

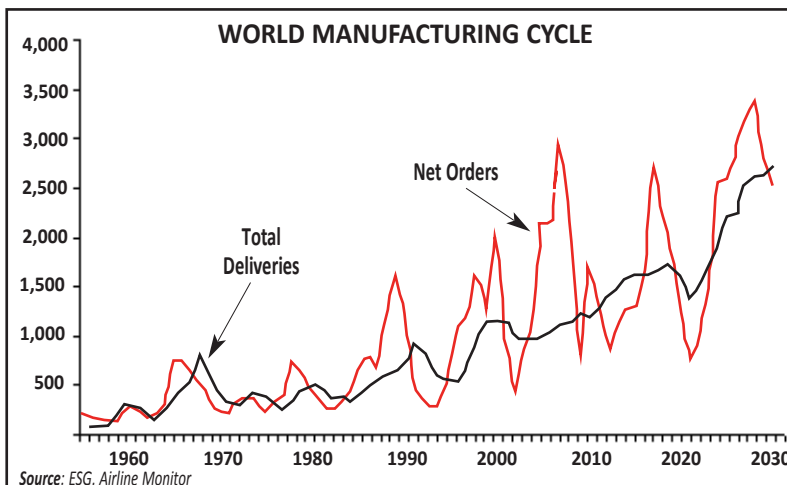
## Re-engined types and the delivery cycle

So Boeing has finally succumbed to the pressure from Toulouse and despite many expectations announced a re-engined option for the 737NG family – under the soubriquet of 737 MAX.

Boeing is promising a 16% reduction in fuel spend per seat (and an extra 4% advantage against the A320neo) – using the CFM Leap-1B (against Airbus's choice of the PW1100G) – and expects deliveries to start in 2017 (more than a year after the expected first A320neo). After the success of the A320neo launch – since December 2010 there have been an unprecedented number of orders for over 1,000 aircraft – the Boeing board obviously finally decided that an all-new product offering in the short-haul, work-horse section of the industry (nicknamed the Boeing Y1) would leave it with too much of a product disadvantage. As such a product would probably not be in production until the early 2020s and after billions of R&D; and the engine technology required to achieve the fuel cost savings to provide a truly significant product advantage still remains on drawing boards.

In doing so it may have given up the idea in the short run of producing a new short-haul single aisle aircraft design as a significant step change to differentiate its offering from its competitors; and these competitors in the short-haul product market are expanding, with the C-Series from DHC, the Superjet from Sukhoi, MS-21 from Irkut, MRJ from Mitsubishi and the C919 from COMAC of China. At the 737 MAX announcement, Boeing also stated that it had received order commitments for nearly 500 units of its new offering.

Meanwhile concerns may be emerging over potential overcapacity resulting from the current order backlog; a recent report



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## CONTENTS

### Analysis

Jet backlog **1-3**

Lessors react to growing fleet flexibility: GECAS, ILFC, BBAM, AerCap, CIT Aerospace, Boeing Capital Corporation, Aviation Capital Group, RBS Aviation Capital, AWAS, BOC Aviation and more **4-15**

### Briefing

Japan Airlines and All Nippon Airways implement LCC JVs: Peach Aviation, AirAsia Japan and Jetstar Japan **16-23**

**Databases** **24-27**

European, US and Asian airline traffic and financials

Regional trends

Orders

## PUBLISHER

### Aviation Economics

James House, 1st Floor  
22/24, Corsham Street  
London N1 6DR

Tel: +44 (0)20 7490 5215  
Fax: +44 (0)20 7490 5218

email: [info@aviationeconomics.com](mailto:info@aviationeconomics.com)

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**Publisher:**

Keith McMullan  
kgm@aviationeconomics.com

**Contributing Editor:**

Heini Nuutinen

**Production Editor:**

Julian Longin  
jil@aviationeconomics.com

**Subscriptions:**

jil@aviationeconomics.com

Tel: +44 (0)20 7490 5215

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Registered No: 2967706  
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**Registered Office:**

James House, 1st Floor  
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from UBS estimated that the backlogs at the two main manufacturers were over-ordered by around 15-20% (or that the backlog if delivered would have to be supported by a compound annual growth in traffic of some 7% over the next five years) and suggested that a large portion of this excess would be deferred or cancelled. Their analysis highlighted that of all the regions only North America had not ordered enough equipment (albeit this was done before the recent American Airlines order) while their calculation of the total potential excess capacity in the backlog of some 1,200 units roughly matched the then total backlog ordered by leasing companies.

This sort of analysis is notoriously awkward – and depends on so many assumptions of medium-term growth rates, load factors, retirement and scrappage rates.

