet by 20 aircraft. Perhaps most concerning is Gol's cash position, which fell 21.1% from year-end 2015.

Under pressure from a slump in the oil and gas industry, as well as a fatal accident in Norway involving one of its aircraft on 29 April, CHC Group filed for Chapter 11 bankruptcy protection in Texas on 5 May. The operator is looking to reduce its fleet of helicopters to 75 from 230 units as part of a broader restructuring that will target more than $2 billion in debt.

The group already has received permission from a US bankruptcy court to return a total of 90 helicopters by July.

Some of these helicopters are on lease from Milestone Aviation, which was purchased last year by Gecas for $1.77 billion, plus the assumption, or payoff, of the helicopter lessor's existing debt.

The situation, no doubt, is a bruising one for Gecas, because the helicopters will be difficult to place in current market conditions, and the upset comes shortly after its expansion into the helicopter sector. However, the US lessor, arguably, is in a better position now to handle the event, following General Electric's (GE) decision in 2015 to divest from the financial services market and to focus on its industrial core. So, in other words, build more engines but shed the credit card receivables.

GE's retreat from finance is in part a response to the Dodd-Frank Act, which deemed companies such as GE too big to fail and in need of increased regulation by the Fed and other regulators. US president Barack Obama signed the act into law in July 2010. The act led to the establishment of the Financial Stability Oversight Council to sniff out and prevent excessive risk shocks to the US economy.

But GE's transformation, through definancialisation, is also a step toward avoiding the repeat of the very process that led the conglomerate to seek a government bailout in 2008. Financialisation of the US economy was also a contributing factor to the 2008 economic crisis and this era of low interest rates.

Jeffrey Immelt, GE's chief executive officer, wants more than 90% of the company's earnings to come from its industrial products and services by 2018.

His crusade to make GE more of an industrial company, and less of highly financialised one, is a journey central bankers should take note of when pondering the next rate hike.

Long-term transformation and structural changes, such as those GE has endured, are needed in order to avoid another decade of slow growth and ultra-low borrowing costs.

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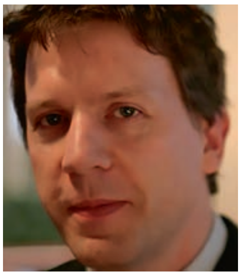

Accipiter promotes Paul Sheridan to MD

Accipiter, a unit of CK Hutchison Holdings, has promoted Paul Sheridan as acting managing director of the Dublin-based lessor.

Sheridan, who joined the lessor in 2015, is also the senior vice-president of risk and capital markets.

Earlier this year, Accipiter closed a $1.2 billion refinancing with 11 banks, covering aircraft purchased in 2014 from three lessors.

The portfolio comprises 41 narrowbody and two widebody aircraft.

Prior to his role at Accipiter, Sheridan served as the senior director of capital markets at Hong Kong Aviation Capital.

Millar joins Stellwagen Group

Howard Millar, former Ryanair deputy chief, will head Stellwagen Capital, a subsidiary of Aviation Finance Company (AFC).

He will also serve as chief operating officer of Stellwagen Group, the holding company of AFC and Seraph Aviation Management.

"We will use innovative and highly efficient structures to raise capital for secured financing of both new and delivered aircraft, and generate significant returns for our investors," says Millar. "The leveraging of my own and the group's outstanding aircraft financing knowledge and experience will have a transformational impact on the industry."

Millar brings "game changing" ability to the group with 23 years' experience in aviation, including raising capital in the public and debt markets, says Douglas Brennan, Stellwagen Group's chief executive.

Stellwagen Capital has announced plans for a $1 billion initial capital raise from institutional investors in Europe and the USA by the fourth quarter of this year.

The company says it expects to raise up to $5 billion from worldwide institutional investors over the next three years.

It plans to list the investment vehicle on the Dublin Stock Exchange via loan notes.

Jim Bell makes partner at Bird & Bird

Jim Bell has been made a partner in the London office of Bird & Bird.

He was selected by *Airfinance Journal* as one of its 2015 Rising Stars and was previously a senior associate in the London office of Allen & Overy.

Bell has experience advising a range of clients on debt financing, export finance, operating leases, pre-delivery payments financing, portfolio sales, tax leasing products, capital markets products, Islamic finance and a range of other matters.

He played a leading role advising BNP Paribas on Transportation Partners' $143.7 million Cofoce-backed bond for the refinancing of 10 ATR aircraft.

Howard Cheung joins Bao Qiao Partners

Howard Cheung, the former chief financial officer of Jetstar Hong Kong and Jetstar Pacific, has joined Hong Kong-based BaoQiao Partners as senior advisor, finance and leasing.

Cheung began his career at KPMG and later held senior financial and operations roles at companies including General Electric, Alcan, Rio Tinto and Amcor.

BaoQiao Partners was previously known as Bridge Partners. The company's aerospace finance and leasing advisory is headed by Dewey Yee.

Vivian Wang leaves CDB Leasing

Wei (Vivian) Wang has left Shenzhen-based CDB Leasing, sources indicate.

Wang worked as the company's general manager of aviation.

CDB Leasing was unavailable for comment at the time of press.

Airfinance Journal's Fleet Analyst indicates that CDB Leasing has a fleet of 134 aircraft.

UKEF promotes Gordon Welsh

UK Export Finance (UKEF) has promoted Gordon Welsh, the former head of aerospace as the head of its new business group.

He will still be involved in aviation but now has extra responsibilities. He will now lead the department's underwriting, product development and new business.

Welsh joined the export credit agency in 1998.

A spokesperson for UKEF told *Airfinance Journal* that a successor has not yet been appointed.

Alaska Air Group makes leadership change

Alaska Air Group has promoted two senior leaders.

Ben Minicucci has been appointed president and chief operating officer (COO) at Alaska Airlines. He has served as executive vice president and COO at Alaska Airlines since December 2008.

Meanwhile, David Campbell has been appointed chief executive officer (CEO) at regional sister airline Horizon Air.

Campbell joined Horizon Air as president and COO in July 2014. Prior to joining the airline, he served a VP of maintenance and engineering at JetBlue.

Both of the appointments are effective immediately.

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Shenzhen Airlines considers bond market

Shenzhen Airlines is considering tapping the domestic bond market for aircraft financing, according to an airline source.

The airline has previously issued bonds for general corporate purposes, but it has not yet done so to finance aircraft directly.

The source believes the Chinese airline could potentially issue one-year bonds with a coupon below 3%.

Shenzhen Airlines is also considering bank loans, the source indicates.

"We may get some money not only from the [finance] leasing: we may find some money from the banks directly and have our aircraft remortgaged."

Airbus prices €1.5bn bond

The Airbus Group has made its market debut into the dual-tranche bond market with a €1.5 billion ($1.71 billion) offering.

BNP Paribas, Credit Agricole Corporate Investment Bank, Deutsche Bank, and Mitsibushi UFJ Financial Group are the joint bookrunners on the offering. BBVA, Hsbc, Morgan Stanley, Natixis and Unicredit were the bookrunners.

The 10-year A tranche priced at 42 basis points over mid-swaps, from initial price thoughts (IPTs) in the 55 bps area. It carries a coupon of 0.875%.

The 15-year B tranche priced at 60 bps from IPTs in the 75 bps area. It carries a coupon of 1.375%.

The bond priced at 99.278% of par value. The person added that the books closed in excess of €3.5 billion ($3.99 billion).

ACG increases revolver by $555m

Aviation Capital Group (ACG) has increased a senior unsecured revolving credit facility to $1.5 billion.

The lessor extended the deal by $555 million and extended the maturity date by one year to 26 April 2020.

BNP Paribas, Citi and Mizuho Bank all acted as joint lead arrangers.

JP Morgan acted as administrative agent and Royal Bank of Canada acted as syndication agent.

Together with another four-year senior unsecured facility, ACG now has $1.72 billion of revolving commitments from 23 institutions.

The lessor wrote in its 2015 financial statements that its monthly interest payments on these facilities range between 1.9% and 2.1%.

As of 31 December, 2015, $1.165 billion was available and $485 million was outstanding on the facilities.

American prices $829m EETC

American Airlines has priced $828.6 million of enhanced equipment trust certificates (EETC), due 2028.

The notes consist of a $567.36 million AA tranche and a $261.28 million A tranche.

The AA tranche carries a coupon of 3.20% with a loan-to-value (LTV) of 38.6%.

The A tranche carries a coupon of 3.65% with an LTV of 56.4%.

The notes are secured against 18 narrowbody and four widebody aircraft. The collateral pool includes 11 Airbus A321-200s and seven Boeing 737-800s, some of which delivered in 2015 and the rest of which will deliver between May and August 2016; two 777-300ERs that delivered in February and March 2016; and two 787-8s that are scheduled for delivery in May 2016.

Credit Suisse and Deutsche Bank are joint structuring agents and lead bookrunners.

Citigroup, Goldman Sachs and Morgan Stanley are joint active bookrunners.

Bank of America Merrill Lynch, Barclays, JP Morgan, BNP Paribas and Credit Agricole are joint bookrunners.

US Bancorp is acting as a co-manager in the transaction.

ICBC Financial Leasing prices tri-tranche bonds

ICBC Financial Leasing (ICBC FL) added a 10-year term tranche priced at 3.625% to its US dollar-denominated bond offering with proceeds from the notes to be used to fund the acquisition of assets.

The Chinese operating lessor came to the market with the $1.3 billion proposed notes offering as part of its existing $5 billion medium term notes (MTN) programme, which was rated last November.

Fitch Rating has assigned ICBC Financial Leasing a proposed long-term senior unsecured notes of "A". The rating agency said the senior notes will have a tenor between three and five years.

The three-year tranche priced at 2.375% with a total issue size of $500 million, reoffered at 99.753%, yielding 2.461%. The spread above comparable US Treasury securities was 157.5 basis points (bps).

The five-year $500 million second tranche priced at 2.75%, reoffered at 98.196%, yielding 2.924% at US Treasury plus 170 bps.

The final $300 million tranche, with a 10-year maturity, priced at 3.625%. The tranche reoffered at 99.875%, yielding

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3.761% at a spread of US Treasury plus 200 bps.

ICBC International Securities, ICBC Standard Bank, Goldman Sachs, Morgan Stanley, Hsbc, Australia and New Zealand Banking Group, Citigroup Global Markets, Merrill Lynch International and Wells Fargo Securities, were joint bookrunners and lead managers of the deal, according to the term sheet.

Citicorp International is the trustee in the transaction.

The senior unsecured notes are expected to be rated 'A-' by S&P and 'A' by Fitch.

Boeing prepares $1bn unsecured notes transaction

Boeing is set to issue $1 billion of senior unsecured notes, according to an a regulatory filing.

The offering will consist of three classes of notes, due in 2023, 2026 and 2046.

Fitch Ratings has assigned long-term ratings of "A" to the issuance.

Boeing says that it will use the proceeds for general corporate purposes. However, Fitch states that the issuance could be considered a refinancing of $1 billion of notes maturing later this year, $500 million of which was issued by Boeing and $500 million of which was issued by its subsidiary Boeing Capital.

Bank of America is the lead left bookrunner across all three classes of notes.

For the 2023 notes, the other joint bookrunning managers are Barclays, Wells Fargo, Credit Agricole Corporate Investment Bank, Santander and US Bancorp.

For the 2026 notes, the other joint bookrunning managers are Goldman Sachs, Morgan Stanley, BNP Paribas, Deutsche Bank and RBC Capital Markets.

For the 2046 notes, the other joint bookrunning managers are Citi, JP Morgan, Mizuho Securities, MUFG and SMBC.

Norwegian prices $349.12m EETC

Norwegian Air Shuttle (NAS) has priced a $349.125 million enhanced equipment trust certificates (EETC) offering.

The EETC, called NAS 2016-1, will be used to finance 10 new Boeing 737-800s. The first three aircraft delivered in March and April 2016 and the remaining seven aircraft will deliver between May and September 2016.

The $274.315 million class A certificates, due on May 10 2028, were given ratings of Baa3 and A from Moody's and Fitch, respectively.

The 12-year tranche has a weighted average life (WAL) of nine years and an initial LTV of 55.1%. The tranche carries an interest rate of 4.875% and priced at par.

The $74.81 million class B certificates, due in November 10 2023, were given ratings of "Ba3" and "BB-" from Moody's and Fitch respectively. The seven-year tranche has and an initial LTV 69.3%. It carries an interest rate of 7.500% and priced at 97.883%.

Morgan Stanley arranged the deal and Natixis provided the liquidity facility.

American closes $1 bn term loan facility

American Airlines has closed a $1 billion seven-year term loan facility, according to a regulatory filing.

The airline will use $588 million to repay the "B2" tranche of term loans that it agreed in May 2013. The rest will be used for general corporate purposes.

Barclays is acting as administrative agent and collateral agent.

The facility also provides for a revolving credit facility that may be established in the future.

The loans are secured against aircraft parts, but American has the option to add or remove certain assets from the collateral.

Loans under the facility carry interest at an index rate plus an index margin, or 275 basis points above Libor if American chooses that option.

Alaska Air to fund Virgin America purchase with 737-backed financing

Alaska Air will raise around $2 billion of debt secured against Boeing 737 aircraft in order to fund the acquisition of Virgin America, according to its chief executive.

The airline plans to acquire Virgin America for a total equity value of $2.6 billion.

On a quarterly results call with investors, Alaska's chief Bradley Tilden said that the company will raise debt against the 737-800s and -900s in its fleet. He explains that the carrier can achieve better pricing than with unsecured debt if it uses the young narrowbodies as collateral.

Tilden adds: "We are able to do unsecured, we just like the pricing frankly better on the secured borrowing. [The] 737-800 and 737-900 that we have are very new. We've got over 70 of those really desirable aircraft. They're unencumbered, and it's just a great source of borrowing."

The combined airline will have a fleet of around 280 aircraft with an average age of 8.5 years.

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Easyjet to tap sale and leaseback market for A319s

Easyjet plans to complete sale and leaseback financing on approximately 10 mid-life Airbus A319s per annum during the next five years, according to the airline's group treasurer.

In an interview with *Airfinance Journal*, Mike Hurst said the final terms of the placement plan will depend on market conditions.

"Obviously, what we're not going to do, is sell them into a market where we're not actually achieving attractive rates. Equally, if we're see attractive rates and there might be an opportunity to do more, then we may well do more. But I think the planned run rate at the moment is about 10 per annum but there's flexibility within that."

The sale and leaseback financing will involve six- to 10-year-old aircraft assets, he says.

Easyjet has not completed a sale and leaseback transaction since 2013 and "we've not tested the market since then," says Hurst.

"The idea is to lease them out between three and five years, so you get a nice profile coming up so we can, if we choose to do so, we can exit the aircraft at year 16. But that's a planning assumption, not an absolute fleet policy."

ACG sells 737-800s to Chinese lessor

Aviation Capital Group (ACG) has sold a two-aircraft deal, on lease to Shanghai Airlines, to China's SPDB Financial Leasing, according to a source close to the deal.

The new Boeing 737-800s (MSNs 42152 and 42153) are on 12-year leases structured through Tianjin's free trade zone.

"ACG made the leasing agreement with Shanghai Airlines structurally then transferred this to SPDB Financial Leasing upon delivery," the source tells *Airfinance Journal*, adding that the deal closed in April.

Baker & McKenzie acted for SPDB Financial Leasing. Clifford Chance acted for ACG.

CMB closes 777-300ER debt facility

CMB Financial Leasing has closed a refinancing debt facility covering two Boeing 777-300ER aircraft.

The aircraft are now on long-term operating lease to the Taiwanese flag carrier China Airlines.

Australia and New Zealand Banking Group (ANZ), DVB Bank and Landesbank Hessen-Thueringen (Helaba) jointly arranged the senior loan facility, which covers the remaining term of the leases.

William KK Ho & Co acted for CMB as borrower's counsel. Allen & Overy acted for the banking group.

Emirates seals A380 sale and leaseback deal

Emirates has closed a structured sale and leaseback deal, covering four Airbus A380s. The aircraft involved are a mixture of 2013- and 2016-built widebodies, says Investec. Two units (MSNs 123 and135) were built in 2013, while the other aircraft (MSNs 205 and 209) were manufactured in 2016.

Investec acquired the 2013-vintage aircraft from Stellwagen Finance, the holding company for Aviation Finance Company (AFC). The 2016-vintage aircraft are new deliveries from Airbus.

Investec acted as the sole arranger for both the financing and the leasing elements of the transaction. The operating leases have a tenor of 12 years.

Financing has been provided by banks and institutional investors across the Middle East, Europe and Asia. Investec has also put in place Islamic financing on two of the deliveries.

Clifford Chance acted for the lenders. Pilsbury acted for the airline on MSNs 123 and 135, while Bird & Bird acted for the airline on MSNs 205 and 209.

Shenzhen choses finance leases for narrowbody expansion

Shenzhen Airlines has mandated lessors to provide finance leases for eight aircraft delivering this year, according to an airline source.

The Chinese airline has arranged finance leases for six Airbus A320-200s and two Boeing 737-800s.

The source said that the airline has not signed the lease contracts yet, as it typically does so only around one month before delivery.

Shenzhen Airlines issued an request for proposals for financing in February this year. It plans to issue another request for preposal in September 2016 for the financing of 11 further aircraft, which could include two or three widebodies.

The source says the financiers mandated on the RFP are Chinese lessors.

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The airline now operates a fleet of 180 narrowbodies. It hopes to expand to 230 aircraft over the next five years, though only a small proportion of these are likely to be widebodies.

J-Air pays cash for Embraer 190

J-Air has paid cash for its first Embraer 190 delivery, a company source has confirmed to *Airfinance Journal*.

The JAL subsidiary took delivery of its first E190 earlier this month. The aircraft was the first of its type to be introduced into Japan.

JAL Group is now using cash to pay for all aircraft deliveries due to its high cash reserves.

The source added that J-Air may take delivery of another E190 later this year but the plan has not been finalised yet.

Malaysia Airlines to lease A350s

Malaysia Airlines plans to add two new Airbus A350-900 aircraft on lease from Air Lease (ALC).

The widebodies, which will be powered by two Rolls Royce Trent XWB-84 engines, will deliver to the airline on 12-year leases in 2018.

ALC and Malaysia Airlines signed a lease agreement for four A350-900s in September 2015. Malaysia Airlines has now exercised its option on the final two aircraft.

The airline's chief executive officer Christoph Mueller says: "The additional two Airbus A350-900s will complement the existing four that is on order to reach a critical fleet size, allowing standby aircraft for any scheduled maintenance and enabling future network expansion."

Air France closes dual currency-backed Jolco

Air France has closed a Japanese operating lease with a call option (Jolco) on one new Boeing 777-300ER (MSN 61707), according to a source close to the deal.

The aircraft was financed by Japanese yen equity and a 12-year euro-denominated amortising senior commercial loan.

Credit Agricole Corporate Investment Bank acted as overall arranger, facility agent and security trustee. CIC, DBS and CA-CIB acted as debt arrangers and lenders.

Watson Farley & Williams acted for the lenders.