ESG's *Airline Monitor* on the other hand is more sanguine in its latest market forecast (although done before the Boeing re-engineing decision). A major element of its analysis and forecasts works on the basis of ideal supply (based on optimum aircraft performance) and perennially shows a year-end capacity "surplus" in the industry; the lowest surplus (1% of supply) was achieved in the peak industry years of 1997 and 1998 – while in the past two years this surplus has averaged 11%. ESG's assumptions – more bullish than even Boeing's for the next twenty years with forecast RPK growth of 5.5% – suggest this "surplus" declining over the next five years to below 5%.

At the moment there are nearly 8,500 aircraft on firm order by passenger and freight operators (43% of the operational fleet at the end of 2010), three-quarters of which are due to be delivered before the end of 2017; after a dip in 2009 the total number of aircraft orders bounced back to over 1,600 units in 2010 and appears likely this year also to exceed the 1,200 mark. It is easy to be beguiled by gross statistics but this backlog works out as potential annual deliveries of no more than 6% of the fleet; similar to the historic average rate of new deliveries required for replacement and growth.

However, the backlog at the end of 2010 accounted for an estimated and unprecedented 7.4 years of deliveries (up to 2005

the industry averaged a backlog of 3.3 years of production) showing that at least in this cycle the two main manufacturers may have been showing unusual restraint in restricting production (although both are planning increases in production rates); and the absolute size of the current backlog is nearly three times the size it was in 2003 – the trough of the last order cycle.

Leasing companies appear to account for around 20% of the total backlog; and of the airline orders (where the operator is known) 32% are from carriers based in Asia, 21% in Europe and 24% in North America (and that includes the AA order). Of the aircraft types in the backlog, 71% are represented by the short-haul single aisle (and 61% for the A320 or 737) while 27% for the major manufacturers' twin-aisle offerings. Of the 230 named airline operators' orders over 40% of the total backlog is represented by 25 airlines (and 80% of the total by 80 airlines) and the largest single aircraft orders are from AirAsia (311 units, or 3.6%), American Airlines (292), IndiGo (232) and Emirates (189); although to be fair AirAsia's backlog extends through to at least 2025.

Meanwhile, in its 2011 Current Market Outlook, Boeing has raised its forecast for deliveries over the next twenty years by a little under 10% from the 2010 CMO figures. This is partly based on a slightly higher rate of growth forecast for the world economy at around 3.3% a year, and generates a forecast rate of demand growth in RPK of around 5.1% a year. It has also raised its expectations for demand for single aisle aircraft to 70% of total deliveries, (compared with the current order backlog of 72% of the total) and slightly reduced its forecast of widebody deliveries as a proportion to 24% of the total.

The largest changes are on the estimates of delivery by region – (reflecting greater optimism in the BRIC economies) with forecasts of Asia Pacific deliveries raised by over 10% (to account for 34% of future aircraft unit demand, with China alone accounting for 5,000 future deliveries or 15% of the total), LatAm deliveries by nearly 18% (8% of the total) and CIS up by 12% (3% of the total). It has also raised its forecasts for

# Aviation Strategy

## Analysis

JET AIRCRAFT BACKLOG								
Aircraft Family	2012	2013	2014	2015	2016	2017	Post 2017 or undated	Total Backlog
<b>A320</b>	467	473	415	312	220	203	769	<b>3,035</b>
<b>A330</b>	115	115	56	10	5		0	<b>342</b>
<b>A340</b>							4	<b>4</b>
<b>A350</b>		5	39	47	84	115	273	<b>563</b>
<b>A380</b>	31	28	31	25	19	14	18	<b>181</b>
<b>B737</b>	391	375	350	334	245	127	225	<b>2,185</b>
<b>B747</b>	26	22	23	8	4	2	5	<b>105</b>
<b>B767</b>	20	13	4				0	<b>47</b>
<b>B777</b>	71	92	60	50	10	3	2	<b>314</b>
<b>B787</b>	67	96	139	146	133	78	151	<b>819</b>
<b>C919</b>					10	16	19	<b>45</b>
<b>CRJ</b>	16	11	3	11	1		4	<b>61</b>
<b>C- Series</b>		1	28	42	38	13	11	<b>133</b>
<b>ERJ</b>	81	27	20	17	14	8	21	<b>253</b>
<b>MRJ</b>			14	32	19		0	<b>65</b>
<b>MS21</b>					6	14	108	<b>128</b>
<b>SSJ</b>	22	36	52	45	24	22	3	<b>213</b>
<b>Other</b>	66	41	31	28	3	3	10	<b>198</b>
<b>TOTAL</b>	<b>1,373</b>	<b>1,335</b>	<b>1,265</b>	<b>1,107</b>	<b>835</b>	<b>618</b>	<b>1,613</b>	<b>8,493</b>
<b>% fleet</b>	6%	6%	5%	4%	3%	2%	6%	
<b>Airbus</b>	613	621	541	394	328	332	1,064	<b>4,125</b>
<b>Boeing</b>	575	598	576	538	392	210	383	<b>3,470</b>
<b>Other</b>	185	116	148	175	115	76	166	<b>898</b>