Finnair closes Jolco financing for an A350

Finnair has closed a €128 million ($143.7million) Jolco structure to finance its fifth Airbus A350-900 delivery.

BNP Paribas acts as the overall arranger of the transaction, according to the airline. The aircraft, MSN 23, delivered on 29 April.

Winston & Strawn acted for the airline; Clifford Chance acted for the senior lenders; K&L Gates acted for the junior lenders; and Nishimura & Asahi acted for the equity, according to sources familiar with the matter.

The transaction is part of Finnair's ongoing long-haul fleet renewal programme, comprising 19 new A350-900s scheduled for delivery through 2023. Finnair closed a Jolco financing for its fourth A350 in April. CA-CIB arranged the transaction.

The airline has a fleet of 12 Embraer E190s, 11 Airbus A321s, 10 A320s, nine A319s, eight A330-300s, five A340-300s and five A350s, according to *Airfinance Journal*'s Fleet Analyst.

Fly Leasing on target for $400m sale and leasback deals in Q2

Dublin-based Fly Leasing says it will close $400 million-worth of sale and leaseback transactions by the end of the second quarter.

Speaking on a first-quarter earnings call, Colm Barrington, chief executive of Fly said the lessor has a $750 million acquisition target this year.

"There's still a lot of capacity out there in the market. It's well bid in many cases, but there are transactions that we are finding attractive enough to put into Fly's portfolio," he adds.

Chorus Aviation to use ECA funding for CRJ900s

Chorus Aviation has received export credit agency (ECA) commitments for five Bombardier CRJ900s on firm order.

Export Development Canada (EDC) has agreed to finance up to 80% of the purchase price for the aircraft, according to an announcement made during Chorus' quarterly results statement.

EDC has provided support for Chorus, the holding company of Canadian regional airline Jazz Aviation and leasing subsidiary Jazz Leasing, in the past: as of 31 December 2015, Jazz Aircraft Financing had 31 separate 12-year loan agreements with EDC, to finance 27 Q400s and four PW150A engines.

The total financing payable on that date was $573.3 million.

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NEWS

Secondary Market Deals

Wings Capital buys A321 from a Japanese lessor

Wings Capital Partners Investments, a US-based aviation investor, has acquired an Airbus A321-200 from an unidentified Japanese lessor.

The aircraft has been placed under operating lease with Iberia. A source familiar with the deal would not disclose the MSN of the aircraft, but said that the unit carries a five-year lease term.

The transaction was arranged by UK-based remarketing agent ALM Lease.

All parties used in-house legal counsel on the transaction.

Aercap moves out of regional aircraft with CRJ900 sales

AerCap has exited the regional market after completing the sale of four Bombardier CRJ900s.

The Dublin-based company announced the sale as part of its first quarter results, ended 31 March. The four CRJ900ERs were sold to Castlelake, sources say. The 2007-vintage aircraft are on lease to US carrier SkyWest Airlines.

The 90-seat units were placed in 2010 by Abu Dhabi-based investment firm Waha Capital, and were later subleased to Vietnam's private airline Air Mekong.

AerCap and Castlelake were unavailable for comment.

The move follows the sale of 25 ATR 42/72 units by Air Lease late last year to Nordic Aviation Capital as the Los Angeles-based lessor focuses on mainline aircraft.

Over the past year SMBC Aviation Capital has also exited the 50-seat and 70-seat market with the sale of its Embraer ERJ-145 and E170 fleets. SMBC Aviation Capital has only four E190s as part of its 439 current aircraft portfolio.

During the first quarter, AerCap completed the sale of a total of 19 aircraft, of which four units were single-aisle Airbus models. The Dublin-based company sold three A320s and one A321 aircraft. It also sold three Boeing 737-800s, one 737 Classic, a pair of 747-400s, two 757-200s and three 777-200ERs during the January-March period.

The lessor also sold one A330-300, one A340-300, two 737 Classics, one 757-200 and one 777-200ER from its managed portfolio.

Elix Aviation adds 16 Q200s

Elix Aviation has purchased 16 Bombardier Q200s from Castlelake, according to a source familiar with the matter.

The aircraft are operated by US airline Commutair. The carrier operates a fleet of 16 Q200s, five Q300s and two Embraer E145-145s according to *Airfinance Journal's* Fleet Analyst.

Castlelake paid for the aircraft using its $350 million revolving warehouse facility, the source indicates.

Milbank acted for Elix Aviation, Clifford Chance acted for the lenders under Elix's warehouse facility, McAfee & Taft acted for Castlelake and Katten Muchin Rosenman acted for CommutAir.

Hong Kong Airlines leases used A330s from Awas

Hong Kong Airlines has agreed to lease two used Airbus A330-300s from Awas, according to a statement from the Irish lessor.

Airfinance Journal's Fleet Analyst shows that the aircraft were manufactured in 2009. The aircraft were previously owned by Singapore Airlines, say sources.

Spicejet leases Q400 from NAC

Indian airline Spicejet has taken delivery of one Bombardier Q400 (MSN 4406) on lease from Nordic Aviation Capital (NAC), according to the Danish lessor.

The unit is a 2012-vintage aircraft, *Airfinance Journal*'s Fleet Analyst shows.

Kaye Scholer acted for the airline and NAC used in-house counsel for the transaction.

Avmax buys more CRJ200s

Avmax continues to expand its fleet with Bombardier CRJ200 aircraft.

The Calgary-based aircraft trader has added two CRJ200s and four CF34-3B1 engines to its portfolio.

Aircraft, MSN 7784, as well as the four engines, were purchased from Cimber Air-Leasing. According to *Airfinance Journal*'s Fleet Analyst, the aircraft was built in 2003.

The 2000-vintage aircraft, MSN 7419, was bought from Danish airline Cimber Sterling, as the Fleet Analyst shows.

Avmax announced the purchase of three aircraft (MSNs 7114, 7128 and 7391) in May. It also bought a CRJ200 (MSN 7661) from Yukai International in April.

Fly Leasing offloads A340

Operating lessor Fly Leasing sold an Airbus A340 during the first quarter of this year.
The sale of the 1993-vintage A340-300 was completed in February, but was not part of the 2015 contracted sales that included 57 aircraft, according to the lessor.

According to *Airfinance Journal*'s Fleet Analyst, the ex-Air France unit was purchased by the lessor's manager and servicer, BBAM, in 2005.

Fly sold a total of 10 aircraft in the first quarter of this year for a $5.1 million gain, BBAM chief executive Steve Zissis said in an earnings call.

An additional eight units, with an average age of 17 years and three-year lease term, are planned to be sold in the second quarter. Four aircraft, including two older Boeing 737s, one 767 and an Airbus A320 have already been announced.

Zissis says Fly expects to record as much as $5 million in gains over the current quarter aircraft sales.

Fly's chief executive Colm Barrington said during the call, the lessor is on course to meet its acquisition requirements in 2016, with $750 million allocated to the purchase programme.
In 2015, Fly spent $629 million worth of asset acquisitions when it acquired 10 aircraft. This followed the year 2014 when the lessor purchased 22 aircraft for $952 million.

NEWS

Secondary Market Deals

Automatic buys British Airways 767-300ER for part out

Automatic, through its Classic 500 II investment vehicle, has completed the purchase of another Boeing 767-300ER aircraft from British Airways.

The 23-year old aircraft, MSN 25828, was purchased without engines, says Automatic. The aircraft will be dismantled and the inventory will be sold in the spare parts market, it adds.

The transaction follows the acquisition of another 1993-vintage 767-300ER, MSN 27140, from British Airways last year.

Last year, Automatic sold one 1993-vintage 767-200ER aircraft, equipped with CF6-80C2B4F engines, to AerSale. Through its joint venture with Infinity Aviation, it has also sold a 1996-vintage 767-300ER with CF6-80C2B7F engines and winglets unit to DHL Aviation.

UIA adds pair of 737-800s

Ukraine International Airlines (UIA) has taken delivery of two used Boeing 737-800s on lease from Aercap.

According to *Airfinance Journal*'s Fleet Analyst Database, the aircraft, MSNs 30628 and 28614, were built in 2001 and 2000, respectively.

UIA's fleet now consists of 30 Boeing narrowbodies and five Embraer 190s.

Canaryfly adds ATR 72 from NAC

Canaryfly has taken delivery of one ATR 72-500 (MSN 570) on lease from Nordic Aviation Capital (NAC).

MSN 570 is the second aircraft NAC has on lease to Canaryfly. *Airfinance Journal*'s Fleet Analyst shows that the unit is 1998 vintage and that the other NAC aircraft with the Spanish airline, MSN 226, is a 1991-built ATR 42-300.

Firststar sells A320 to Finnair's leasing division

Firststar Aviation, a subsidiary of Fifth Street Finance, has sold a 2002-built Airbus A320 to Finnair Aircraft Finance Oy, the aircraft leasing division of the Finnair Group.

The aircraft is on long-term lease to Finnair expiring in 2017. Firststar bought the aircraft in February 2014.

Since its inception in 2013, Firststar Aviation has invested in 11 mid-life aircraft and has traded five aircraft. Its fleet consists of Boeing 737-800, A320 and 767-300 aircraft.

Awas buys A320s from another lessor

Awas has bought two Airbus A320s on lease to Spirit Airlines and Volaris.

Both the aircraft were bought from another lessor, says Awas.

According to *Airfinance Journal*'s Fleet Analyst, Awas already has three A320-family aircraft on lease to Spirit and one A320-200 on lease to Volaris.

Amazon agrees second 767-300 lease deal

Amazon has agreed a leasing deal with Atlas Air Worldwide (Atlas) for 20 Boeing 767-300 aircraft.

The 10-year agreement states that Atlas, a cargo and charter airline and aircraft lessor, will operate the aircraft on a crew, maintenance and insurance (CMI) basis and will also dry lease some aircraft.

The operations are expected to begin in the second half of this year and reach full service in 2018.

Atlas has also granted Amazon the right to acquire up to 20% of its common shares over five years, with the right to buy an additional 10% of its common shares over seven years.

This is the second major leasing deal that Amazon has closed this year. In March, the company reached a deal with Air Transport Services Group (ATSG) for the lease of 20 767 cargo aircraft.

Morgan Stanley is serving as financial advisor to Atlas while Cravath, Swaine & Moore is acting as legal advisor.

Alafco acquires four narrowbodies from BOC Aviation

Alafco has purchased a four-aircraft portfolio from BOC Aviation.
The aircraft include two Airbus A320s, MSNs 6426 and 6480, which are on lease to Beijing Capital Airlines and two Boeing 737-800s, MSN, 39065 and 39066, on lease to Jet Airways.

Aerfin adds more Embraer aircraft to portfolio

Aerfin has completed the acquisition of two ex-Estonian Air Embraer 170 aircraft from SMBC Aviation Capital.

The end-of-life company purchased a 2005-vintage unit, MSN 17000100. The deal follows the recent acquisition of another E170, MSN 17000093, also manufactured in 2005.

According to *Airfinance Journal*'s Fleet Analyst database, both units were purchased by SMBC Aviation Capital from Jetscape in February.

Allegiant buys four A319s from Cebu Pacific

Allegiant Travel has signed a sale agreement with Cebu Pacific for the purchase of four Airbus A319 aircraft.

Delivery of the four aircraft to Allegiant is scheduled from 2017 to 2018, says Cebu Pacific.

Cebu Pacific's fleet consists of 57 aircraft, including seven A319s, 36 A320s, six A330s and eight ATR 72-500s.

Speaking about the agreement, Jude Bricker, Allegiant Travel chief operating officer, said: "By the end of 2016, Allegiant will be a majority Airbus carrier, as measured by available seat miles. This agreement to purchase additional aircraft from Cebu Pacific is an important step in our long-term transition to a single fleet type."

CARGO CONVERSIONS

Appraisers value 737-800 conversion models

Olivier Bonnassies asks the appraiser community: at what value point does it make sense to convert a Boeing 737-800 passenger aircraft into a freighter?

A 1999-built 737-800 (MSN 29121) will be the first of 20 aircraft to undergo Miami-based Aeronautical Engineers' (AEI) passenger-to-freighter conversion programme as part of an agreement with operating lessor Gecas.

The 737-800, which is equipped with CFM56-7B27 engines, was on lease with Corendon Airlines. It previously had been operated by Air Berlin.

The aircraft had clocked 25,630 cycles and 62,932 hours by March 2016, according to the *Airfinance Journal* Fleet Analyst database.

Gecas says the aircraft will be equipped with a rigid cargo barrier and have 12 main-deck pallet positions, 11 full-height containers, plus a one-half width container. The 737-800SF has a maximum structural payload of 23,500kg (51,800lb) and a maximum range of more than 2,100 nautical miles.

The conversion and the subsequent certification process will take about a year to complete, according to Gecas. The lessor will add another 737-800 into the programme later this year.

Although details have yet to emerge about the cost of the programme, investor appetite for the converted freighter appears to be growing, says a leasing source.

Appraiser firms have sightly different opinions about the value point at which it makes sense to convert a 737-800 passenger aircraft into a freighter.

Gueric Dechavanne, Collateral Verifications' vice-president of commercial aviation services, says the half-time current market value (CMV) for a 1999-vintage 737-800 is about $18 million. "Add $4.5 million for the conversion and this would put the aircraft around $22.5 million as a converted freighter," he adds.

He says the best candidates for conversion are aircraft with build years between 1998 and 2001 because they are the "least attractive" passenger units. Those vintage aircraft may also be due for maintenance checks, making the initial purchase prices "more attractive", he adds.

Angus Mackay, ICF International's principal, has a $15 million CMV for a 17-year-old model. He believes 737-800s manufactured between 2001 and 2008 are attractive candidates for conversion, "as the early models are too close in age to the 737 Classics".

MBA's chief operating officer David Tokoph also says that a 1999-vintage model commands a $15 million valuation. He expects the half-life CMV to drop to $14 million when the programme is approved.

Tokoph anticipates the 1998 to 2000 vintages to be the "most likely" candidates for conversion in the next few years.

George Dimitroff, Ascend's head of valuation, expects CMVs to be in the region of $14.8 million for a 1999-built model, with corresponding market lease rates in the $220,000-a-month range.

Dimitroff says the CMVs reflect "strong demand" for the 737-800 passenger units.

"In the initial phase of the programme, early-built models with the lowest CMVs will make the best candidates for conversion. But in the fullness of time, there appears to be no barrier to any aircraft being converted to special freighters," he says.

Olga Razzhivina of Oriel has a value range of $12 million to $12.5 million for 1997- to 1999-vintage models, adding that the units heading for conversion are "often less than half-life", especially on the airframe.

Older vintages will be the "first to go", she says, because the rest of the fleet "might still be in leases, especially with the current tendency to extend".

High maximum take-off weight (MTOW), high-thrust 737-800s are usually preferred candidates for conversion, although "these increases can be purchased", adds Razzhivina.

However, given the limited supply of 737-800s, "whatever comes available will have to do", she says.

IBA Group has values between about $13 million and $14 million for early vintages in a half-life condition with winglets, engines and MTOW defining the breadth of the value.

"Buyers would be looking for a number that is lower than this to convert from. We would ascribe that a decent aircraft that is ready for heavy airframe check but reasonable engines to be converted to freight would need to be between $10 million and $11 million," says IBA Group's chief intelligence officer Stuart Hatcher.

He adds: "Part-out companies are looking at a number much lower than this but then the engines would not be a mid-time condition with respect to time remaining on wing."

Rikard de Jounge, Avitas' vice-president of asset valuation, believes all vintages are suitable for the conversion programme.

"What will be the driving factor is the grand total ramp-ready cost, which will vary from tail to tail," he explains.

"The passenger-to-freighter cost, the cutting in a door, as well as the installation of the cargo loading system and the barrier, will be about the same for all conversions. But each aircraft will require additional maintenance and possibly engine overhauls. That will be the differentiator between what constitutes a good passenger-to-freighter candidate and what is not."

Hatcher expects the 1999-2002 builds to start the process off, and this will "leak into the 2005s once these aircraft return from lease."

"Provided aircraft have been operated on longer sectors, the older ones should be okay; however, short-hop aircraft will need to be much younger to make it work. Flight cycles will define it," he says.

As for monthly lease rates, Dechavanne says 737-800SFs should sit between a similar vintage 737-400F or 757-200F, which command lease rates of about $150,000 and $200,000, respectively.

Based on his converted CMV, a present value analysis suggests a lease rate of about $205,000 a month for the conversion with a 10-year lease attached.

"Although this is right in line with the 757, the 737 will cost the operator about half in maintenance [costs] and will also be more fuel efficient, which could justify the higher lease rate," he adds.

"The initial cost of the aircraft will, of course, play a big role in what lessors and investors are able to achieve in terms of market lease rates," he says.

Tokoph anticipates lease rates in the $170,000 to $200,000 range. He believes that demand will be limited, outside of Gecas, in the first few years because of the cost of the initial 737-800 purchases, the conversion cost, as well the current suitability of the 737-400SF.

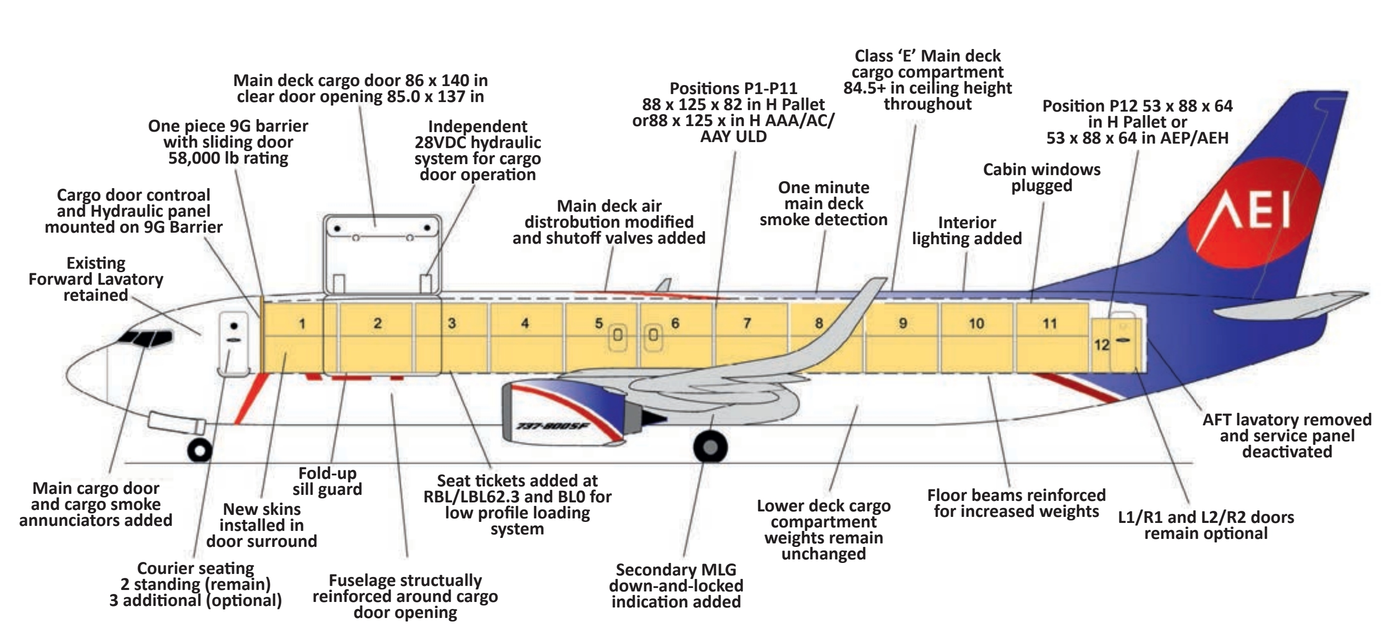
Razzhivina expects lease rates of about $200,000 a month, noting that the 737 Classic freighters are "rather popular" with operators.

Meanwhile, Mackay stresses an imbalance between supply and demand. "Lessors want $200,000 or more, but operators still want $175,000 or less," he says.

Hatcher says converted aircraft need to be in the region of $200,000 for the earliest models.

"For the younger models you would need to be up at $260,000 to $270,000 a month. This can change considerably, though, as we know demand is strong but there aren't any in service. This may swing by 10% to 20% either way if demand remains strong or drops away."

737-800SF CONVERSION DATA



WEIGHTS

	Heavy Gross Weight
MTW*	Up to 174,900 LB Max (79,333 kg)
MTOW*	Up to 174,200 LB Max (79,016 kg)
MZFW*	Up to 138,300 LB Max (62,732 kg)
MLW*	Up to 146,300 LB Max (66,361 kg)
BEW**	86,300 LB Est (39,145 kg)
Total Aircraft Payload***	Up to 52,000 LB Max (23,587 kg)
Fuel Capacity	6,875 USG (26,022 L)

*Aircraft as-delivered weights **Typical BEW after conversion, depends on original aircraft configuration ***Typical Max Payload, depends on aircraft OEW and MZFW

VOLUMES

Main Deck Usage Volume	
11 ULD's - 88"x125"x82"H 1 ULD - 53"x88"x64"H	5,012 Ft^3 (142m^3)
11 Netted Pallets 1 ULD - 53"x88"x64"H	4,840 FT^3 (137.0 m^3)

Source: Aeronautical Engineers

COVER STORY

Delta's order: what next for the CSeries?

Now that the dust has settled on Delta Air Lines' order for up to 125 CSeries aircraft, the manufacturer still has to convince carriers of the programme's value, and fight claims of state aid. Joe Kavanagh reports.

A sigh of relief could be heard from Bombardier's commercial headquarters in Montreal, in late April, after Delta announced its much-awaited firm order for 75 CS100s, with purchase options for a further 50.

Delta has the option to upsize a number of the aircraft into the larger CS300.

The order was a much-needed boost for Bombardier and its CSeries programme. The manufacturer had been in a tough spot because of the various problems afflicting its programme, which consists of the CS100 and the CS300, both of which are clean-sheet designs.

The programme has still not attracted large orders, its entry into service has been delayed multiple times and it is billions of dollars over budget. Questions of state support were also raised when the government of Québec announced a $1 billion equity investment into the CSeries programme in November.

A recent flurry of orders in the past few weeks may be about to turn Bombardier's fortunes around. In February, Air Canada revealed a letter of intent for 45 CS300s, with 30 options. Two weeks before Delta's announcement, Latvian carrier airBaltic converted seven of its purchase options into firm orders.

But while the latest announcements are undoubtedly good publicity for the CSeries, the true significance of the Delta order will depend on how many more orders it brings in. For the programme to succeed commercially, Bombardier needs to build on the momentum created by recent orders to bring home more contracts.

Meanwhile, there are still questions about when the programme will break even, if ever, and rival manufacturer Embraer is protesting loudly about the state support that it believes Bombardier has received from the Canadian government.

And in February, one of the largest orders for the CS300 was thrown into doubt when Republic Airways filed for Chapter 11 bankruptcy. At the time of writing, it is unclear how the proceedings will affect the 40 aircraft that the US regional carrier has on order.

More orders to come?

Speaking to *Airfinance Journal*, Rob Dewar, the CSeries programme's general manager, refers to the Delta deal as a "huge change in the momentum of the whole programme".

Importantly, the announcement takes the number of firm orders for the CSeries to 325 above Bombardier's target of at least 300 by the time of entry into service.

Although Dewar did not go into detail about which potential customers Bombardier is speaking to, or which regions of the world they are from, he does say that the Delta announcement was a boost to the CSeries' appeal. He adds that the news has sped up

CSERIES FIRM ORDERS SO FAR

Customer	CS100	CS300	Notes
airBaltic	-	20	
Air Canada	-	-	Air Canada's LOI includes 45 firm orders for the CS300. Bombardier expects to sign a firm order this quarter.
Al Qahtani / SaudiGulf Airlines		16	
Braathens Aviation	5	5	
Delta Air Lines	75	-	Delta has options to convert some aircraft into CS300s
Falcon Aviation Services	-	2	
Gulf Air	10	-	
Ilyushin Finance	-	32	
Iraqi Airways	-	5	
Korean Air	-	10	
Swiss International Air Lines (Lufthansa subsidiary)	20	10	
Lease Corporation International	3	17	
Macquarie AirFinance	-	40	
Odyssey Airlines	10	-	
PrivatAir	5	-	
Republic Airways	-	40	The airline has entered Chapter 11 bankruptcy proceedings and it is unclear what impact this will have on the order.
TOTAL	128	197	

Source: Bombardier

“I think, historically, Bombardier hasn’t been willing to be malleable on pricing.”

David Tokoph, chief operating officer, Morton Beyer and Agnew

some of Bombardier’s sale campaigns.

Dewar says: “As soon as we announced this order, we had congratulations from all our suppliers, who were very excited in the programme, as they had invested very heavily [in the programme] as well. Other customers that were engaged with us accelerated their discussions with us. Other people that weren’t looking [at the CSeries] called us and said, ‘We really need to take another look at this aircraft’.”

The market is watching to see if more high-profile customers make similar announcements soon. Bombardier will be hoping that an order from an airline as large and reputable as Delta will prompt others to follow suit.

However, David Tokoph, chief operating officer at Morten Beyer and Agnew, says that simply having Delta on its order book will not be enough on its own to create more orders for Bombardier. He points out that Delta is not the first major carrier to have ordered the aircraft.

He says: “Swiss is a well-respected carrier and they are the launch customer.”

Tokoph adds: “I think, historically, Bombardier hasn’t been willing to be malleable on pricing.”

He says that pricing the CSeries competitively is what will most likely bring in more orders for the manufacturer.

What may help Bombardier is how vocal Delta executives have been in their praise for the economics of the new aircraft. Dispelling the theory that Delta placed the order mainly because of a heavily subsidized sale price, airline executives said at a press event that they ordered the aircraft for its technical specifications.

Greg May, senior vice-president of supply chain management, said that Delta had “put the aircraft through its paces” and liked the CSeries’ efficiency and passenger comfort. Daniel Pietrzak, managing director of fleet management, also mentioned the jet’s reliability.

But, however good the efficiency savings are, there are other factors at play that have already dissuaded some potential customers.

For example, several operating lessor chief executive officers have said publicly that they are not yet sold on the CSeries.

Aengus Kelly, Aercap’s chief executive officer, said in May he did not intend placing an order for the aircraft. Citing a small customer base, Kelly expressed doubts about the aircraft’s investment appeal. He said: “That airplane just doesn’t have a customer base that we think will retain its residual value.”

Ed Bastion (left), CEO of Delta Air Lines, shakes hands with Fred Cromer, president of Bombardier Commercial Aircraft.

Other executives also dismissed the idea that the Delta order was a game changer.

Fly Leasing’s chief executive officer Colm Barrington rejected any notion of ordering the aircraft, during the company’s first-quarter earnings call in May. He said the lessor was not planning to increase its exposure to smaller aircraft, including the CSeries, Embraer jets, A319s and 737-700s.

Barrington adds: “It [Delta’s order] doesn’t change our view on the marketplace.”

Similarly, Ron Wainshal, Aircastle’s chief executive officer, recently told investors that the CSeries “is not yet in a place where it can really be considered a real viable operating lease aircraft” and, like Kelly, said he was bearish about the customer base. He also said the agreement was one that “primarily benefits Delta”, because of an accounting charge that Bombardier recorded in its first-quarter results this year.

$500 million provision

In its quarterly results announcement on April 28, Bombardier recorded a $500 million “onerous provision” related to the recent orders.

The $500 million sum was referred to as a “loss” by some observers and has prompted plenty of speculation about the sale price to Delta, which neither party has revealed.

But Bombardier argues that the provision was always part of its five-year plan to control costs, announced last year, and says it is because of the way it manages its books.

The manufacturer says that it is still on track to break even by 2020. Chief financial officer John Di Bert recently said that Bombardier’s five-year plan “forecasted early marquee customer deals”. He adds that a “production learning curve” explained the size of the onerous provision, which is normal for a programme as large as the CSeries.

According to the theory of the learning curve (or experience curve, as it is sometimes known), as a manufacturer ramps up production on a new aircraft type, its production costs decrease. In addition, as its market presence increases and the expected residual value of its products improves, it can begin to increase its sale price. This means that the earliest sales of a programme will usually be done at the most competitive price.

Dewar adds that the reason Bombardier has recorded an onerous provision is because of the accounting standards that it follows, which other manufacturers do not.

He says: “We have a learning curve, which is totally normal on all programmes. We actually account for that as it happens. Whereas other [manufacturers] do

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"It was the best aircraft with the best operating economics, and that's why we won the deal."

Rob Dewar, CSeries programme general manager

programme accounting and will actually do an average over the whole programme, so that you don't see this type of disclosure."

It is not clear how many CSeries aircraft Bombardier would need to sell in order 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, director at Citi Research, says: "It's hard to imagine that the government contribution was not pertinent to Bombardier taking that onerous contract charge."

He adds that Bombardier's answer "doesn't tell the whole story. In the 12 years I have been covering aerospace, I have never seen a $500 million onerous contract charge".

Embraer's reaction

For some, the $500 million provision is more evidence that the CSeries is a state-funded programme.

After the Delta order, Embraer accused Bombardier of receiving improper state support. The Brazilian manufacturer has gone public with a series of complaints about the competitiveness of the regional aircraft manufacturing market.

Not only did Embraer lose out on Delta, but the CSeries order means the US carrier will no longer be taking up to 20 used E190s into its fleet, as it announced last summer.

The Brazilian manufacturer claims that it could not compete with the CSeries because of Canadian government support for the programme.

In October, the government of Québec announced it would take a 49.5% stake in a limited partnership that owns the CSeries programme. The $1 billion investment has been delayed, but Bombardier says the deal should be closed in the coming months.

Paulo Cesar de Souza e Silva, president and chief executive officer of Embraer Commercial Aviation, says that the market dynamics are "distorted" by government support for the programme.

He adds: "The CSeries is almost two years late and well over budget, requiring the support of the government to move forward. Embraer is not aware of the details of recent deals. However, what we know is this. Bombardier stands to receive another $2 billion for the CSeries programme from the province of Québec and Canada's central government.

"This potential cash injection allowed Bombardier to offer the CSeries to Delta and Air Canada with an onerous contract provision of $500 million, changing the market dynamics. This kind of aid makes the CSeries a state programme. This bill is going, once more, to the Canadian taxpayer. Embraer is confident in its competitive position when competing on a level playing field, but this aid distorts the competitive environment."

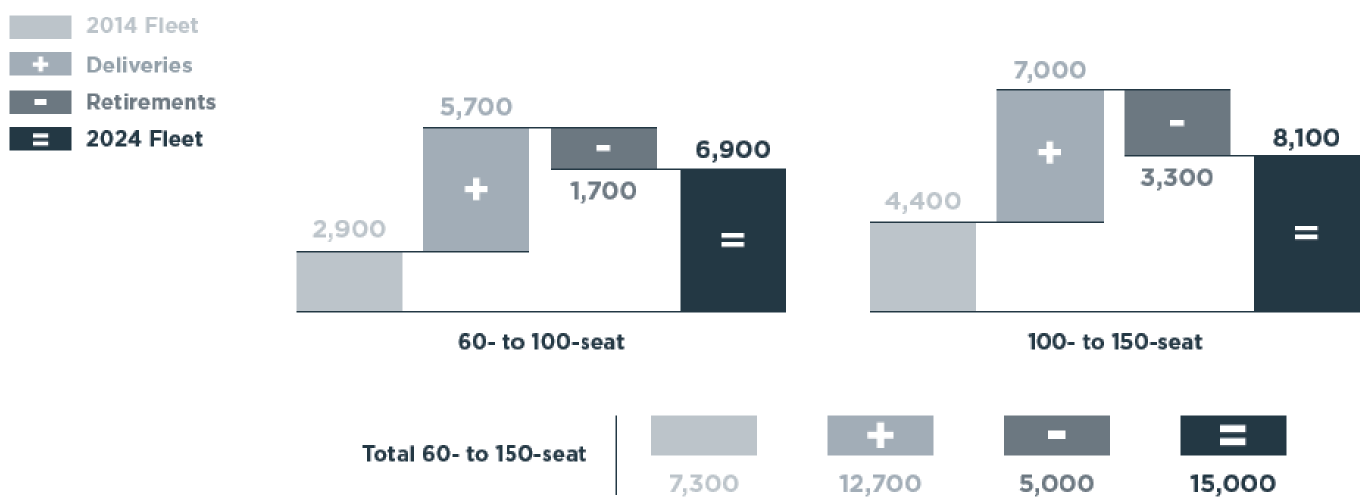
Embraer is reportedly examining what options are available to take its complaints further, which may include inter-governmental talks or filing a request with the World Trade Organization (WTO) to examine the deal with Delta.

When asked whether Québec's investment into the CSeries programme constitutes state aid, Citi Research's Trent says: "I would have to say yes. The provincial government of Québec has already agreed to acquire a minority active stake in the programme. It's not just a matter of a government body offering export credit agency (ECA) financing to buyers."

Asked to comment on government investment into the programme, Bombardier's Dewar responds: "We are fully compliant with all the WTO regulations, and Delta's been really clear about why they bought the aircraft. It was the best aircraft with the best operating economics, and that's why we won the deal."

Delta's order is undoubtedly good news for the CSeries programme. A successful entry into service will no doubt help to boost the aircraft's appeal further. Bombardier's main challenge now is to close more CSeries orders soon.

BOMBARDIER'S 20-YEAR COMMERCIAL AIRCRAFT FLEET FORCAST



Source: Bombardier

MIDDLE EAST

Liquidity still on tap for aircraft

Gulf banks are coming to terms with the substantial drop in oil prices. Jack Dutton investigates whether Middle Eastern financing for airlines is still there.

The recent drop in the price of oil has completely changed the outlook of the transportation industry. The price of crude oil fell about 70% from mid-2014 to early 2016, from $105 a barrel to about $32. There has been a slight climb this year, but oil remains at a low price – $43 a barrel on the Nasdaq as *Airfinance Journal* went to press.

Sustained low-fuel prices have been a blessing for most airlines, with operating costs falling. Also, the more expensive – yet fuel-efficient – newer technology aircraft are not as economically advantageous, meaning that airlines can fly cheaper and older aircraft for a better price than they could have previously.

But not everyone is benefiting from low prices. Countries whose economies rely heavily on oil are worse off than before. One of those regions is the Middle East, where some banks are cautious about liquidity drying up.

A report from Moody's Investors Service, released in March, indicates that banks in the Gulf Corporation Council (GCC) were likely to experience challenges in providing regional liquidity because of sustained low oil prices.

"Lower oil revenues are driving tightening of liquidity in the GCC, with overall deposit growth slowing down significantly to around 3% in 2015 from around 10% in 2014," says Nitish Bhojnagarwala, an assistant vice-president at the ratings agency. "Moreover, liquid asset buffers are broadly expected to decline by around 20% across the region over 2016," he adds.

GCC economies are heavily dependent on oil for revenues and macroeconomic growth, with revenues from oil and gas accounting for at least 80% of total revenues (apart from UAE and Qatar, which have diversified their economies and reduced their reliance on oil and gas).

Governments in the GCC play a major role in their domestic banking sectors, often being simultaneously the biggest borrowers, depositors and shareholders.

The Moody's report proposes that falls in oil and energy revenues in the GCC will likely reduce sovereign deposits in banks and eventually reduce state support for the bank systems involved. This reduction in support is driving up funding prices from domestic banks, increasing their overall cost of funds and reducing profitability.