Source: Ascend Online

Europe and North America but only by around 5%, highlighting a continued shift away from the more mature markets (for 2011 to 2030 it is forecasting a modest average 2.3% growth in North American traffic, 3.6% growth on the North Atlantic and 4% within Europe). At the same time its long range forecasts for deliveries assume a geographical distribution not noticeably different from the make up of the current order backlog.

Aircraft deliveries had been fairly static through the 2000s, averaging around a 1,000 units each year; and the peak to trough decline in deliveries of a mere 5% showed a remarkably shallow cycle (in the previous three cycles this ratio has run at a "normal" 25%-40%). Of course this remarkable constraint by the manufacturers through this cycle has allowed the backlog to build to record levels in both terms of a percentage of the fleet and in absolute

numbers. The manufacturers however will have to increase their production rates to meet medium term forecasts – and *Airline Monitor* is assuming average aircraft deliveries of nearer 1,500 units a year through to 2020 with a peak of 1700 units by the end of the decade - although the manufacturers may decide that it need not be necessary to aim to fulfil every single order.

The current backlog may represent an element of over-ordering and could, if fully delivered, engender a period of overcapacity. At the same time it could well be that changing perceptions of the long range price of fuel (and in Europe the introduction of the ETS) further accelerates decisions to retire older aircraft earlier and that this may give operators greater leeway to maintain balance.

By James Halstead,  
jch@aviationeconomics.com

## The lessors react to growing fleet flexibility

The leasing industry has continued its steady recovery in 2011, with customer demand, lease rates and lease contract lengths all moving in the right direction. That's not to say there aren't massive challenges ahead for the industry, but rather that the doom and gloom that abounded two or three years ago has now largely dispersed.

The good news for the industry is that the deep aviation recession appears to have effected a strategic change in many airlines, in that there has been a conscious decision by many major airlines to retain more flexibility in their fleets – which of course means a larger proportion of leased aircraft.

In previous cycles the rush to leased aircraft in a downturn is usually reversed as the aviation cycle turns upwards, but this time around airlines appear more skittish about fuel prices and the strength of recovery, which may account for a sustained interest in a higher proportion of leased aircraft.

Though accurate figures are notoriously difficult to calculate, the proportion of the global fleet that is leased has risen to around 34%-36%, although this does vary considerably by region, with Europe leading the way with more than 42% of its fleet being leased, followed by the Asia/Pacific region with 38%-40% and falling to 24%-26% in both the African and North American markets.

On the downside, while traffic is continuing to rebound, the price of oil remains a huge concern to airlines and lessors alike, although this is accelerating the drive to designing and releasing new, more fuel-efficient models from the manufacturers.

### Ambiguous reaction to neos

That's both an opportunity and threat to the lessors. While older, classic narrowbodies continue to be retired, it's still too early to say how excited the leasing world will be by the Airbus A320neo programme or Boeing's new 737 MAX family. Some lessors are concerned

about the effect the new aircraft will have on the residual values of the existing A320 family, which will be 15% less fuel efficient than the neos. A large swathe of new (non-neo) narrowbody aircraft is due to be delivered over the next 24 month period. About half of the entire narrowbody backlog (3,800 aircraft in total) is scheduled for delivery by 2013, with Asia/Pacific and European airlines accounting for most of these. Similarly, an estimated 42% of the widebody backlog (2,200 aircraft) will be delivered by 2013.

As has occurred many times before in the down cycle, the traumatic market conditions of the last few years have proved ideal opportunities for existing and new lessors backed by deep pockets to pick up cheap assets. The market has even recovered enough for ILFC to join the ranks of those placing new orders, which surely is the surest sign yet that everything is almost back to normal in the leasing industry.

New entrants such as Air Lease, Jackson Square and Avolon are forging ahead with their fleet expansion and have already established themselves as mid-ranking lessors, while new entrants are still emerging, such as Infinity Aviation Capital.

Merger speculation is still doing the rounds in the industry, and after an unsuccessful attempt last year RBS is again trying to offload RBS Aviation Capital - and this time it should succeed in finding a buyer. If Terra Firma could combine RBS Aviation Capital with AWAS that would create the third-largest lessor behind only the "Big Two" of GECAS and ILFC. There is sure to be interest from other potential acquirers, including Macquarie Group, perhaps looking for a second major aircraft acquisition in under two years, but whether the Chinese will be interested is open to doubt. While they have deep pockets, the likes of BOC Aviation are probably more interested in organic growth and slowly expanding their office network and reach outside of the Asia/Pacific region,

rather than making a lumpy (and risky) acquisition.

In *Aviation Strategy's* annual survey of the leasing industry (see tables, pages 7/8), the overall fleet has continued to grow, rising from 7,308 aircraft as of a year ago to 7,352 at present. It's still a very concentrated industry, with the grip of the top 10 lessors tightening further – together they now account for 68% of the total lessor fleet, compared with 67% a year ago. And the Big Two – GECAS and ILFC – together account for no less than 39% of the total lessor fleet (the same proportion as 12 months ago).

However, the outstanding order book has eased back slightly, with new orders from ILFC and others being outstripped by deliveries and cancellations, so that there are currently 1,171 outstanding orders from lessors, compared with 1,189 as of 12 months ago (see *Aviation Strategy*, September 2010).

### GECAS

General Electric Capital Aviation Services (GECAS) has kept its portfolio steady over the last 12 months at 1,530 owned and 300 managed aircraft, but comfortably retains its position as the world's largest lessor, backed by the might of parent company GE, the finance, services and technology conglomerate that employs no fewer than 300,000 people worldwide and has a turnover of more than \$150bn.

In the second quarter of 2011 GECAS saw revenue increase by 5% to \$1.3bn, with net profit up 11% to \$321m. As at June 30th GECAS's assets were valued at \$48.8bn, slightly up on the \$48.6bn value as 12 months earlier.

The portfolio has an average age of seven years, although by value 47% of the fleet is five years old or less, 33% is aged between six and 10 years, 12% is between 11 and 15 years, while 8% is aged 15 years or more. Narrowbodies account for 58% of the fleet, with 20% being widebodies, 12% RJs and 10% cargo variants. All but 8% of the narrowbody fleet are A320 family and 737NG aircraft, while the widebody fleet consists largely of A330s, 767s and 777s.

Based in Stamford, Connecticut, and with 24 other offices around world, GECAS's staff of

480 have placed this portfolio with 245 airlines in 75 countries. The US remains the single most important market for GECAS, although its percentage share (as measured by value of the overall fleet) has fallen yet again, to 30% (compared with 32% last year and 47% in 2009), as a result of the lessor's strategy to spread its business (and risk) more evenly through the globe. After the US, the next most important market is Europe (22% of overall fleet value), followed by the Asia/Pacific region (20%), the Americas (13%) and all other markets (15%).

Over the year-to-date GECAS has placed a raft of new orders, including 12 A330s in January, 10 777-300ERs in March, and 60 A320neo family aircraft (available from 2015 onwards at the earliest) as well as eight 777-300ERs and two 747-8 freighters in June.

GECAS's current order book now stands at 244 aircraft, comprising 94 Boeing aircraft (72 737s, two 747s and 20 777s) and 150 Airbus aircraft (138 A320s and 12 A330s). That's the second year in a row the order book has jumped significantly (it stood at 211 a year ago and 145 in mid-2009) although it is now only marginally ahead of the order book of the other "Big Two" lessor - ILFC.

### ILFC

AIG's inability to find a trade buyer or private equity house willing to digest the massive portfolio of International Lease Finance Corporation (ILFC) has forced a strategic rethink, and the latest plan, announced in July, is to carry out an IPO at ILFC, potentially to be completed before the end of the year. A reported 25% of ILFC will be offered at a price of up to \$2bn, which if successful will help ease the financial pressures on the company.

In the meantime continued fleet trimming has seen the portfolio fall from 946 owned and 103 managed aircraft as of a year ago (a total of 1,049 units) to 937 owned and 90 managed aircraft as at the end of June (a total of 1,027 aircraft), which have an average age of seven and a half years. The owned fleet has an asset value of \$37.7bn, but as the portfolio fleet has contracted so have revenues. In the first six months of 2011 ILFC saw revenue fall

by 5% to \$2.3bn, although net profit rose from \$47.9m in the first six months of 2010 to \$146.4m in the first six months of 2011.

At least ILFC is now back in the market for new orders. After a peak in its order book of 360 aircraft in 2004, the total had fallen since then to a low of just over 100 aircraft as of a year ago. However, earlier this year ILFC placed its first order for new aircraft since 2007 - in March the lessor ordered 75 A320neos and 25 A321neos for delivery between 2015 and 2019 (although at the same time it also cancelled an existing order for 10 A380s). In the same month it also placed an order for 33 737-800s, for delivery during 2012 to 2019.