The Middle East's favourable geographic location makes it a good place to run an airline. According to Boeing's

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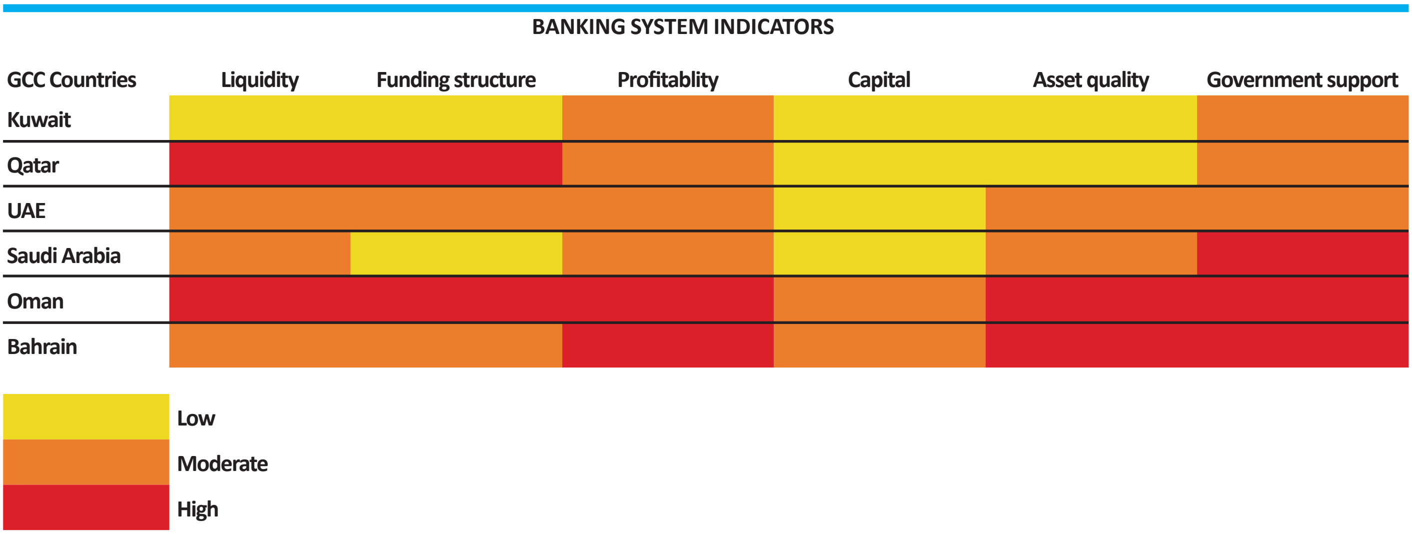
OIL PRICE VUNERABILITY HEAT MAP

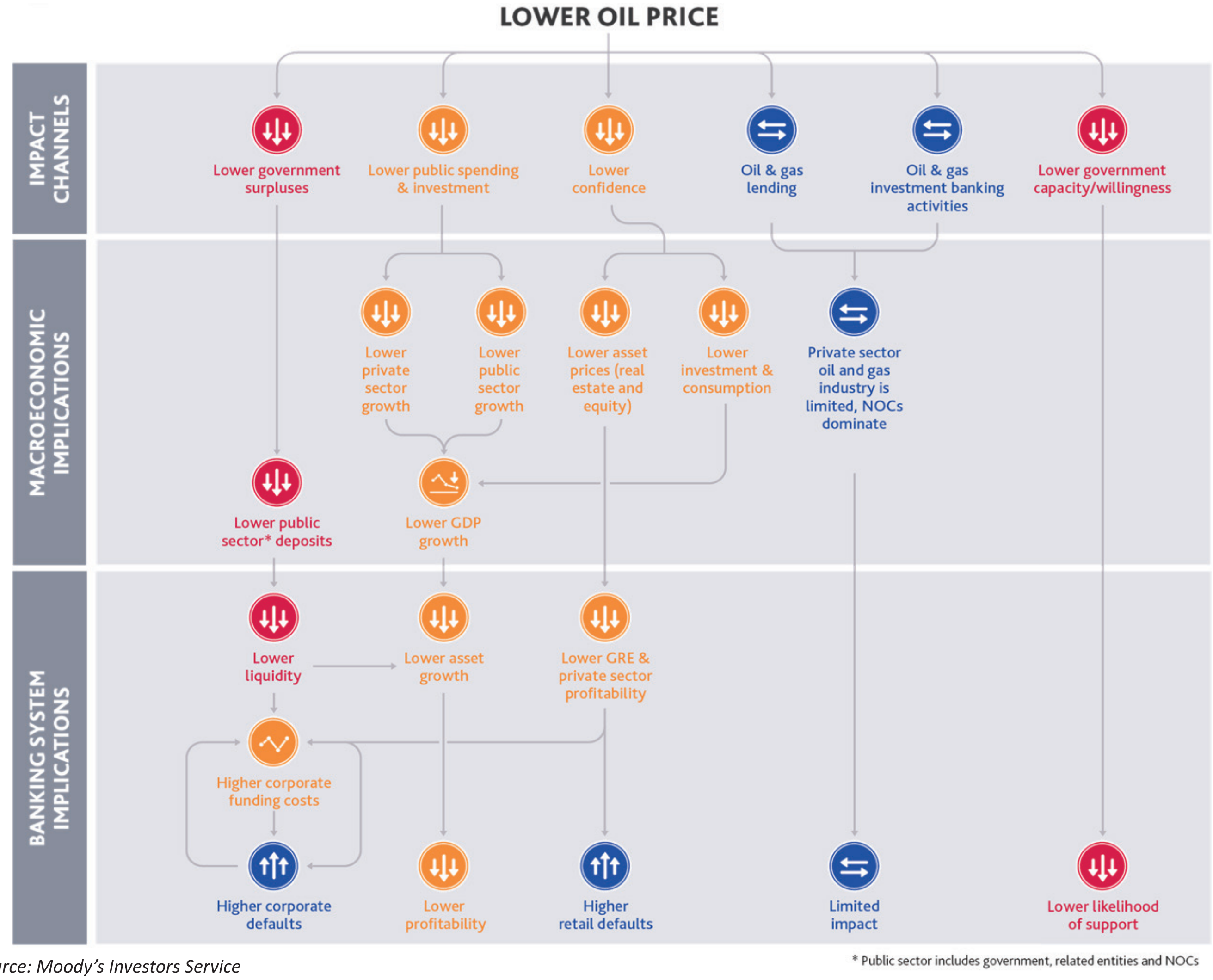


Source: Moody's Investors Service

“There is still liquidity, but at a higher cost. It hasn’t disappeared.”

Alok Wadhawan, co-head Investec Aviation

TRANSMISSION CHANNELS - IMPACT OF LOWER OIL PRICES ON BANKS



Source: Moody’s Investors Service

2015 Current Market Outlook, air traffic to and from the Middle East has grown at a compound rate of 9.9% a year over the past five years. But with sustained lower prices causing banks in the region to slow down, airlines may have to look elsewhere to finance their aircraft.

One senior banker, who works regularly with the Gulf airlines, tells *Airfinance Journal* that less long-term liquidity is available in the Middle East for airlines because of sustained low oil prices. He adds that airlines which look at using regional banks to fund their aircraft need to look at new sources of funding, as aviation may not be a “top priority” because many aircraft deals require longer-term liquidity.

Some bankers believe that despite liquidity drying up, aviation financing from banks in the Middle East is still available.

However Bertrand Dehouck, head of aviation Europe, Middle East and Africa at BNP Paribas, believes the low price has had an impact on regional liquidity.

“I think it already has had a knock-on effect,” he says, adding “that said, nothing dramatic, but we’re certainly seeing some form of retrenching of the local banks. For the right deals or with the right

“Many local banks in the Middle East were doing very silly things – like 100% financing of A380s or taking full deals themselves. I think they will act more rationally around that now.”

incentives, liquidity can still be there, but certainly, they are much more selective.

“Is it negative? It should be viewed more as a normalisation of that market. It’s certainly is less of an easy path for the local airlines to find liquidity, but liquidity is still plentiful for the good credits.”

Investec Aviation’s co-head agrees. Alok Wadhawan tells *Airfinance Journal:* “Liquidity has obviously gone down from what it was last year. There is still liquidity, but at a higher cost. The liquidity hasn’t disappeared.”

Liquidity has been affected due to the sustained run of low oil prices resulting an increase of US dollar funding costs for the banks that is being reflected in a moderate widening of spreads. Although solid names are still able to access the debt markets,” says Ahsen Rajput, deputy managing director Middle East, Africa and South Asia, Boeing Capital.

He says: “If you want to borrow money from the Middle East now, the banks will still lend to you, but they will charge you a higher interest. So it’s not competitive, but the liquidity is still very much there. The cost has gone up.”

Some of the larger Gulf airlines, such as Emirates, Etihad and Qatar Airways, do not just rely on Middle Eastern banks to finance their aircraft and are able to source financing from the international banks and capital markets. If liquidity costs go up, they will have access to financing from other parts of the world.

This year, Dubai-based carrier Emirates tapped the German and Japanese markets to fund incoming Airbus A380s, which are often considered as niche assets because of the expense of financing them. In April, Abu Dhabi-based carrier Etihad agreed to finance two of its incoming Boeing 787-9 aircraft through Japanese operating leases.

Smaller carriers, which may not be able to get access to international financing, often will turn to leasing companies to finance their aircraft, whether through traditional operating leases or sale and leasebacks.

However, there have been some instances when carriers smaller than the big three Gulf airlines have obtained financing. Having only started operations in 2009, flydubai raised $500 million through a sukuk bond in 2014. The deal provided a highly cost-effective unsecured funding source for flydubai, pricing at a profit rate of 3.776%, equivalent to 200 basis points over five-year US dollar midswaps.

But smaller airlines in the region may need to look elsewhere for financing.

“They are relying more on the lessor financing rather than the airline financing, and lessors again tend to be able to access their financing internationally,” says Wadhawan. “So, at this point in time, I don’t think it has any impact on Middle Eastern airlines. If it carries on, it could mean the cost of financing goes up, but that’s too early to say at this point.”

According to the report, banks in countries such as Oman and Qatar are taking the biggest hit from the lower oil prices, because of a high vulnerability in liquidity and the funding structures of banks from the two countries. In Oman, government fiscal pressures have resulted in a decrease in capability and willingness to support its banking system. Although Qatar is projected to deliver strong, non-oil-related economic growth in 2016, by continued investment in infrastructure, Moody’s notes that local banks have experienced “a significant slowdown in overall deposit growth”, with it falling from above 20% in 2012-13 to 6% over 2015.

A senior aviation banker based in Oman, who did not want to be named, says that the funding costs of local Omani banks have increased by 35%, and even then the availability of the US dollar in the region is tight. Despite this, Bank Muscat recently provided 100% Sharia-compliant lease financing to Oman Air on two 787s, meaning that the liquidity is still there for the right deals.

Another aviation banker based in Dubai has seen surprisingly strong demand from local banks to do aircraft deals in the Middle East.

“It is clear that not as much liquidity is available,” the banker tells *Airfinance Journal.* “It is certainly not available for the large infrastructure projects in the Middle East. But whether it’s available

for their current clients – in this case the Gulf airlines – it doesn’t seem to me it has vanished for airlines like Emirates, Etihad, Air Arabia or flydubai. I think pricing may have changed – maybe the local banks will do slightly less – but it hasn’t gone away.”

He adds: “Surely the cost of liquidity would have gone up. Has it gone phenomenally up? I don’t get that sense either. What I do sense, though, is that many of these banks in the region were doing very silly things – 100% financing of A380s or just taking full deals themselves, etc, and I think they will act more rationally around those things now.”

Although BNP’s Dehouck believes that the fuel price has affected the industry, he thinks that airlines do not have much to worry about if they are looking at financing from the Middle East.

“Airline borrowing costs have been going back to more balanced levels when compared with other markets,” he says. “I don’t think borrowers are overly concerned. Prior to this, there was a bit of an oversupply of liquidity. The retrenching of local banks pushes back the supply level to a normal market.

“That said, between the low fuel price knock-on effect and the temporary gap in US export import bank and European export financing there is a slight risk of entering into an under-supplied market. If so, we would expect it to only be temporary, except if there was a marked credit deterioration – which we are not observing yet.”

NEWS ANALYSIS

No hiding place for aircraft leases

International accounting authorities are clarifying the treatment of leases, with new rules set to come into effect in 2019. Michael Rubinett, an analyst with aviation advisory firm MBA, highlights the impact on the commercial aviation sector.

The International Accounting Standards Board (IASB) is making life easier for financial analysts in offices from Shanghai to Dublin. IASB is the regulatory body given the task of creating universal accounting standards used by every company in the world outside of the USA.

It publishes the International Financial Reporting Standards (IFRS), which is updated periodically and known to be much less specific and principle-oriented than the strict and specific rules contained in the Generally Accepted Accounting Principles (GAAP) used by public companies in the US.

While IFRS and GAAP have been slowly converging in recent years, there are still some significant differences between the two.

In its most recent round of updates and revisions, the IASB issued a new standard, IFRS 16, which institutes new rules and regulations for lease accounting, and will come into effect on January 1 2019. IFRS 16 replaces International Accounting Standard (IAS) 17, which has been in place since 1984, undergoing significant updates in 1997 and 2003.

IAS 17 focused on identifying whether or not a given lease was economically similar to purchasing the leased asset. If the lease was deemed to be economically similar to a purchase, it was treated as a finance lease and was required to be capitalised on a company's balance sheet.

There are four main criteria for designating a finance lease, each of which is sufficient on its own to require capitalisation:

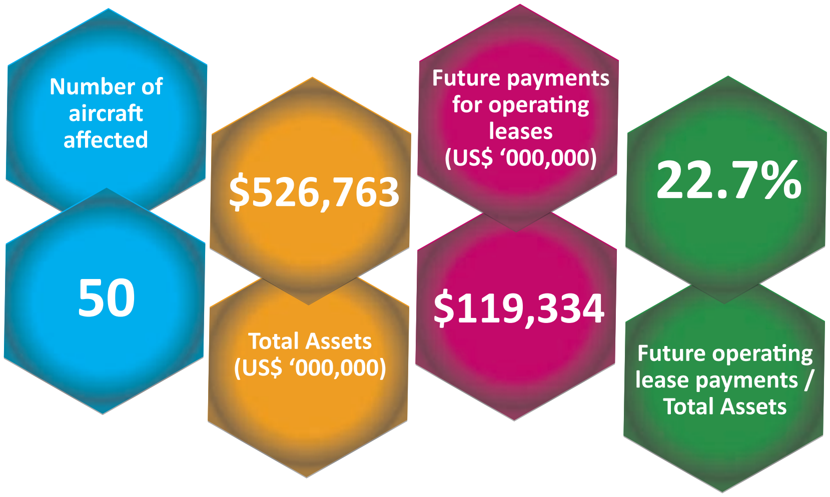
1. The lease transfers ownership of the asset to the lessee at the end of the lease term;
2. The lessee has an option to purchase the asset at the end of the lease term, typically for a price lower than current market value (sometimes known as a bargain purchase option);
3. The lease term is for the majority of the economic life of the asset; or
4. The present value of the minimum lease payments at the inception of the lease is reasonably equal to the fair value of the leased asset.

US GAAP uses substantially the same rules for determining whether leases are capitalised, but US standards dictate specific percentages of economic life and fair market value in points three and four above.

IAS 17 is much vaguer, leaving ultimate determination to the discretion of the company and its accountants. All other leases were considered operating leases and could be expensed as incurred on a company's profit-and-loss statement.

While the system did not require the capitalisation of all leases, it has long been standard practice for equity analysts to capitalise manually all operating, or off-balance-sheet, leases when calculating metrics related to a company's financial performance. This provides a more realistic view of a company's future obligations and more

EFFECTS OF IFRS ON THE AVIATION SECTOR



> "The capitalisation of all leases gives investors a much clearer, more complete picture of an airline's future obligations."

accurately depicts the company's true financial position, which is the basis for IASB's decision to create IFRS 16.

The new standard clearly will have varying degrees of impact across different industry sectors, depending on an industry's use of leases and the typical nature of these leases.

For instance, the retail sector will see significant changes, because most retail stores and warehouses are leased on terms that would classify them as operating leases. The new standard requiring these leases to be capitalised will cause additional capitalisation of more than $400 billion across the retail sector, representing over 20% of total assets on the books of retail companies worldwide, according to a study published by IASB. The energy sector will see more than $250 billion in additional capitalisation, while other industries such as healthcare and technology will realise far less of an airline impact.

Airline impact

However, the industry projected to experience the most significant financial impact, in terms of the percentage of total assets affected, is the airline sector.

Based on the aforementioned IASB study, 50 airlines will be affected in some way by the new standard, and altogether they will be required to capitalise $119.4 billion in previously expensed operating lease payments, which constitutes nearly 23% of these companies' total assets. Further, for about 30 of the affected airlines, total assets will increase by more than 20%. About 14 of the airlines will increase asset totals by at least 50%, and six airlines will see their total assets double as a result of IFRS.

IASB cites better comparability of financial statements across an industry as the primary reason for the move to IFRS 16. The ability to make valid comparisons is in part why analysts needed to adjust balance sheets manually to account for the capitalisation of operating leases. This is especially apparent in the airline sector, because the balance sheets of two equally sized commercial airlines could differ substantially based on their respective lease versus buy strategy.

An example of two hypothetical airlines, (shown in the table), illustrates the point. Company A leases few to none of its aircraft, whereas Company B leases the majority of its aircraft. Under IAS 17, Company A must borrow money to finance the purchase of its aircraft, resulting in

BALANCE SHEET IMPACT

	COMPANY A		COMPANY B	
	Buys majority of aircraft		Leases majority of aircraft	
	IAS 17	IFRS 16	IAS 17	IFRS 16
PP&E ($0,00s)	16,908	19,926	15,748	24,020
Long-Term Liabilities ($0,00s)	13,232	16,567	9,615	18,320
Equity ($0,00s)	6,719	6,402	5,604	5,171
Debt to Equity	2.0	2.6	1.7	3.5

a more bloated balance sheet and higher leverage ratios than Company B. However, when both companies are forced to capitalise all of their respective leases under IFRS 16, Company B's balance sheet suddenly has significantly more debt and fixed assets than Company A's, leaving Company B with much higher leverage ratios.

The capitalisation of all leases gives investors a much clearer, more complete picture of an airline's future obligations. At its core, a financial liability is anything that is estimable in value and will probably require the future sacrifice of economic benefits. All leases, if locked in by enforceable lease contracts, constitute a financial liability, because they require known cash payments at set dates in the future.

Balanced reporting

Under IAS 17, companies with large amounts of outstanding debt were forced to recognise liabilities related to the future debt repayment, while companies with large amounts of known, locked-in future lease payments were not forced to recognise liabilities This created a disconnect between the financial statements of similar companies in the same industry, which is what IFRS 16 is hoping to correct. Under the new rules, sale and leaseback transactions will also have less of an impact on financial reporting, because the resulting lease obligation must be recapitalised.

From a profit-and-loss perspective, IFRS 16 will also have a material effect on airline earnings. Under IAS 17, companies simply expense operating lease payments as they are paid on a straight-line basis, classifying the entire expense as an operating cost. Under IFRS 16, these lease obligations will be capitalised and subsequently amortized similar to fixed-income securities, with each lease payment resulting in interest expense (non-operating) and depreciation expense (operating). Thus, operating income will be much higher under IFRS 16 than IAS 17, because a portion of expenses are shifted from operating costs to finance costs.

Additionally, interest expense will be higher at the beginning of the lease term, when the outstanding liability is higher, and decrease as the lease term progresses, meaning that overall expenses per period will also decrease over the life of the lease. A study by IASB estimates that IFRS 16 will result in an across-the-board 43% increase in earnings before interest, taxes, depreciation and amortization for airlines, with 78% of airlines realising a profit margin increase of more than 100 basis points.

From a fundraising perspective, IFRS 16 should not have an impact on the cost of borrowing. Credit analysts already calculate leverage ratios after manually adding in off-balance-sheet leases, so the accounting change will not materially change a lending institution's methods for determining interest rates. However, certain debt covenants could be affected if they are based on leverage ratios calculated using unadjusted IFRS financial statements. Financial institutions are expected to account for these changes and make the requisite adjustments to debt covenants by the time IFRS 16 comes into effect in 2019.

IFRS 16 will make airlines' IFRS financial statements more comparable and improve book-operating earnings, but it will also cause balance sheets to swell and add significant leverage to companies that lease the majority of their aircraft. From an institutional perspective, not much will change, because manually capitalising off-balance-sheet leases has long been standard industry practice. However, from a pure reporting standpoint, the new standard will have a large dollar value impact on published financial statements, which could cause an eventual change in the way airlines structure their operations.

LOW-COST CARRIERS

Credit where credit is due

The landscape for financing low-cost carriers is more competitive than ever. Jack Dutton explores how these airlines are benefiting from this funding boom.

Solid profitability and a steady increase in air traffic are helping low-cost carriers (LCCs) to broaden their funding sources. These carriers are also enjoying funding from a slew of new financiers to the aviation market – a move that has sent financing costs tumbling.

Also, over the past three years, LCCs such as Easyjet, Westjet and Southwest Airlines have received investment-grade ratings. These moves have allowed them to expand their financing options, including unsecured funding through the debt capital markets.

"The financing strategies [of LCCs] have moved from being more mortgage-backed and Ex-Im Bank financing, to unsecured markets," Stephen Furlong, analyst at Irish stockbrokers Davy, tells *Airfinance Journal*. "The leading low-cost airlines have amazing balance sheets."