At an estimated value of \$7.5bn, these first quarter orders were made possible by a raft of new finance deals and aircraft sales over the past 12 months that have raised \$16bn in funding. For example, in March ILFC raised a \$1.3bn loan from a consortium of 15 banks globally, although this will be used to repay bank facilities that mature in 2011 and 2012.

The order book now stands at 233 (compared with 115 a year ago), including those 100 recently-ordered A320neo family aircraft, six A350-800s, 14 A350-900s, 39 737s and 74 787s. These will all be delivered in the period through to 2019, and have an aggregated purchase value of \$17.6bn.

### BBAM

BBAM is a San Francisco-based lessor that manages a fleet of 380 aircraft, valued at approximately \$11bn, and placed with clients that include BA, Ryanair and easyJet in Europe, Air China and China Southern in the Asia/Pacific region and United and Delta in the Americas. BBAM has nine other offices around the globe, including London, Dubai, Singapore and Tokyo, and has outstanding orders for 18 737s.

The lessor is 85% owned by its management, led by CEO Steve Zissis, and 15% by Dublin-based Fly Leasing, which was previously known as Babcock and Brown Air until changing its name in June 2010, and for whom BBAM manages its portfolio of 62 aircraft. The Fly Leasing portfolio consists largely of A320 family aircraft and 737s, with a

handful of widebodies, and is placed with 24 airlines globally.

### AerCap

Following the merger of Dutch-based AerCap with Genesis Lease last year, its fleet has now grown to 335 owned and managed aircraft, with a total asset value of \$9.3bn. The average age of the owned fleet is 5.4 years, which includes A320 family aircraft, 737 NGs and Classics, 757s, MD-80s, MD-11s, A330s and 767s. The lessor has four A330s and 10 737-800s on order.

The portfolio is currently placed with 114 airlines in 49 countries, the majority of which are based in Europe (48 customers, including Air France, easyJet, Aeroflot and Virgin Atlantic), followed by North and South America (30, including United, Southwest and Virgin America), the Asia/Pacific region (29, including JAL, Air China and SIA), the Middle East (five) and Africa (two).

AerCap also has offices in the US, UK, Ireland, China, the UAE and Singapore, and in the first six months of 2011 the lessor saw revenue fall 24% to \$727m, though this was due largely to \$254m less of revenue from the sale of aircraft in the second quarter of 2011 compared with the same period in 2010. At the net level, profit rose 24% to \$103m, and AerCap has considerable cash reserves, amounting to more than \$0.5bn as at the end of June 2011. In August AerCap announced a new share repurchase programme, with just under \$49m of shares authorised to be bought and cancelled by the end of the year.

In August AerCap agreed a deal to sell its AerTurbine subsidiary to ILFC for \$228m, which will be completed by the end of 2011. Miami-based AerTurbine was bought by AerCap in 2006 and specialises in engine leasing and trading, as well as airframe and engine disassembly. AerCap says the company was bought to help the lessor manage its older aircraft, but now that the proportion of older aircraft in its portfolio has decreased it makes strategic sense to dispose of AerTurbine, with funds raised going to portfolio development.

### CIT Aerospace

Part of the CIT Group, CIT Aerospace has

# Aviation Strategy

## Analysis

THE LESSORS' FLEETS				
Company	Fleet Total	Boeing orders	Airbus orders	Total orders
GECAS	1,830	94	150	244
ILFC	1,027	113	120	233
BBAM	380	18		18
AerCap	335	10	4	14
CIT Aerospace	310	54	43	97
Boeing Capital Corporation	278			
Aviation Capital Group	245	61	57	118
RBS Aviation Capital	236	38	52	90
AWAS	209	30	75	105
BOC Aviation	175	13	42	55
Macquarie AirFinance	159			
Aircastle	136		3	3
BAe Systems Asset Management	112			
MC Aviation Partners	100			
ORIX Aviation	94			
Sumisho Aircraft Asset Management	90			
Avolon	80	12	8	20
Pembroke	76			
Hong Kong Aviation	70			
Airplanes Group	69			
Sky Holding	65			
Air Lease Corporation	65		53	53
World Star Aviation	54			
ICBC Leasing	54			
Aergo Capital	53			
Aircraft Leasing and Management	53			
CDB Financial Leasing	52			
Volito Aviation Services/VGS	50			
Global Aviation Asset Management	49			
Guggenheim	49	2	2	4
Alafco	47	14	19	33
DAE Capital	46	21		21
Compass Capital	45			
Amentum Capital	40			
Jetscape	40			
BCI Aircraft Leasing	32			
SkyWorks Leasing	30			

a portfolio of 310 narrowbody and widebody aircraft, slightly higher than the 300 aircraft it owned or managed a year ago. They are placed with 120 airlines in 45 countries, and served from CIT Aerospace's New York headquarters as well as offices in Florida, Los Angeles, Dallas, Connecticut, Dublin and Singapore.

The fleet is a mixture of types, from 737s and A320 family aircraft to A310s, A330s, A350s, 747s, 777s and CRJ-100s. CIT Aerospace has 97 aircraft on order, including

44 737s, 10 787s, 25 A320 family aircraft, 13 A330s and five A350s.

### Boeing Capital Corporation (BCC)

Boeing Capital Corporation continues its traditional role of providing "last resort" finance for the entire range of Boeing products, from aircraft to space and defence. Headquartered at Renton, Washington, its 160 employees are also based at offices in Los Angeles, St. Louis, Moscow and Hong Kong. In

# Aviation Strategy

## Analysis

THE LESSORS' FLEETS (cont.)				
Company	Fleet Total	Boeing orders	Airbus orders	Total orders
Jackson Square Aviation	30			
Q Aviation	26			
AAR	26			
Doric Asset Finance	26			
Vx Capital Partners	23			
GA Telesis	22			
Goal	22			
AerVenture	22		5	5
First Greenwich Kahala	22			
Mitsui Bussan Aerospace	21			
Deucalion Capital	21			
Automatic	20			
Global Knafaim Leasing	18			
GMT Global	18			
Aldus Aviation	16			
Waha Capital	16			
Deutsche Bank Equipment Leasing	16			
Veling	15			
Bavaria	15			
Novus Aviation	15			
Skytech-AIC	15			
Airbus Asset Management	14			
Lease Corporation International	13			
Sojitz Aircraft Leasing	12			
Aviation	11			
Dragon Aviation Leasing	11		2	2
Itochu Airlease	10			
Global Aviation Leasing	9			
RPK Capital Management	9			
Intrepid Aviation	3		20	20
Alphastream			15	15
OH Avion			8	8
MatlinPatterson			6	6
LCAL		5		5
Oak Hill Capital Partners		2		2
<b>TOTAL</b>	<b>7,352</b>	<b>487</b>	<b>684</b>	<b>1,171</b>

**Note:** This table includes jet lessors with at least nine owned or managed aircraft; or with any outstanding orders. Excludes entities set up solely to manage the leasing activities of a specific airline.

the January to June period of 2011 BCC reported a 9% drop in revenue, to \$290m, although net profit rose to \$70m compared with \$62m in January-June 2010.

As at the end of June 2011 BCC owned 236 aircraft (267 a year ago) and had partial ownership or interest in another 42 (the same as 12 months ago). BCC's total portfolio is worth \$4.4bn, a substantial decrease on the \$5.3bn value a year earlier (and \$6.4bn as of 24 months previously). That's mostly a function

of owning fewer aircraft but also partly due to the declining value of the very oldest aircraft, of which BCC has a substantial amount.

Less than 4% of its portfolio by value is in aircraft that were manufactured in 2006 or later, 64% by value are of a 2001-2005 vintage, 20% were made in 1996-2000 and just over 12% manufactured prior to 1996.

That exposure to older aircraft becomes even clearer when looking at individual models - 717s account for 47% of portfolio value



(up from 42% a year ago), with the next biggest categories being 757s (15%), 767s (8%) and 737s (8%). Additionally, BCC is highly exposed to a handful of airlines - 77% of the fleet by value is with US carriers, and 61% is with five customers: AirTran, American, Hawaiian, Continental and Korean Air. AirTran Airways alone accounts for 30% of BCC's entire portfolio by value, although its acquisition by Southwest earlier this will be comforting to BCC. Intriguingly, in its latest 10Q filing (for the period April-June 2011), BCC says that in July "Boeing committed to provide financing to a customer for up to 100 737 aircraft for delivery beginning in 2013. Any requirement to fund these commitments could significantly increase our portfolio concentration, although we expect to work with third party financiers to provide alternative financing to this customer."

### Aviation Capital Group

Aviation Capital Group (ACG) is part of insurance giant Pacific LifeCorp and is based in Newport Beach, California, with other offices in Seattle, London, Santiago, Shanghai and Singapore – the last of which opened in December.

In the 2010 calendar year ACG saw revenue rise 10% to \$650m, although that was due partly to the sale of aircraft, and underlying lease income was up just 2%, to \$590m. During the year ACG raised more than \$1bn of unsecured debt in order to "improve financial flexibility", and followed this up by selling \$750m of senior notes in April of this year.

ACG's portfolio of 245 owned or managed aircraft include the A320 family, A330s, 737 (both classic models and NGs), 757s, 767s and freighters, and they are leased to more than 90 customers in 38 countries around the world. ACG continues to hold the third-largest order book of any lessor (after GECAS and ILFC of course), which currently stands at 118 aircraft (56 737s, five 787s and 57 A320s).