From secured to unsecured

Last year, Ryanair returned to market with its second €850 million ($950 million) eurobond with a coupon of 1.125%, setting a record for the lowest coupon in the aviation industry. The deal was more than three times oversubscribed.

Jose Abramovici, global head of asset finance group at Crédit Agricole Corporate and Investment Banking, says the pricing was in line with Ryanair's "superior credit quality".

The airline's debut eurobond also broke the same record, carrying a coupon of 1.875% for seven years.

In February, Easyjet accessed the unsecured bond markets for the first time, issuing a €500 million eurobond. Moody's and Standard & Poor's rated the carrier Baa1/BBB+ stable, respectively, giving it an investment-grade credit rating. Like Ryanair, the UK-based LCC also paid a small amount for a bond of that size – a seven-year bullet repayment with a coupon of 1.75%.

Ryanair and Easyjet had previously relied on other ways of financing their fleets – such as export credit agency (ECA) financing and operating leases – before moving into the unsecured market.

"In the European market, in particular, I think there's been a big change over the course of the last 18 to 24 months," says Mike Hirst, group treasurer at Easyjet.

"For me, it's not about a preference of one type of funding over the other; it comes down to a number of factors – like cost, speed to market, access to liquidity, the secured versus unsecured, and all the rest of it," he adds. "I think the more flexible a business is in terms of being able to raise funding, the better chance it has of having significant longevity."

All of Easyjet's new aircraft will come onto its balance sheet through a combination of commercial debt and its own cash, which has been raised through its recent bond offering. The carrier has a fleet of 93 Airbus A320s and 133 A319s, as well as orders for 130 A320neos and 44 A320s, according to *Airfinance Journal* Fleet Analyst.

Easyjet plans to complete sale and leasebacks on about 10 of its mid-life Airbus A319s a year during the next five years, according to Hirst.

The final terms of the placement plan will depend on market conditions: if the airline is not achieving attractive rates, it will not sell them into the market. If it does achieve attractive rates from the lessors, Hirst says there may be an opportunity to sell more than 10 aircraft a year to lessors and lease them back for periods of three to five years. Such a strategy allows the airline to manage residual value risk and keep its average fleet age young.

However, even with more funding options available, ECA support has continued to be used by LCCs.

When Indonesia's Lion Group signed a purchase agreement in 2014 for 40 additional ATR 72-600 turboprops in a deal worth $1 billion, it became the largest customer for the type because it already had an existing orderbook of 60 units.

To refinance 10 of these deliveries, the group turned to its Transportation Partners leasing subsidiary to diversify its funding providers. The Singapore-based lessor issued a $143.7 million bond guaranteed by the French ECA, Coface. The 10-year floating-rate bond was the first ECA-supported offering backed by ATR aircraft and the first Coface deal to be privately placed.

It also had the highest number of aircraft to be included within a single ECA-supported bond deal. Sace, the Italian ECA, reinsured the offering.

Options still available without ratings

Although it may be considered prudent for carriers to get a corporate rating, it is by no means the only way of being able to access financing. Even LCCs that are not investment-grade rated have been busy in the debt and equity capital markets. The sacrifice of these carriers not having a rating is that they will often have to pay

"With LCCs adopting an aggressive growth plan, the exclusion of an aircraft from the LCC balance sheet and the freeing up of equity facilitates the expanding operations."

Polis Polycarpou, SVP, aviation division, DVB Bank.

higher margins to issue unsecured debt, meaning they are likely to turn to other ways of financing their fleets to achieve tighter pricing.

"With Ryanair and Easyjet, the supply demand is very much in their favour, in terms of who wants to come towards them," says Furlong. "At the other end of the spectrum is Norwegian, which has a very highly leveraged balance sheet, is still able to access funding sources, whether it's in the bond market or the Scandi-debt market, but probably at sufficiently higher rates."

In December, the Norwegian airline diversified its investor base after issuing its debut unsecured eurobond. The carrier paid a higher interest rate – 7.25% semi-annually – compared with some of its higher-rated peers.

Earlier in the year, the carrier also raised capital through US Export-Import bonds and a Nok-denominated unsecured bond.

In May, Norwegian issued an enhanced equipment trust certificate (EETC), a structure often used to leverage an asset to reduce the cost of funds and get funding that is more akin to investment-grade pricing than sub-investment grade. The $349.125 million transaction was split into two tranches: 4.875% $274.315 million class-A certificates, due 10 May 2028, and 7.500% $74.81 million class-B certificates, due 10 November 2023. Morgan Stanley arranged the deal and Natixis provided the liquidity facility.

Other European LCCs, such a Wizz Air, have not raised financing through the debt capital markets to fund their fleets. The Hungarian airline has traditionally financed most of its fleet through operating leases, but its chief executive officer, József Váradi, said last year that he was in discussions with Asian banks. The airline declined to comment any further about its financing plans when contacted by *Airfinance Journal*.

Polis Polycarpou, senior vice-president, aviation division at DVB Bank, says: "I think the clear move in how LCCs finance their fleets is the now strong preference for the sale and leaseback market. As the LCC phenomenon has grown in all regions across the globe, so has the credit quality of the individual LCCs, allowing for preferential purchase prices and associated discounts."He adds: "In addition, with LCCs adopting an aggressive growth plan, the exclusion of an aircraft from the LCC balance sheet and the freeing up of equity facilitates the expanding operations. Indeed, good timing and great negotiation can lead to the airline scoring well on its P&L [profit and loss]."

Horses for courses

Will sub-investment-grade LCCs look to the paradigm of Easyjet and Ryanair when thinking about how they are financing their fleets in the future?

"I think it's horses for courses," says Easyjet's Hirst. "Airlines can be very successful being sub-investment grade and just funding themselves based on securing the assets in some shape or form. For example, a sub-investment-grade LCC did a bond fairly recently and paid quite a high coupon as a consequence of that, but sub-investment grade has alternatives to raise funds, such as the EETC route and operating leases."

The residual value of the aircraft involved also can play a major part in underpinning the attractiveness of a deal. If sensible cash flows can be generated and a strong investment case can be made, sub-investment-grade carriers may not have to look at getting an investment-grade rating to run a successful business.

Although there are differences in financing an LCC as opposed to a legacy carrier, Hirst says the credit of the airline is more important.

"We all have slightly different business models quite frankly, so there's different things that drive the actual credit ratings themselves, but certainly the more sophisticated debt capital market institutional investors will look at the quality of the individual credit and scrutinise quite closely what the ratings agencies say as well," he says.

Hirst adds: "I think it all comes down to the quality of the credit: what they see as the key pillars of the credit and how the individual credit differentiates itself. Having a low-cost base obviously helps, because it drives the profitability of any airline really and it enables the cash flow to be generated."

Focus on balance sheet

Hirst believes that Moody's Investors Service has shifted its thinking about the transportation sector globally and perhaps has a slightly different view on the sector now compared with what it had 18 months ago.

"For example, one of the things that Moody's was really focused on with our rating was the level of unencumbered aircraft we have on the balance sheet," says Hirst. "I think it plays back into the point about getting institutional investment-grade investors comfortable investing unsecured."

He says the reason why Easyjet's recent bond was given the same rating as the company was because more than 50% of its fleet is on the balance sheet and unencumbered. The number of unencumbered assets on the airline's balance sheet is one of the main factors that underpins the quality of Easyjet's credit, says Hirst.

With all these financing options at their disposal, DVB's Polycarpou believes LCCs will increasingly turn to the public markets for funding.

"I see the sale and leaseback market making the most sense for the LCCs that are intent on keeping a young and maintenance-free fleet flying, avoiding large maintenance, repair and overhaul (MRO) and life limited parts (LLP) costs," he says. "And as the capital markets become more accessible on a global scale and less US-centric, this should be the next big area to finance LCCs, following the lessor community, of course."

I&O POLL

Investor and operator poll update

Airfinance Journal's annual landmark poll confirms investor confidence in future models.

Manufacturers are often the target of criticism from the investment community, but the results from *Airfinance Journal's* most recent Investors' and Operators' Poll appear to be an endorsement of their development programmes.

The top three positions in the overall standings are occupied by aircraft models that had yet to enter service when the poll was carried out. All three models are narrowbodies or, as the manufacturers prefer to call them, single-aisle aircraft.

Given the large orderbooks for the new-generation single-aisle aircraft, support for these aircraft in our poll is perhaps unsurprising. The fact that the 737 Max 8 nosed ahead of the A320neo to take first place might be seen as more surprising, given the Airbus model is ahead of its rival in terms of entry into service and accumulated orders. Since the poll was first published in January, *Airfinance Journal* has been monitoring market sentiment and has questioned a number of respondents as to whether their judgements have changed in the light of developments in the first half of 2016, during which the A320neo entered into service and the 737 Max made its first flight.

The sentiment is that confidence in both the A320neo and 737 Max families remains high, but that the problems associated with the respective programmes have tipped the balance in favour of the Airbus models in terms of investor appeal. The issues experienced by Airbus and Pratt & Whitney with early deliveries of PW1100G powered aircraft are widely seen as teething problems. There is, however, more serious concern over reported shortfalls in performance of Boeing 737 Max aircraft, for which the sole powerplant is the CFM Leap-1B engine. The A320 is not isolated from such concerns as the issues are likely to impact on the Leap-1A engine that is offered on the A320neo in competition to the PW1100G.

There is much talk in the investment community that the new-technology models will undermine the values of current-generation single-aisle aircraft, but our poll suggests that significant confidence remains in the current models. Three current-generation types figure in the top 10 by overall ranking, aided by high scores in the operational success category. Of the four categories we asked respondents to consider, operational success is the only one that does not apply to both current production and future models.

Some respondents also commented that remarketing potential was difficult to assess for the new-generation models until fleet sizes had built up. To a lesser extent, this observation is valid for judgments on residual value.

Perhaps the most straightforward category to judge is value-for-money, although a lack of transparency on discounting by the manufacturers complicates the issue. The A321neo scores higher in terms of value for money than any other type, and new-technology models in general score well, perhaps suggesting that the premium that manufacturers are seeking for these models is not seen as excessive.

Engine choice

Some respondents have pointed out that rating certain aircraft types without reference to the choice of engine manufacturer is unhelpful because values can vary dramatically between the engine variants. There is clearly some merit in this argument, particularly when considering some of the more established widebodies.

However, given that the poll focuses on new production and in-development models, the issue is becoming less critical because fewer aircraft types are offered with a choice of engines from different manufacturers.

Among the more popular models only the A320 and 787 families offer a choice.

David Tokoph, chief operating officer of advisory firm Morten Beryer and Agnew, believes engine selection can be an important factor in aircraft appraisal, but to what degree depends on the aircraft type in question. For example, he says that MBA does distinguish between engine models on the current generation A320 family. He comments: "There is a measurable fuel burn advantage for V2500-powered aircraft compared to CFM-equipped models. For A321s, which typically fly longer sectors, this is a significant advantage. On the A319 and A320, which fly shorter sectors the fuel burn saving is less important and other factors [such as maintenance cost] play a more important role."

MBA, however, does not make any distinction between the engine variants of 787 models. Tokoph explains that MBA has not received any market feedback from 787 operators that would warrant separate valuations for different engine types.

The trend to single source engine suppliers is confirmed by the absence of an alternative powerplant on new widebody programmes such as the 777X and the A330neo. And, should an A380neo be launched, it seems unlikely that there would be more than one engine supplier.

METHODOLOGY

The poll asked respondents to rate aircraft types from one to five in four categories (one is worst and five is best). The categories were: residual value, value for money, operational success and remarketing potential. Only current production and in-development models were included in the questionnaire. The operational success category was omitted for aircraft in development.

Overall ranking was calculated by a simple average of the relevant categories. Responses were completed on the understanding that they would remain anonymous.

THE TOP 20

Rank	Aircraft type	Overall score
1	737 Max 8	4.63
2	A320neo	4.52
3	A321neo	4.52
4	737-800	4.48
5	787-10	4.44
6	777-9X	4.42
7	A320	4.33
8	787-9	4.31
9	A321	4.22
10	A350-900	4.17
11	787-8	4.12
12	ATR 72-600	4.04
13	777-8X	3.94
14	737 Max 9	3.88
15	ATR 42-600	3.81
16	777-300ER	3.72
17	E190-E2	3.71
18	E195-E2	3.66
19	737-900ER	3.64
20	A350-1000	3.61

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“There is much talk in the investment community that the new-technology models will undermine the values of current-generation single-aisle aircraft.”

New generation aircraft topped the poll

Popular narrowbodies

As in previous years, popular narrowbodies have topped the poll across the board. Their scores in this year’s survey also show that in-production aircraft remain popular, despite the imminent arrival of latest-technology variants.

Boeing’s 737 family and Airbus’s A320-family jets have remained attractive to investors because of their wide operator base and reliable performance. A wide and deep market for these aircraft means that investors feel comfortable with their remarketing potential – which is reflected by their strong scores.

Some investors say the retention of high scores of in-production aircraft owes much to the low cost of fuel. The Max and the Neo appeal to airlines because of their fuel efficiency, but with Brent crude at $40 a barrel, this advantage becomes less significant. Older in-production aircraft, despite being less efficient, can be bought and leased for substantially less.

“Little effect on the values of the A320ceo and the 737NG is visible today, since the economics of the 737 Max and A320neo family are only really unlocked at higher fuel prices and/or when the market share of the new-generation aircraft grows more substantial,” notes Simon Finn, senior vice-president, aviation research, DVB Bank.

Finn adds: “Values of both generations will continue to be affected by macro factors such as traffic, fuel prices and interest rates, but the residual value effect of new-generation aircraft should not become significant before the 2020s. A bigger risk is the threat of over production and the elevated levels of used aircraft transition that result from the growth of aircraft leasing activity.”

Bombardier’s CSeries aircraft did not score well in general, but the poll was carried out before the announcement of the deal with Delta Air Lines for 75 CS100s.

NARROWBODY CURRENT

Aircraft Type	Residual value	Value for Money	Operational success	Remarketing Potential	Overall	2014 result	Change
737-800	4.33	4.08	4.90	4.58	4.48	4.52	-0.04
A320	3.92	4.00	4.90	4.50	4.33	4.03	0.30
A321	3.91	4.09	4.50	4.36	4.22	4.20	0.02
737-900ER	3.61	3.72	3.71	3.50	3.64	3.02	0.62
E195	3.06	3.17	3.21	2.83	3.07	3.3	-0.23
737-700	2.56	2.44	3.75	2.67	2.85	3.12	-0.27
CS300	2.64	3.07	n/a	2.58	2.77	2.81	-0.04
A319	2.50	2.56	3.11	2.60	2.69	2.58	0.11
CS100	2.64	2.79	n/a	2.58	2.67	2.74	-0.07

NARROWBODY FUTURE

Aircraft Type	Residual value	Value for Money	Operational success	Remarketing Potential	Overall	2014 result	Change
737 Max8	4.79	4.31	n/a	4.79	4.63	4.44	0.19
A320 neo	4.50	4.31	n/a	4.75	4.52	4.51	0.01
A321neo	4.64	4.50	n/a	4.42	4.52	4.47	0.05
737 Max9	3.79	3.79	n/a	4.08	3.88	3.91	-0.03
E190-E2	3.67	3.67	n/a	3.80	3.71	3.47	0.24
E195-E2	3.50	3.67	n/a	3.80	3.66	3.47	0.19
E175-E2	3.50	3.50	n/a	3.60	3.53	3.67	-0.14
737 Max7	3.17	3.17	n/a	3.17	3.17	2.84	0.33
A319 neo	2.70	2.90	n/a	2.70	2.77	2.82	-0.05
CS300	2.64	3.07	n/a	2.58	2.77	2.81	-0.04
CS100	2.64	2.79	n/a	2.58	2.67	2.74	-0.07

> "The trend to single source engine suppliers is confirmed by the absence of alternative powerplants on the 777X and the A330neo."

Widebodies

Although there are specialists in widebody aircraft financing who extol the virtues of this market segment, it has been overshadowed by the single-aisle market. More limited customer bases, high transition and reconfiguration costs are often cited as drawbacks to financing larger commercial aircraft.

Our survey certainly shows a decline in confidence in current-technology aircraft in the sector. Last year, the 777-300ER, which at the height of its popularity topped our poll, had a respectable overall score of 4.07. In this survey, it scored 3.72, mirroring increasing concerns in the market that have been well documented (see 777-300ER – a remarketing challenge, *Airfinance Journal*, July/August 2015, page 27).

The smaller 777-200ER has also dropped in value this year. Scoring 2.78 overall, the aircraft has also scored poorly for remarketing potential. Respondents said that it is difficult to trade in the secondary market, partly because of the popularity of the larger -300ER variant.

"The 777-200ER is a great aircraft, but the remarketing of the aircraft has its challenges in the current market," says Abdol Moabery, president and chief executive officer, GA Telesis.

"The lack of an aftermarket trading environment, specifically related to the engines, has led sellers to draw a blank when they approach the secondary aircraft traders and lessors. These secondary traders and lessors are the ones that provide liquidity to that market and in the current environment, the airline and top-tier lessor communities are hitting a brick wall when it comes to trading their 777-200ERs," he adds.

Moabery says he expects 777-200ER values to continue to plummet.

The 787-10 is the most popular widebody.

>>>

WIDEBODY CURRENT

Aircraft Type	Residual value	Value for Money	Operational success	Remarketing Potential	Overall	2014 result	Change
787-9	4.28	4.17	4.50	4.28	4.31	4.37	-0.06
A350-900	4.25	4.06	4.00	4.38	4.17	3.88	0.29
787-8	4.00	3.88	4.36	4.25	4.12	3.51	0.61
777-300ER	3.41	3.65	4.50	3.32	3.72	4.07	-0.35
A330-300	3.08	3.08	4.05	3.25	3.37	3.80	-0.43
A330-200	2.54	2.86	3.73	2.54	2.92	3.13	-0.21
777-200ER	2.50	2.72	3.50	2.39	2.78	3.33	-0.55
A380	1.75	2.25	3.00	1.31	2.08	2.44	-0.36
747-8 pax	1.63	2.13	2.00	1.25	1.75	1.83	-0.08

WIDEBODY FUTURE

Aircraft Type	Residual value	Value for Money	Operational success	Remarketing Potential	Overall	2014 result	Change
787-10	4.33	4.50	n/a	4.50	4.44	n/a	n/a
777-9X	4.58	4.42	n/a	4.25	4.42	n/a	n/a
777-8X	4.00	3.83	n/a	4.00	3.94	n/a	n/a
A330-900 neo	3.44	3.31	n/a	3.50	3.42	3.78	-0.36
A330-800 neo	2.94	3.19	n/a	2.79	2.97	3.26	-0.29
A350-800	2.67	2.75	n/a	2.83	2.75	2.53	0.22

“Respondents seem to think Boeing’s 777-9X is worth waiting for.”

“I anticipate greater problems ahead, especially as some of the larger 777-200ER fleets come to market. The engine original equipment manufacturers [OEMs] need to embrace the market that provides liquidity for their products,” he adds.