### RBS Aviation Capital

No longer considered a core asset by parent RBS (83% owned by the UK state), lessor RBS Aviation Capital couldn't find a buyer last year and it was "off the market" until condi-

tions improved – which is now, with RBS announcing in July that it will attempt to sell the leasing arm yet again (and perhaps a move that is made even more urgent by parent RBS's dismal £1.4bn net loss for the first six months of 2011).

With an improving leasing market RBS aims to raise at least £4bn, but that will depend on the strength of demand. Macquarie Group have recently been reported as leading the list of potential bidders, which includes Asian players (specifically the Bank of China) and also Terra Firma, although General Electric is also on an unconfirmed list of companies that have expressed an interest (as reported in the UK press). RBS is keen to get a substantial amount for its leasing arm, but the recent loss at the parent combined with the embarrassment if it couldn't find a buyer yet again may mean that this time around it will be more willing to compromise on the price.

Despite the uncertainty over its future the 90-strong team based at the lessor's head office in Dublin - and other offices in London, New York, Hong Kong, Shanghai, Toulouse, Beijing, Singapore and Tokyo – continue to operate a portfolio of 200 owned and 36 managed aircraft. They are placed with approximately 100 airlines in 38 countries, with the most important markets continuing to be Europe (32 customers, including Air France, British Airways and Lufthansa) and the Asia/Pacific region (30 airlines, including the "Big Three" in China). On order are 90 aircraft, comprising 38 737s, 51 A320s and a single A321.

### AWAS

AWAS had a mixed set of results in its latest financial year (the 12 month period ending November 30th 2010), when it recorded lease revenue of \$763m, more than 4% down on the previous year (which itself was down 9% year-on-year), thanks largely to the sale of 11 aircraft and lower lease rates on floating rate leases tied to LIBOR. However, it reported a net profit of \$112.8m, a significant improvement on the \$3.8m net loss it made in the previous financial year (due to a large impairment charge on aircraft values).

Headquartered in Dublin, AWAS also has offices in New York, Miami and Singapore, and

its 120 employees manage a portfolio of 209 aircraft, leased to more than 90 customers in 44 countries.

In the last financial year AWAS signed 27 new lease deals with 16 airlines, while receiving another seven new aircraft, all of which were placed with clients. While in 2009 Europe and the Asia/Pacific region were jointly the most important markets for AWAS, each accounting for just over 30% of lease revenue, through 2010 the Asia/Pacific market clearly became the most important for AWAS, now accounting for 36% of revenue, as opposed to 31% from European clients. They are significantly ahead of the next most important market for AWAS – North America and the Caribbean, which provides 19% of lease revenue. However, as a counter-balance to its dependence on two markets, AWAS has a much lesser dependence on a handful of major clients, with its top five customers accounting for no more than 22% of all revenue in the last financial year.

The average age of the fleet is around eight years, with 56% of the fleet by value being narrowbodies, and 44% widebodies. AWAS has 105 aircraft on order (the fourth-largest lessor order book), including 29 737s, one 787, 73 A320 family aircraft and two A350s.

In order to fund its growth, AWAS has undergone a major round of equity raising in 2011, including \$266m from the Canada Pension Plan Investment Board (CPPIB), \$246m from Terra Firma and \$17m from other investors. Following this round of funding, AWAS is owned 60% by Terra Firma, 25% by CPPIB and 15% by other co-investors. Led by Guy Hands, private equity house Terra Firma is undoubtedly watching the aviation and leasing cycle recovery very carefully as it contemplates the best time to try and crystallise a hefty return on its leasing investment, although an attempt to create even more value by buying and merging with another mid-ranking leasing player cannot be ruled out.

### BOC Aviation

BOC Aviation (previously known as Singapore Aircraft Leasing Enterprise – SALE) put in another year of growth over the last 12 months, with an extra 33 aircraft increasing its owned and managed fleet to 175 aircraft.

With an average age of just four years, the portfolio is based heavily on 737NGs and A320 family aircraft, and is placed with more than 40 airlines worldwide.

Based in Singapore, BOC Aviation also has offices in Dublin, London and Seattle, and in 2010 the lessor saw net profit rise 22% to \$168m. BOC Aviation is backed by the considerable wealth of owner Bank of China, which has more than US\$1 trillion of assets, and which pumped in another US\$200m of equity into its aviation leasing arm in December 2010.

Last year BOC Aviation added to its existing order book with eight 777-300ERs and 30 A320 family aircraft, for delivery from 2012 to 2014, and the current total for new aircraft stands at 55, including five 737s, eight 777s, 37 A320s and five A330-200Fs.