Boeing’s 787 models appear to be seen in a favourable light, perhaps reflecting that investors view them as new-technology models with the added advantage that the -8 and -9 variants are becoming well established in service. However, the in-development 787-10 scores better than both its in-service family members and, in sixth position, is the highest ranked widebody in the survey. The fact that the 787-10 is the largest model in the family may be a factor in its popularity as it scores well in the value-for-money criteria.

Respondents seem to think Boeing’s 777-9X is worth waiting for as it is the second highest-placed widebody despite having an entry-into-service target of 2020, several years behind any of the other aircraft considered in the poll.

Some respondents also drew attention to the A330-200 and -300, stating that values had begun to soften in the past year. This is supported by the results of the poll, which shows that the overall scores have dropped from 3.13 to 2.92 and from 3.80 to 3.37 for the -200 and -300 variants, respectively.

However, other investors brushed aside concerns about the value of these aircraft, insisting that they are still very strong performers. Under the operational success category, the scores remained steady or improved.

The poll saw a resurgence in the popularity of turboprops

Regional aircraft

The term regional aircraft may be outmoded and is certainly disliked by the manufacturers of the latest generation of 100-seaters, but it is sill widely used by the industry. For our poll we have categorized aircraft that typically seat less than 100 passengers as regional aircraft. Therefore, both CSeries models are included in the main narrowbody category, but all other Bombardier aircraft are classified as regional aircraft.

For both generations of Embraer’s E-Jets, the line is drawn between the E190 and the E195, with the former included in the regional category together with the respective E170/175 models.

Although smaller aircraft have become more popular with financiers (see Small aircraft, big rewards, *Airfinance Journal*, November 2015, page 33), they continue to score relatively modestly compared to single-aisle aircraft. The highest placed regional aircraft is the ATR 72-600, in 12th place.

A more detailed analysis, however, does show the aircraft in a good light. The larger ATR model has a respectable overall score of more than four, and has a better score for residual value retention than the current A320 model. Such a result for a turboprop would have been unthinkable a few years ago.

Embraer’s best-performing aircraft are its new-generation models, with the E190-E2 making it into the top 20 (as does the larger E195-E2). Embraer’s management of the transition to the new generation of aircraft appears to be having the desired effect of retaining confidence in the current E175 model. The E175 scores for both the current-generation and E2 models are marginally higher than in the previous poll and the two aircraft are together in the rankings.

The apparent disconnect between regional aircraft scores and increased investor appetite

REGIONAL CURRENT

Aircraft Type	Residual value	Value for Money	Operational success	Remarketing Potential	Overall	2014 result	Change
ATR72-600	4.17	3.83	4.00	4.17	4.04	3.99	0.05
ATR42-600	3.83	3.67	3.75	4.00	3.81	3.46	0.35
E175	3.31	3.44	3.42	3.56	3.43	3.37	0.06
E190	3.17	3.28	3.64	3.17	3.31	3.61	-0.30
Q400	3.25	3.08	3.63	3.25	3.30	3.36	-0.06
E195	3.06	3.17	3.21	2.83	3.07	3.3	-0.23
CRJ900	3.14	3.14	2.67	3.00	2.99	2.60	0.39
E170	2.93	2.79	3.10	2.79	2.90	2.77	0.13
CRJ1000	2.50	2.79	2.10	2.50	2.47	2.20	0.27
CRJ700	2.14	2.29	2.50	2.57	2.38	2.95	-0.58
SSJ-100	1.80	2.70	2.00	1.70	2.00	n/a	n/a
ERJ-145	1.75	1.75	1.75	1.64	1.72	1.77	-0.05
CRJ200	1.21	1.30	1.83	1.21	1.39	1.61	-0.22

REGIONAL FUTURE

Aircraft Type	Residual value	Value for Money	Operational success	Remarketing Potential	Overall	2014 result	Change
E190-E2	3.67	3.67	n/a	3.80	3.71	3.47	0.24
E175-E2	3.50	3.50	n/a	3.60	3.53	3.67	-0.14

"Sukhoi still has work to do to take sales away from its regional rivals."

may be explained in the thinking of one respondent who commented: "We didn't score regional aircraft that highly, but we quite like them as the pricing means you don't have to bet the company on acquiring them."

Introduction of SSJ

For the first time, this year's poll has accepted submissions for the Sukhoi Superjet 100. The Russian-manufactured aircraft has traditionally been operated mostly by Russian carriers, although there are notable exceptions such as Mexican airline Interjet.

However, at the end of 2014 Belgian charter airline VLM Airlines became the first European carrier to agree to lease the aircraft. It signed a letter of intent with Ilyushin Finance Company in October 2014 for the 12-year lease of two aircraft. In October 2015, CityJet joined the list of European carriers that will operate the jet. It signed an agreement for 25 of the aircraft, and took delivery of the first unit in May.

When asked about the aircraft from an investors' standpoint, most respondents are cautious about its value. With an overall score of 1.94, the regional jet has scored lower in the overall category than the other assets in its seat range, such as the ATR and Bombardier types.

It has scored better in the value-for-money section, suggesting it can be bought for agreeable prices. This bodes well for Sukhoi as it seeks to expand its market share and widen its customer base.

Sukhoi still has work to do to take sales away from its regional rivals. In particular, the manufacturer must convince investors that the maintenance agreements in place are up to the job. It also needs to prove that the market is liquid enough to support trading.

However, the fact that the Superjet is the first Russian-built aircraft to be included in the *Airfinance Journal* poll could be seen as a breakthrough. Other non-western models such as the Irkut MC-21 and China's Comac C919 are not as yet thought of as viable models for western financiers and as such were not included in our poll.

MRJ

We had not asked investors to look at the Mitsubishi Regional Jet for this poll because as a new aircraft from a new manufacturer there is relatively little experience on which to base a judgment.

The further delay to entry into service, announced at the end of 2015, adds to this view.

Some respondents did comment that they had an open mind about whether they would finance the aircraft, but the additional delay is unlikely to help its case.

This article is an update of the investors and operators poll that was first published in Air Investor January 2016.

FUNDING

Chinese airlines tighten RFP process

A privately owned leasing company claims it is losing out on deals with Chinese airlines because of corruption fears. Michael Allen reports.

China's aviation industry has been dogged by corruption scandals, and sources say the after-effects are being noticed in request for proposals (RFP) being issued by domestic airlines.

According to an investigation last year by the *South China Morning Post*, the mainland's "booming aviation industry has been gripped by uncertainty in the wake of a corruption investigation into China Southern Airlines. The newspaper reported that the carrier's chairman Si Xianmin was being investigated for "serious discipline violations".

Five other senior directors at the company had already been removed from their posts: former chief financial officer Xu Jiebo, deputy managers Chen Gang, Zhou Yuehai, Tian Xiaodong and, most recently, executive vice-president Liu Qian.

In June 2015 Mike Poon, the chief executive officer of lessor Calc disappeared. Market sources, at the time, said he was being questioned in relation to the investigation into China Southern Airlines. The company's chairman Chen Shuang took over as the CEO and Poon eventually re-emerged in Hong Kong.

These occurrences are part of a much broader anti-corruption crackdown in China led by President Xi Jinping covering industries beyond aviation.

RFP tender change

Multiple sources who have received RFPs from Chinese airlines have told *Airfinance Journal* that some have modified their RFP tendering process in the wake of these events.

Changes include setting up a public email account to receive tender bids and issuing a time range in which bids can be tendered. This is designed to limit potential interference in the bidding process by giving more than one person access to the email account. The airline will set a time range – for example, from 9am to 5pm – during which it will accept proposals – the airline will not accept submissions outside of that time frame.

Some market players have found this beneficial. One banker in Hong Kong says it gives his company reassurance that the bidding process is going to be clean and free from corruption.

However, one privately owned Chinese leasing company tells *Airfinance Journal* that lessors in China have been "greatly influenced by the anti-corruption campaign" and are losing business with the big three – Air China, China Eastern and China Southern – as a result of it.

The source adds that the potential influence has created "disadvantages" for these leasing companies, claiming airlines are "really afraid of being involved with so-called corrupt" entities.

"For people working in state-owned airlines, it [the anti-corruption drive] has made them more cautious in choosing their cooperators," adds the source.

"I met the head of these airlines and actually they are quite interested [in doing business with us] if we have our own [delivery] slots. They might be interested, but honestly they are really afraid."

The source has delivered several aircraft this year to airlines, but "not to those big names as usual".

The company has had to change its strategy and is buying aircraft from abroad, trying to establish new relationships with foreign airlines and looking at different financing resources to make it more competitive.

"It's very limited… here in China, so we [had] to look out to other countries to do business," the source explains. "We have to find out the solution… for our future."

While the investigations are affecting privately owned leasing companies, airlines are willing to discuss how to resolve the matter, says the source, adding: "There is hope that they can do business together again in future."

Airlines are still sending their proposals and inviting private leasing companies to bid, according to the source, but several of the big airlines have stopped sending proposals altogether.

"But they also give us a private call to explain what is going on. They say: 'We like your company but there are some difficulties in this specific area.' It's a mutual understanding… Maybe it's not a long-term problem and maybe it will get better next year."

Instead, privately owned leasing companies are being offered to do deals with second-tier subsidiaries of the state-owned carriers.

"Those second-tier airlines would be more willing to give a privately owned leasing company the more difficult deals," the source says. "The bank-affiliate leasing companies are not interested at all and think there is too much risk and potentially… [could] be blamed by the boss."

Law firms

The effect of China's anti-corruption drive on the RFP process is not just limited to banks and lessors, but has hit law firms also.

"It's a very cumbersome procedure. You need to prepare the bids in a particular way and provide a lot of information, not just about the deal, but about yourself," says an Asia-based partner, who has significant deals with Chinese airlines and lessors.

He says airlines are running a "very strict bidding process", adding: "You may be required to put the bid in a sealed envelope and hand deliver it to the airline."

The source recalls such a move when handling a bid for an RFP with one of the big three Chinese carriers.

Despite the inconvenience, the source believes there is an overall benefit to the industry.

"My view is this is a good development," he says. "Now it's not so much about who you know. The connections still count, but it's not the determining factor about whether or not you win the deal. It becomes more transparent and fair."

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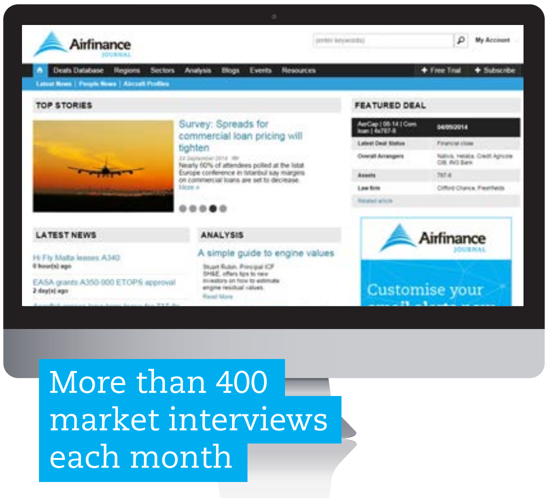

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CONFERENCE REPORT

Investors shrug off Asian fears

Asia remains awash in liquidity as investors seek opportunities in the region's large orderbooks, writes Michael Allen from the Istat Asia conference in Tokyo.

Investors continue to flock to Asia to find investment returns in aviation despite concerns over the possible over-ordering of aircraft by the industry and weaker currencies throughout the region.

South Korean companies looking to help their investor clients find homes for their money were present at the International Society of Transport Aircraft Trading (Istat) conference in Tokyo in May.

Seoul-based Truston Asset Management, which has $7 billion in assets under management, told *Airfinance Journal* it has $100 million-worth of equity to deploy for investment in narrowbody or widebody aircraft.

The investor is looking for "very conservative loan to values (LTV) with equity investment in narrowbodies," said Kenneth Kang, managing director and head of the alternative investment department at Truston.

The firm's aviation team consists of four people, including an engineer, and the asset manager says it is looking to appoint "a few" new members. Institutional investors have raised about 80% of Truston's funding capital.

South Korean institutional investors have become fed up with the low investor returns in the shipping industry and bond markets, and are increasingly turning towards the more lucrative returns on offer from aircraft investments.

Insurance companies and pension funds, rather than banks, are the main players tapping the aircraft financing market in South Korea. Market observers say these institutional investors are more flush with cash than banks. Also, insurers have more leeway to operate out of international jurisdictions than banks do, they argue.

Large orderbooks of Airbus A320 and Boeing 737-800 aircraft are forcing Chinese leasing companies to look outside of China to place assets, conference delegates observed.

One source said Chinese leasing companies have approached Japanese airlines with offers to place narrowbody aircraft.

It is not clear how likely it is that a deal could be done, particularly given the strained political relations between the two countries, adds the source.

Japanese airlines – particularly All Nippon Airways, Japan Airlines and their affiliates – already have access to the international financing and leasing markets. Market observers suggest Chinese lessors would have to offer significant competitive advantages in their leasing contracts in order to attract Japan's carriers to take their aircraft.

Delegates also observed that Chinese leasing companies are increasingly trading more aircraft.

"I think there's lots of interest in trading between leasing companies, including Chinese leasing companies," said a Japanese source, who adds: "There are a lot more Chinese leasing companies interested in trading rather than just building up a portfolio."

Feeling the squeeze

However, one source urged caution regarding lease rate factors stemming from Chinese operating lessors. He argues that Chinese leasing companies are accepting lower lease rentals than in previous years because of their large orderbooks of aircraft.

The source cites 0.65 lease rate factors from large Chinese airlines and 0.70 from smaller airlines. He says: "The Chinese lessors don't have any experience in the downturn cycle, they don't know how dangerous it is to offer 0.65 lease rate factors for a widebody aircraft." He argues such a rate "will kill you if you do the configuration on the redelivery for a 777 or 737."

The source says that previously he observed lease rate factors of 0.75 for narrowbodies and 0.78 to 0.80 for widebodies. He believes, by accepting low lease rentals, Chinese lessors are driving down the value of the market for all other lessors.

"The market has become totally distorted in the past 12 months," says the source, adding: "[There] is huge pressure from their management to [get deals done]."

Tom Vincent, managing director of Asia Pacific Aircraft Storage, said that one of the takeaways from the conference is that there is plenty of liquidity in the market, with airlines looking for sale and leasebacks or straight leases.

"The market is quite stable at the moment but liquidity can dry up quite quickly. What effect would that have on future order books?" he asks.

Vincent says he was particularly interested in the panel discussion involving Boeing 777 and Airbus A330 aircraft.

"What is the future for those aircraft, those platforms? Some of the major platforms we are storing include the 777-200, particularly with Trent [engines]. We're storing A330s – we've got more being delivered – so I guess that's tangible evidence of the slightly more difficult market environment for those aircraft."

While leasing large numbers of aircraft to lesser credits would be considered a risky venture by many, the abundance of leasing opportunities springing up with up-and-coming carriers – particularly in South-East Asia – is proving too tempting for some companies.

The lawyer adds: "In terms of new sale and leasebacks, I think we are seeing lessors who are willing to commit to 20 aircraft at one time to a single lessee – that's interesting," said a lawyer at the conference.

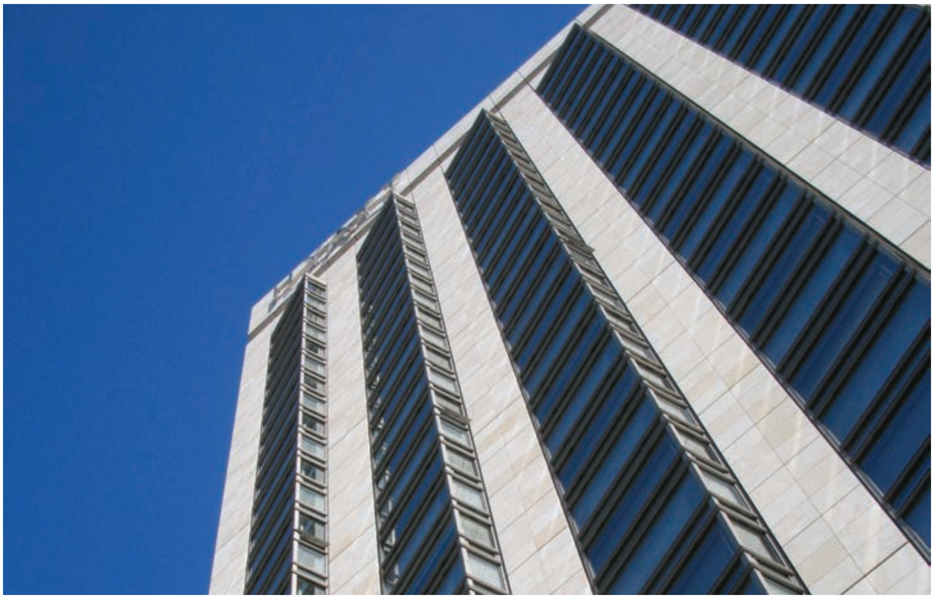
He confirmed some deals have "pretty big tranches" of aircraft, but most comprised "seven to 10" units.

The lawyer adds "Those airlines that have bought large numbers of Neos or whatever… tend to be the new kids on the block – VietJet, Tigerair, etc. These guys are up and coming; they are in great jurisdictions but, at the same time, it's quite a big risk to have 20 aircraft in one go in some of these carriers at the moment. Clearly, having 20 aircraft in Singapore Airlines is going to be fine, albeit your returns are going to be less exciting."

Max Jonsson, assistant vice-president marketing, PK AirFinance Japan, said: "A general view of the low-cost carrier (LCC) market is that Asia has strong growth potential compared with other regions. Japanese banks seem to be moving away from targeting only top-tier airlines, and more open to taking asset risk."

Less conservative?

Japanese conferences are often awash with speculation about the Japanese operating lease with call option (Jolco) market and which airlines might be likely to tap this source of funding.



Grand Hyatt Tokyo, Japan.

Turkish carrier Pegasus is rumoured to be a possible new entrent to the market.

One Japanese equity provider told *Airfinance Journal*: "We are on the conservative side, so we are not really interested in a new name like that. I think there's a big difference between someone like Copa and Virgin Atlantic and someone like Pegasus."

Another Japanese equity provider agreed, saying it "would not be easy to underwrite the equity portion" of a Jolco transaction for Pegasus. He cites geopolitical risk associated with Turkey as a jurisdiction, as well as Pegasus being a "less attractive name to investors" as possible obstacles for the carrier in the Jolco market. He also notes that Turkish Airlines, which has tapped the Jolco market, accepts yen-denominated equity, whereas Pegasus would be unlikely to because it does not fly any routes into Japan.

An Asia-based source had a different opinion.

"I think the Japanese have become less conservative in who they are willing to invest in," said the source. "Pegasus are pretty switched on and probably quite well-liked, but the Japanese tend to invest in airlines they have heard of. It's a good job they were at Istat, but they will have to do more work to get the green light from the Japanese investors."

The Japanese equity market is typically a closed market, in which gossip is traded among its members but rarely shared with the outside world. As a result, Japanese companies involved in the Jolco market tend to be low profile.

However, Japanese equity provider FPG hosted a drinks reception to increase its presence in the market in which its president and chief executive officer Hisanaga Tanimura was present. The financier told *Airfinance Journal* that it is looking to build its presence in the market. The company recently hired two new members to its Jolco team in Tokyo.

A banking source noted that FPG could be trying to replicate a similar strategy to the one BBAM pursued in the aviation finance market.

"They [FPG] are new arrangers of transactions," says the banking source. "They are placing equity in the Japanese market… and I think they are trying to put themselves in the same boat [as BBAM]. They are trying to beef up their image in terms of placing assets."

INTERVIEW: NORDLB

'Crazy' currency risk threatens Chinese lessors

Michael Allen speaks to NordLB about the impact a weak yuan is having on the bank's expansion plans into Chinese leasing.

From left to right: Jasper Tan, Nadine Limburg, Wan Li Chng and Jeremy Ong.

Hanover-based NordLB is looking to grow its financing activities in the operating lease market with a focus on the fast-growing Chinese leasing sector.

"There is certainly no lack of potential lessor customers in China, with a new one popping up almost every week," said Jasper Tan, head of NordLB's aviation finance team in Asia, from the bank's new offices in Singapore.

He adds: "Anyone who's got money to spend wants to set up a leasing company, and anyone who sets up a leasing company wants to be an aircraft owner – that's a definite trend in China."

However, Tan remains disciplined in the bank's growth plans and aims to strike a "50-50 balance" – where half his team's income comes from the airlines and half from the leasing companies.

"I would not like to be overly reliant on one segment because obviously if that segment starts to show signs of slowing down it wouldn't be great for us," he explains.

Knee-jerk reaction

Tan observes more Chinese airlines are requesting yuan-backed financings, after the devaluation of their currency – a move, he says, "is crazy".

"They have been pushing for yuan financing, even on operating leases," he says. "It works well for the airlines, but is maybe not an excellent idea in the bigger scheme. It's a knee-jerk reaction. The yuan is devaluating vis-à-vis the US dollar, and the expectation is it will devalue more.

"Everyone wants to change their balance sheet into a yuan-based borrowing. What happens in two or three years if the US dollar starts depreciating against the yuan? Are you going to go through that whole exercise again and change all your debt borrowing to US dollars?"

Aircraft are primarily traded in US dollars, so lessors who are willing to consider yuan-based rentals are neglecting the fact that there is a credit risk in the transaction, he warns. Lessors will first need to obtain funding in yuan to match that currency, he says.

"If you get your aircraft back early during a 12-year lease the next rental may not be in China and it may not be in renminbi – all of a sudden you have cash flows in US dollar. If the lease runs through its full course of 12 years there's no currency risk that would affect your yield levels, but if the aircraft comes back early there is. It is a currency risk but that currency risk won't materialise unless there's a credit event – that's why I call it a credit risk."

Tan adds that a further issue is the difficulty of selling an aircraft to an international lessor if the lease rentals are in renminbi.

He believes the Chinese market is also becoming more "inward looking" and "closed to the outside world".

Lessors with orderbooks are still able to go into China and place some aircraft, but he insists those lessors that are looking at completing sale and leaseback financing with Chinese airlines may find it "very difficult".

Tan says: "There's a few reasons for that and one is simply purchase price. From what we have observed, the purchase price of the Chinese airlines has been on the higher side compared with market values. That means for an international lessor, you're not going to be willing to pay that kind of purchase price, and the Chinese airlines are not going to be willing to take a book loss as a result of the sale and leaseback.

"If you combine that with a new Chinese leasing company that is more focused on the domestic

“If you’re looking at sale and leaseback, I think it would be very difficult for an international leasing company to win anything in China.”

Jasper Tan, head of aviation finance Asia, NordLB

market, which is probably not very experienced on the global stage, they will say, ‘Sure, I’ll do it: sale and leaseback – what’s the purchase price? Okay. Definitely.’ So I think for that reason, you see a lot of sale and leaseback transactions being done by Chinese leasing companies and a lot of it being done by way of the free-trade zone structure.”

South-East Asia

The low-cost carrier (LCC) market has been “saturated for quite some time now”, says Tan.

“If you look at Indonesia, Malaysia, Thailand, Singapore, all this influx of LCCs, the record order book and now delivery from the LCCs has been causing the yields to drop and, for some carriers, losses.”

He believes that some carriers have been able to manage this overcapacity by delaying their deliveries, with some shifting their deliveries into their leasing arms to be placed out to other airlines. An example of this would be the Lion Group’s use of group its leasing company subsiduary Transportation Partners, or AirAsia’s use of Asia Aviation Capital, to manage thier fleets.

He characterises Thailand as a problematic jurisdiction, suffering from high saturation partly caused by the lack of a dominant LCC.

Tan says: “In Indonesia, Malaysia and the Philippines you have one dominant LCC, and I think everyone shows everybody a bit of healthy respect there by not going in a big way. [With] Thailand not having an equally dominant LCC, people are thinking there is a chance for them to go in and gain a firm foothold in that market.

“I think every country [in South-East Asia] is seeing some slowing down in terms of the economy but, at the same time, I’m sure Boeing and Airbus will show you nice charts showing that even with the slowing down in the economy, the capacity and the load factors on the aviation side is still fairly decent.”

Standing out from the crowd

Tan admits that competition in the lending market is fierce, with airlines enjoying “unprecedented levels of support” from financiers, including from international banks, local banks and institutional investors.

He says given the level of support from banks which have cheaper funding sources, the tier-one airlines will not be a key area of focus for NordLB.

“We’re not known in the market to be the cheapest in town and it’s unlikely that we’ll ever be,” he says.

“I think when it comes to tier-one names everybody wants to do it – new entrants, old existing players, everybody wants to do it. It doesn’t mean we don’t look at it at all; we try different ways to do it. The bank has set up a credit asset management team based largely out of Hanover to tap into the institutional investors to try and find ways to make ourselves meaningful when it comes to top-tier names. My main focus is to say we are not the cheapest in town but what we do have is good knowledge of the asset and good clients.”

Tan believes NordLB’s value to its clients lies partly in its being comfortable taking asset risk.

“When it’s a full-payout structure for a top-tier airline, we’re not going to be meaningful simply because whoever is cheapest for the day wins the deal,” he says.

“But when it comes to a lessor deal with maybe a weaker airline which requires you to take an asset risk, a balloon risk, recourse, non-recourse, portfolio financing, I think there the benefit for the advantages of cheaper banks become less critical.”

The bank has assigned two dedicated account managers to China – Wen Yu Ting and Wan Li Chng – whereas other jurisdictions are assigned just one.

“That makes a lot of sense given the number of airlines and leasing companies in China – you do need more than one person to cover it well,” says Tan.

The bank’s Singapore team consists of five people, including Tan.

The most recent hire was Chng, previously a senior member of Standard Chartered Bank’s aviation finance team, who joined NordLB in December as a director.

Jeremy Ong, formerly of Australia and New Zealand Bank, joined Tan’s team in October. Ong had been part of the corporate tax team at Ernst & Young. Nadine Limburg joined last August as an associate responsible for supporting the origination efforts of the team. She previously worked in various departments in the bank’s Hanover office.

Ting has been covering aviation finance for NordLB for nine years from Hanover. Tan credits her with developing new relationships with People’s Republic of China (PRC) clients and, in particular, with the country’s leasing companies over the past few years.

He says: “She’s done a good job in terms of opening up some of the key relationships with some of the leasing companies in China and it would be quite a waste to simply let that fall away. The decision was made that she will continue to be located out of Hanover but report to me from a marketing perspective so that we can coordinate the marketing efforts into Asia.”

Wenyu Ting, from Taiwan, is based in the company’s Hanover office.

Tan’s vision for growth in the region is based on his 15 years’ experience in aviation, though he entered the industry only by chance.

He began his career at Dresdner Bank, since acquired by Commerzbank, doing structured asset finance and cross-border leasing.

Some senior members in the bank needed an analyst to crunch numbers for the aviation department and they asked Tan if he was interested in doing it for them.

He joined them on a year’s contract and was eventually given a permanent position.

Tan also has experience working on aviation finance transactions at DVB Bank, before joining NordLB to head up its Singapore team in mid-May 2015.

NordLB did not immediately put the burden of a “huge budget” on the aviation finance team, he says, adding: “The bank has given us a reasonable budget because it wants to build the business steadily and [it wants] to build relationships with clients in this part of the world. I see that as a very positive sign of its intention to be in this part of the world in the long run.”

Last year, Tan’s team closed a lessor financing deal. This year the bank has financed the delivery of two aircraft for a lessor.

The team is “in the midst” of closing another transaction, he says, and has two mandates – one from an airline and one for a lessor. The lessor deal involves a carrier in the Americas working with a Chinese lessor.

AIRLINE CFO INTERVIEW

Buoyant Volaris eyes A320neo ownership

Fernando Suarez, chief financial officer at Mexican low-cost carrier Volaris, speaks to Joe Kavanagh about the airline's Airbus A320neo financing plans.

Volaris will become the first Mexican airline to take delivery of the A320neo in 2017. When it ordered the re-engined Airbus narrowbody in January 2012, the deal was the largest single commercial aircraft order placed by a Mexican airline.

The 2017 delivery date seemed a long way off at the time. But next year's delivery – the first of 30 of the type on order with Airbus – is now just around the corner, and will give the airline an opportunity to make an important strategic choice.

Fernando Suarez, the airline's chief financial officer, tells *Airfinance Journal* that Volaris will soon decide whether to break with tradition by taking some of its upcoming aircraft deliveries on its balance sheet.

Volaris has, so far, used the sale and leaseback markets to finance its fleet. The airline has a fleet of about 60 A320-family aircraft on lease from lessors around the world.

Suarez says that the "strong expected residual values" of these aircraft may tip the scales in favour of ownership.

However, the carrier is still evaluating its different funding options.

Financiers have signalled to *Airfinance Journal* that they view Volaris positively, opening up the possibility for the Mexican carrier to take aircraft on its balance sheet.

Suarez says: "It's more a net present value [decision] and what are the underlying assumptions on the NPV [net present value]. Clearly, residual value plays a big role."

He adds: "But we have not formally tendered for financing terms. Nor have we come to the market on Neo sale and leaseback requests for proposals (RFP). So we're in the analysis [stage]: we haven't got formal quotes yet.

"We're getting price talks from different financiers and lessors. We keep a constant dialogue with the export credit agencies (ECA) and have a rough idea on how they would view and rate Volaris. Our first Neo delivery from our orderbook is not until July 2017, so we still have over a year to refine that and form an opinion."

Attractive alternatives

Something that may dissuade Volaris from taking aircraft on its balance sheet is the strength of the sale and leaseback market.

With new entrants recently entering the space, many of which are the leasing arms of large Asian banks, the competition for new-equipment sale and leaseback deals is fierce.

While this is disrupting for the established leasing players, it is undoubtedly good news for airlines such as Volaris, which benefits from the lower lease rates.

Suarez says: "We are seeing improvements in lease terms over the last couple of years. How much can you attribute to our improved credit metrics and performance, and how much can you attribute to new money in the system? It's hard to draw a line in the sand on how much is what. But in general we've seen better lease terms in the last couple of years. Generally, they keep on getting better."

Volaris has taken some new aircraft on eight-year lease terms, sources indicate.

Although the airline is leasing aircraft from a range of lessors (see table), its 2016 deliveries will be leased from both BOC Aviation and Avolon – which this year was purchased by Bohai Leasing, a subsidiary of Chinese conglomerate HNA Group.

In terms of its pre-delivery payments, Volaris has a revolving line of credit structured by Santander and by Mexico's state-owned bank and export credit agency, Bancomext. The airline has continued the facility and will use it to finance the predelivery payments all the way into 2018.

Improving credit metrics

Volaris kicked off the year with a strong set of quarterly results, achieving record profitability and a 37.5% increase in its revenues.

The achievement is more impressive given the decline in the value of the Mexican peso, which has fallen about 21% against the US dollar year-on-year.

The decline has put pressure on the airline's dollar-denominated costs, such as lease payments, airport costs and maintenance expenses. However, its cost per available seat mile for the quarter fell 0.7% compared with the previous year, largely because of the dramatic reduction in the price of fuel.

In addition, Volaris has managed to maintain yields and improve its quarterly load factor to 85%, from 80%.

The Airline Analyst Financial Ratings Scores (TAAFRS), a unit of *Airfinance Journal*, shows an airline that is going from strength to strength. Its overall rating has jumped to "BBB" from "BB" after its first-quarter results, placing the carrier on par with the likes of British Airways and American Airlines. The boost to its financial rating, as determined by TAAFRS, takes into account Volaris' young fleet, strong earnings before interest, taxes, depreciation, amortization, and restructuring or rent cost (Ebitdar) margins and liquidity position during the last three consecutive 12-month periods.[1]

"It's [the bus market] a huge opportunity for us"

Fernando Suarez, CFO, Volaris

From bus to aircraft

During a quarterly results call with analysts in April, Enrique Beltranena, Volaris' chief executive officer, noted the strong demand environment in Mexico.

However, Mexico's "best kept secret" – as Volaris refers to it – is an underpenetrated market because of the high number of domestic bus travellers.

Through its bus-switching programme, the airline is trying to bring these passengers onto its aircraft instead. Volaris' passenger growth is partly because of this programme.

So far Volaris has had success: it states that, on certain flights, about 30% of passengers considered taking the bus before booking their flight, but chose to fly.

Suarez notes that the phenomenon of an extensive bus market is "very specific to Mexico" because of the country's developed road network and its competitive range of bus companies.

A very developed bus market serves the country's domestic travellers. About 2.8 billion domestic bus journeys were made in 2014, compared with 67 million by air. Volaris believes that many of the bus passengers can still be persuaded to travel by aircraft.

The airline is best able to compete against longer bus journeys – more than five hours – for which a shorter journey time is an incentive for passengers to switch to air travel.

Suarez adds: "It's a huge opportunity for us that we've been tapping into, and we intend to continue to tap."

Bringing passengers onto aircraft off buses will not fuel growth forever: as Mexico's economy develops, the unpenetrated market for air travel will eventually shrink to a similar level to other developed economies.

For the time being, however, Suarez says there is plenty more potential for growth. When combined with Volaris' recent results, this potential will no doubt keep financiers interested in the airline.

[1]A TAAFRs rating is a rating of intrinsic financial strength of an airline based solely on five historic ratios and indicators. It does not incorporate qualitative or forward looking criteria and is not a credit rating or an indicator of the probability of default.

VOLARIS FLEET

MSN	Aircraft type	Aircraft model	Lessor/owner	Year built
2657	A319	100	Air Lease Corporation	2005
2666	A319	100	Aircastle	2006
2771	A319	100	Archway Aviation	2006
2780	A319	100	Aircastle	2006
2979	A319	100	BBAM	2006
2997	A319	100	CIT Aerospace	2006
3045	A319	100	SMBC Aviation Capital	2007
3069	A319	100	SMBC Aviation Capital	2007
3253	A319	100	SMBC Aviation Capital	2007
3279	A319	100	SMBC Aviation Capital	2007
3450	A319	100	SMBC Aviation Capital	2008
3463	A319	100	AerCap	2008
3491	A319	100	Macquarie Airfinance	2008
3590	A319	100	Macquarie Airfinance	2008
4403	A319	100	CIT Aerospace	2010
4422	A319	100	CIT Aerospace	2010
3524	A320	200	Amentum Capital	2008
3543	A320	200	Amentum Capital	2008
3624	A320	200	Amentum Capital	2008
3672	A320	200	Awas	2008
4714	A320	200	Avolon	2011
4741	A320	200	Avolon	2011
4798	A320	200	Jackson Square Aviation	2011
4828	A320	200	Jackson Square Aviation	2011
4832	A320	200	Jackson Square Aviation	2011
4950	A320	200	Jackson Square Aviation	2011
5062	A320	200	Accipiter	2012
5207	A320	200	Jackson Square Aviation	2012
5212	A320	200	Jackson Square Aviation	2012
5308	A320	200	Gecas	2012
5322	A320	200	Gecas	2012
5337	A320	200	Gecas	2012
5391	A320	200	Gecas	2012
5488	A320	200	Gecas	2013
5510	A320	200	Gecas	2013
5595	A320	200	Gecas	2013
5651	A320	200	Gecas	2013
5776	A320	200	Gecas	2013
5793	A320	200	BOC Aviation	2013
5819	A320	200	BOC Aviation	2013
5988	A320	200	BOC Aviation	2014
5996	A320	200	Macquarie Airfinance	2014
6014	A320	200	Gecas	2014
6109	A320	200	BOC Aviation	2014
6161	A320	200	Gecas	2014
6288	A320	200	Macquarie Airfinance	2014
6321	A320	200	Macquarie Airfinance	2014
6332	A320	200	SMBC Aviation Capital	2014
6470	A320	200	SMBC Aviation Capital	2015
6610	A320	200	Avolon	2015
6705	A320	200	SMBC Aviation Capital	2015
6778	A320	200	Avolon	2015
6906	A320	200	SMBC Aviation Capital	2015
6948	A320	200	SMBC Aviation Capital	2016
6969	A320	200	SMBC Aviation Capital	2016
7000	A320	200	Avolon	2016
6558	A321	200	Air Lease Corporation	2015
6601	A321	200	Air Lease Corporation	2015

Source: Airfinance Fleet Analyst May 2016

AIRCRAFT PROFILE

A350-900 – family's most popular member

Appraisers are positive about Airbus's new widebody, which they see as a strong rival to Boeing's 787 models.

The A350-900, given the suffix extra widebody (XWB) by the manufacturer, is the first model of Airbus's new family of widebody aircraft to enter service, beginning operations in January 2015.

The A350 family also includes the smaller -800 model and the larger -1000 variant. The manufacturer says the A350-900 has a 25% lower fuel consumption than its current-generation long-range competitors.

In May, the US Federal Aviation Administration approved the A350-900 for extended-range twin-engine operations with diversion times of more than 180 minutes.

Future developments
Airbus has launched an ultra-long-range version of the A350-900. Designated as the A350-900ULR, the model offers increased fuel-carrying capacity of up to 165,000 litres and a higher 280-tonne maximum take-off (MTOW) weight to enable non-stop flights of up to 19 hours.

ISTAT APPRAISERS' VIEWS

Avitas
Martin O'Hanrahan, director, asset valuation

First entering commercial service in early 2015, the A350-900 is becoming well established in the marketplace. The order backlog is about 600 firm orders with close to 130 options.

The A350 is an advanced technology design that has been fulfilling its promise of replacing aircraft in the 767-300ER/A330-200 class and operating on long-range routes that do not warrant larger equipment. The extensive use of composite materials in the design significantly reduces overall weight and boosts performance.

AIRCRAFT CHARACTERISTICS

Capacity/range	
Max seating	475
Typical seating	311
Maximum range (standard model)	8,100 nautical miles
Technical characteristics	
MTOW (standard model)	268 tonnes
OEW	116 tonnes
MZFW	192 tonnes
Fuel capacity (standard model)	138,000 litres
Engines	Trent XWB
Thrust	84,000lbs
Fleet data	
Entry into service	2015
In service	26
Operators (current and planned)	38
In storage	1
On order	590
Built peak year (2015)	14
Planned 2016	57
Average age	0.9 years

Source: Airfinance Jounral Fleet Analyst/Aerotransport Data Bank as of 15 May 2016

Indicative maintenance reserves	
C-check reserve	$105 to $110/flight hour
Higher checks reserve	$95-$100/flight hour
Engine overhaul	$260-$265/engine flight hour
Engine LLP	$240-$245/engine cycle
Landing gear refurbishment	$150-$155/cycle
Wheels, brakes and tyres	$375-$380/cycle
APU	$105-$110/APU hour
Component overhaul	$420-$425/flight hour

Source: Airfinance Journal research/analysis

"The A350 offers operators and investors a new-technology option, which is expected to remain in production for at least another 15 years."

Olga Razzhivina, senior Istat appraiser, Oriel

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

The A350-900 has shown stability in its market value and lease rates. Operating leases for the new aircraft are about $1.2 million a month. CV expects these numbers to remain stable and even increase as the market demand for such aircraft continues to grow. Because of its efficiency, the A350 will, over the long term, replace many of the ageing aircraft types such as A340s, some A330s and older Boeing 767s and 777s.

With about 600 orders since its launch, the A350-900 has already shown great signs of success, and CV believes it will continue to do so as the fleet continues to grow and the aircraft proves itself to the industry. CV anticipates the -900 variant will remain the most popular member of the family among operators and investors, because it offers good seat-mile economics and cabin flexibility.

The A350-900 has significant competition from the 787-9, which also offers attractive performance and operating economics. Each manufacturer claims that its aircraft offers better economics over the other, but CV expects both aircraft will do very well with strong current and future demand for this type of aircraft from the global operator base.

Airbus has sold the aircraft to a wide range of operators and lessors worldwide and, in common with its Boeing rival, has been allowing airlines to open up new long-haul non-stop services with very favourable economics.

The A350 family competes directly with the 787. The first 787 came into service just over three years ahead of the first A350, and Boeing has enjoyed greater sales success with a total of more than 1,200 orders for the 787 against just over 900 for the A350 (all variants, in both cases).

The A350 is offered with a single engine option, the Rolls-Royce Trent XWB 75-97, whereas the 787 has a choice of powerplant between Rolls-Royce's Trent 1000 and General Electric's GEnx.

Within the A350 family, the A350-900 has so far been the most popular member having secured about three-quarters of total A350 orders. Boeing's forthcoming 787-10, due to enter service in 2018, will compete most closely with the A350-900.

Oriel
Olga Razzhivina, senior Istat appraiser

The A350-900 is a member of the A350 family of widebody long-haul aircraft. The A350 was originally launched in 2004 and was based around an improved A330 fuselage. However, comments from its potential customers, especially lessors, persuaded Airbus to redesign and relaunch the A350 with a wider cross-section.

The A350 is the first aircraft to be built by Airbus primarily with a carbon fibre fuselage and wings. Rolls-Royce is the sole source engine supplier, reflecting a trend in the widebody market where Rolls-Royce is aligned with Airbus and General Electric with Boeing.

The A350 only entered service in early 2015 and deliveries are yet to reach their peak; however, with about 600 orders, the backlog is strong, encompassing 36 airlines and eight lessors. Only seven orders (all for Singapore Airlines) have been placed for the ultra-long-range version.

Some carriers have reported recent delivery delays attributed to buyer-furnished equipment supply-chain problems. We believe these problems are temporary and will not affect the long-term fortunes of the type.

The A350 offers operators and investors a new-technology option, which is expected to remain in production for at least another 15 years. It is likely to become one of the more desirable long-haul aircraft for financiers.

The direct competitors to the A350-900 from Boeing are the 787-9 and -10, which offer similar capacity and range. The two families are expected to form between them the backbone of long-haul fleets for many decades to come.

However, recent months have shown that even the newest in-production aircraft are not immune to the general softening of the widebody market. Delta Air Lines has delayed delivery of four of its A350 orders, citing excess capacity. Sri Lankan Airlines cancelled four A350s and intends selling another four. Market values and lease rates have decreased, albeit only marginally.

In Oriel's opinion, the A350-900 and 787-9 are likely to be the most liquid assets in the twin-aisle category in the near-to-mid term, which should ensure good residual value retention.

VALUES AIRBUS A350-900

Current market value ($m)

Build year	2014*	2015	2016
Avitas view	120.6	129.8	140.1
CV view	–	130.5	150.0
Oriel view	125.0	135.0	146.1

Assuming standard Istat criteria. Maintenance status assumes half-life, except for new aircraft, which assumes full-life.

Indicative lease rates ($ms/month)

Build year	2014*	2015	2016
Avitas view	0.95-1.05	1.01-1.11	1.07-1.17
CV view	–	1.05	1.20
Oriel view	1.00	1.05	1.15

*Monthly rental will vary according to factors such as term and lessee credit. *Build year 2014 (delivery 2015)*

DEAL WATCH

LOANS/FINANCE LEASES

Borrower	Country	Asset	Amount	Structure/status (closed unless stated)	Arranger	Debt/Equity
May 2016						
Air France	France	1x777-300ER	$163.1m (CMV*)	Euro/Yen Jolco	CA-CIB	CIC, DBS and CA-CIB
Virgin Atlamtic	UK	1x787-9	$136m (CMV*)	Jolco	FPG AIM	DVB, FPG
CMB Financial Leasing	China	2x777-300ER	Undisclosed	Senior loan facility	ANZ Bank, DVB, Helaba	
April 2016						
Aercap	Netherlands	Unsecured	$700m	Credit facility	Coordinators: CTBC Bank, DBJ, DBS Bank	Mandated lead arrangers: Tokyo-Mitsubishi UFJ, National Australia Bank, China Construction Bank, Bank of East Asia, Tokyo Star Bank
Aircastle	USA	Unsecured	$120m	Senior unsecured term loan	Development Bank of Japan	
Etihad Airways	Abu Dhabi	2x787-9	$272m (CMV)	Jolco	SMFL	
FPG/ FPG Amentum	Ireland	Unsecured	JPY11bn ($101.4m)	Warehouse credit facility	SMBC, SMTB, Aozora Bank, Gunma Bank, Shizuoka Bank	
American Airlines	USA	1x737-800	$35m	Mortgage	CA-CIB	
March 2016						
THY	Turkey	1x737-800	$47m (CMV)	Jolco	ING, Natixis	ING, Natixis/Century Tokyo Leasing
British Airways	UK	787-9	$136m (CMV*)	Jolco		SMBC, Mitsubishi UFJ/ Century Tokyo Leasing, Fuyo General Lease
Aircastle	USA	Unsecured	$500m	Senior notes due 2023	Deutsche BNP Paribas, Citi, Credit Agricole Goldman Sachs, JP Morgan Mitsubishi UFJ, RBC	
Air India	India	3x777-300ER	$155m	PDP finance	Deutsche Bank	
Awas	Ireland	1xA320	undiclosed	Long-term finance	CA-CIB	
Fly Leasing	Ireland		$385m	Blind pool	Commonwealth Bank of Australia Bank of Tokyo-Mitsubishi UFJ, New York Life Insurance Company, National Australia Bank	

EXPORT CREDIT DEALS

Borrower	Country	Asset	Amount	Structure/status (closed unless stated)	Arranger/status (closed unless stated)	Debt
April 2016						
Silk Way Airlines	Azerbaijan	2x747-8Fs	$761m (at list prices)	ECA-backed Italian tax lease	SG-CIB	
February 2016						
Air Cote D'Ivoire	Ivory Coast	4xQ400	$87m (CMV*)	Secured loan	EDC	
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	

DEAL PIPELINE (MANDATES)

Borrower	Country	Asset	Structure	Amount	Status
March 2016 to May 2016					
Biman Bangladesh Airlines	Bangladesh	3x737-800	Commercial/Ex-Im	$21m per aircraft	RFP issued
Spirit Airlines	USA	10xA320, 4xA321	Lease or financing	$652m (CMV*)	Mandated
Shenzhen Airlines	China	6xA320-200, 2x737-800	Finance leases	$360m (CMV*)	Mandated
Saudia	Saudi Arabia	New aircraft	Sukuk bond	5 billion riyal ($1.3bn)	Mandated (sale H2 2016)

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

DEAL WATCH

CAPITAL MARKETS

Borrower	Country	Asset/Security	Amount	Structure/status (closed unless stated)	Arranger/status (closed unless stated)	Coupon/Rating
May 2016						
ICBC	China	Unsecured	$1.3bn	Tri-tranche bond /three-year, five-year, ten-year maturity	ICBC, Goldman Sachs, Morgan Stanley, HSBC, ANZ, Citigroup, Merrill Lynch, Wells Fargo Securities	2.375%, 2.75%, 3.265%/A- (S&P)
Boeing	USA	Unsecured	$1bn	Unsecured notes/ 2023, 2026, 2046	Bank of America	
Airbus	France	Unsecured	€1.5bn	Bond/ A:10 yr, B:15yr	BNP Paribas, CA-CIB, Deutsche Bank, Mitsibushi UFJ	A:0.875%, B:1.375%.
American Airlines	USA	22 aircraft	$829m (AA:$567.36m/ A:$261.28m)	EETC/2028	Credit Suisse, Deutsche Bank	3.2%/AA , 3.65%/A
Norwegian	Norway	10x737-800	$349.1m (A:$274.3m, B:$74.8)	EETC	Morgan Stanley	A:4.875%/Baa3, A (Moody's, Fitch) B:7.50%/Ba3, BB- (Moody's, Fitch)
Gol	Brazil	Spare parts	To be confirmed	Secured notes exchange/2028		8.50%
April 2016						
BOC Aviation	Singapore	Unsecured	$750m	Senior notes	BOC International, Citigroup, Goldman Sachs, HSBC, JP Morgan, Morgan Stanley, BNP Paribas, Wells Fargo Securities	3.875%
March 2016						
Aircastle	USA	Unsecured	$500m	Senior notes	Deutsche, BNP, Citi, Credit Agricole, Goldman Sachs, JP Morgan, Mitsubishi UFJ, RBC	5.00%
Apollo	USA	32 aircraft	$510m (A:$395m, B:$80m, C:$35m)	ABS	Goldman Sachs	Pricing TBD

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SALE/LEASEBACKS

Borrower	Country	Asset	Lessor/Arranger	Amount	Status
May 2016					
Emirates	Dubai	4xA380	Investec	Undisclosed	
Indigo	India	A320neo	Avolon	$107.3m (2016 list)	
April 2016					
Thomas Cook	UK	A321	Avolon	Undisclosed	
Emirates	Dubai	2x777-300ER	EMP Structured Assets	Undisclosed	
Virgin Atlantic	UK	1x787-9	Avolon	$136.2m (2016 CMV*)	
March 2016					
Emirates	Dubai	1xA380	AFC	$221m (CMV*)	

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

RATINGS

AIRLINE FINANCIAL RATINGS

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

Source: Ratings Agencies - 25th May 2016

LESSOR CREDIT RATINGS

Lessor	Fitch	Moody's	S&P
AerCap	BB+(pos)	Ba1(stable)	BBB-(stable)
Air Lease Corp	-	-	BBB-(pos)
Aircastle	-	Ba1(stable)	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)	-	Ba1(stable)	-
SMBC Aviation Capital	BBB+(stable)	-	BBB+(stable)

Source: Ratings Agencies - 25th May 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	BBB-(stable)	Ba1(neg)	BBB(neg)
Rolls-Royce	A(neg)	A3(stable)	A-(neg)
United Technologies	A-(stable)	A3(stable)	A-(stable)

Source: Ratings Agencies - 25th May 2016

AIRCRAFT ORDERS

COMMERCIAL AIRCRAFT ORDERS BY MANUFACTURER

	Gross orders 2016	Cancellations 2016	Net orders 2016	Net orders 2015
Airbus	117	25	92	117
Boeing	183	26	157	183
Bombardier	136	0	136	136
Embraer	30	0	30	30
ATR	40	0	40	40

Based on Airfinance Journal *research and manufacturer announcements as of May 18*

COMMERCIAL AIRCRAFT ORDERS BY CUSTOMER

Customer	Country	Quantity/Type
March 2016 to May 2016		
Trident Jet	UK	4xCRJ900
Delta Air Lines	USA	37xA321ceo
China Eastern	China	20xA350-900
Avianca	Colombia	3xA320neo
Air Cote d'Ivoire	Ivory Coast	2xA320ceo, 2xA320neo
Delta Air Lines	USA	75xCS100
Chorus Aviation	Canada	5xCRJ900
Xiamen Airlines	China	10x737-800
airBaltic	latvia	7xCS300
Horizon	USA	30xE175
Emirates	Dubai	2xA380
Garuda	Indonesia	14xA330-900
CSA	CZ	7xA320neo
Pegasus Airlines	Turkey	5x737-800
Air China	China	12xA330-300
United Airlines	USA	25x737-700

CURRENT PRODUCTION AIRCRAFT PRICES AND VALUES ($ MILLIONS)

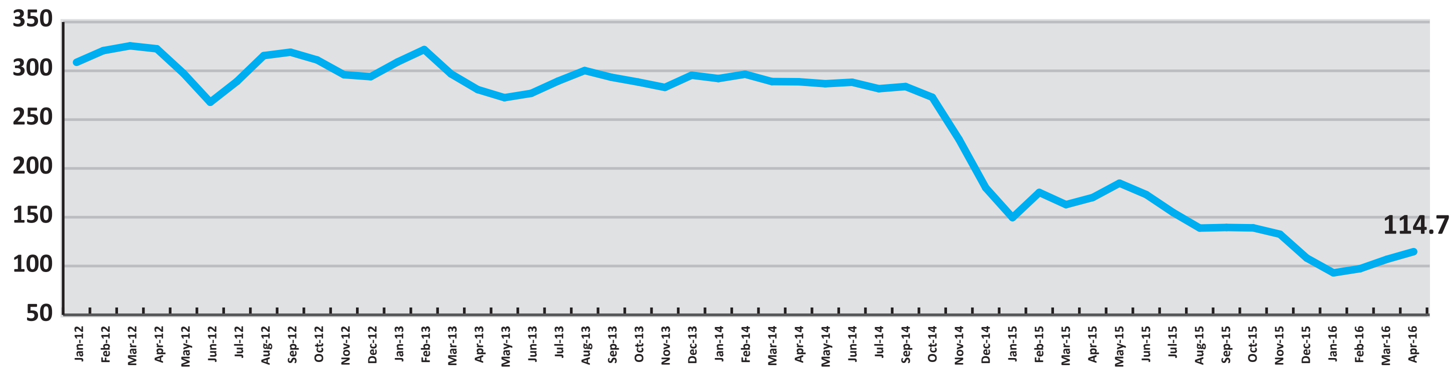
Model	List price	Current market value*
Airbus (2016 price)		
A319	89.6	37.0
A320	98.0	44.2
A321	114.9	52.6
A330-200	231.5	92.3
A330-300	256.4	104.4
A350-900	308.1	144.5
A380	432.6	221.4
ATR (2015)		
ATR42-600	21.6	16.4
ATR72-600	25.9	20.4
Boeing (2015)		
737-700	80.6	36.7
737-800	96.0	47.5
737-900ER	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 Max 7	90.2
737 Max 8	110.0
737 Max 9	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 2016

PILARSKI SAYS

Conflict between Airbus and Boeing threatens to burst bubble

The behaviour of the big two manufacturers could prove a problem for the market, writes Adam Pilarski, senior vice-president at Avitas.

A number of strange developments are happening relating to a potential bubble in aircraft production, especially in the narrowbody segment. Some data are beyond contestation. The number of aircraft ordered from Airbus and Boeing is very high compared to the current production levels. This results in historically record backlogs leading to unreasonably long times customers have to wait when ordering new equipment. Hence, the tremendous and real pressure on Airbus and Boeing to raise production levels, a pressure that resulted in announcements by both competitors to increase production levels significantly.

An alternative interpretation of the existing realities is the stipulation of an order bubble, which may lead to a production bubble. More analysts have been moving in that direction which, incidentally, does not imply a miserable long-term future for aviation.

That alternative view does imply special circumstances that contributed to the huge aircraft order surge. These include historically high oil prices and low cost of money, temporary involvement of governments in new aircraft financing and the emergence of new engine technology, together with redesigns of existing platforms, all spurring huge orders. Some of these special circumstances have changed, or are in the process of changing, casting doubt on the longevity of those record orders placed.

Some of the changes in the environment are of the traditional kind of increased uncertainties, which threaten a burst of the existing bubble. These include regional recessions, the potential of a full-blown downturn in world economic activity and various political conflicts threatening the viability of tourism and world airline traffic.

Additionally, there are two other aspects of the situation I want to comment on, both of which have a tremendous impact on the demand/supply balance in the industry. One is the recent Delta order of 75 CSeries aircraft from Bombardier and the other is the increasingly acrimonious competition in the narrowbody market between Airbus and Boeing, which can lead to tactical mistakes by either party.

The Bombardier CSeries is a good aircraft, which until recently had not been selling too well. When launched it was seen as a very viable competitor to the Airbus and Boeing narrowbody offerings. Many analysts believe that the Neo and Max versions were launched as a direct result of the CSeries, with the rationale of offering proven equipment with new engines to take away the main advantage the Bombardier product had over the incumbents. The Neo and Max were very successful, selling thousands at reasonably low prices.

Bombardier insisted on relatively high prices for an unproven but excellent product. The world does not work like this. We can only assume that the Delta sale involved very substantial discounts, meaning that Bombardier will follow a different strategy from now on. Instead of providing a superb product at a premium price, the manufacturer will most likely try to sell a substantially larger number at lower prices and hope it will be able to deliver those sold aircraft at a reasonable cost. This new reality will impact Airbus and Boeing significantly.

Airbus and Boeing have a tendency to dismiss other manufacturers. This was evident when for years both pursued a policy of claiming half of the world market. Unfortunately for them, there are other producers in the world which also believe they are a part of the market. Fortunately for them, so far their so-called rivals' products, price and customer support do not match their lofty ambitions. The fact remains that when you look at Airbus and Boeing production assuming new rates, there does not seem to be room for other manufacturers. With Bombardier's success at Delta, future sales are fairly obvious and the net market remaining for the two existing major producers will shrink.

The whole concept of a bubble relies on some irrational behaviour. The duopolists need to be certain they will not lose a competition because of the inability to offer aircraft. Even if they do not believe the macro forecasts, they need to increase theoretical rates to remain in the competition. Not having aircraft to offer will surely lead to losses and may force them out of the market.

The problem is that both duopolists have a different vision of reality. Airbus's Neo has outsold the Max 4,515 to 3,090 as of the end of April. The difference is even more pronounced with the largest version of the aircraft, where the A321neo has outsold the 737 Max 9 by 1,114 to 294. Boeing believes this is a temporary phenomenon because of a head start Airbus had from December 2010 to August 2011. The head start though was of 788 units which since then has swollen to 1,425 units lending some credence to Airbus' claim of a superior product. Hence Airbus believes it has the right to increase its rate and Boeing does not. Boeing does not share that view.

Such a situation does not bode well for the future, because the irrational behaviour of the duopolists may lead to unnecessary production increases, a market share battle and an eventual burst of the bubble.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