### Macquarie AirFinance

Macquarie AirFinance - owned 37.5% by Macquarie Bank - is headquartered in Dublin and has other offices in London, Singapore and San Francisco. It owns 135 aircraft and manages another 24, with the owned portfolio being dominated by modern narrowbodies, including 73 A320 family aircraft and 51 737NGs.

The fleet is currently placed with 79 airlines in 44 countries, with Europe providing the majority of customers (33 carriers, ranging from Air Berlin to Vueling), followed by the Asia/Pacific region (20 airlines, including Cathay Pacific, Qantas and China Eastern) and the Americas (17 customers, including Frontier, JetBlue and Southwest). Excluding BCC, Macquarie AirFinance is the largest lessor not to have any aircraft on outstanding order.

### Aircastle

Based in Connecticut, Aircastle's fleet has nudged up by seven aircraft in the last 12 months, to 136 aircraft, all of which are owned and which have an average age of just under 11 years. The portfolio has a net book value of \$4.1bn and comprises 114 passenger models and 22 freighters. By net book value 32% of the fleet is in new generation narrowbodies, 26% is in A330s, 26% in 747-400 freighters, 8% in 767s and 777s, and 8% in a mixture of other models.

Also with offices in Dublin and Singapore, Aircastle's portfolio is placed with 59 airlines in 32 countries, and in the first six months of 2011 Aircastle's revenue rose 18% to \$307m, with net profit up 78% to \$66m. Improving financials have enabled the lessor to repurchase its own shares, and in June this year \$60m worth of shares were bought, with a further purchase of \$30m worth authorised in the same month. Aircastle is also looking to make opportunistic portfolio additions though the second half of the year, financed by a combination of cash reserves (which totalled \$369m at the end of June) and bond market financing. All but 11 aircraft are leased to clients outside of the US, and by value 44% of the portfolio is placed with European airlines, 24% is in the Asia/Pacific region, 14% in the Middle East/Africa, 10% in North America and 6% in Latin America. The top 10 customers account for 52% of Aircastle's portfolio by total value, and the three largest customers are China Eastern, with 10 aircraft, US Airways (8) and China's NHA Group (8).

So far this year five new A330s have been delivered (and placed on lease, to South African Airways and the HNA Group), and the lessor now has an outstanding order for three A330s, with two arriving in the second half of the year and one in the spring of 2012. Looking ahead, 24 aircraft have leases that will expire in 2012, and so far seven of these have been renegotiated on lease extensions.

### BAe Systems Asset Management

Based in the UK and with offices in the US, Colombia and Malaysia, BAe Systems Asset Management has a portfolio of 112 jets of all types, including MD-80s, 737s, 757s and RJs. However, this is down substantially on the 148 jets it managed as of a year ago as BAe Systems hasn't regarded the lessor as a core business for some time, and indeed in May BAe Systems announced an agreement to sell the entire leasing unit (both jets and turbo-props) to the US-based Fortress Investment Group for \$187m. The deal is expected to be completed "by the third quarter of 2011".

### MC Aviation Partners (MCAP)

Based in Tokyo and with offices in Dublin and Los Angeles, MC Aviation Partners (MCAP)

is part of the giant Mitsubishi Corporation, which employs 60,000 in more than 500 subsidiaries. MCAP's 65 employees manage a portfolio of 100 aircraft, of which 24 are 737-800s, 19 are 767-300ERs and 15 are A320s. A quarter of its portfolio is less than five years' old, but another 25 aircraft are 15 years or older.

Unsurprisingly, it's most important market is the Asia/Pacific region, where 50 of its aircraft are based. 35 aircraft are with clients in Europe or Africa, with the remainder in North and South America.

### Sumisho

Sumisho Aircraft Asset Management is based in Amsterdam and is a subsidiary of Japan's Sumitomo Corporation. It has increased its portfolio by 20 units over the last 12 months to approximately 90, of which most are new generation 737s and 320 family aircraft. SAAM is targeting a fleet of around 150 aircraft over the next three years.

### Avolon

Just 18 months after launching, Dublin-based Avolon has grown its fleet to 80 aircraft, comprising 47 A320s, 29 737-900s, three A330s and a single 777. Placed with 21 customers in 16 countries, 34 aircraft currently are with airlines in the Asia/Pacific region, 17 in Europe and 11 in Latin America.

Also with offices in New York, Shanghai, Hong Kong and Connecticut, Avolon appears to be quickly spending the \$3bn it raised from debt and equity (including a total of \$1.8bn in equity investment from three private equity funds – Cinven, CVC Capital Partners and Oak Hill Capital Partners) as it seeks to build a portfolio close to 150 aircraft and worth \$6bn by 2015.

In the short-term Avolon has been carrying out a series of sale and leaseback deals with airlines, but aims to top that up with new aircraft in the medium-term. In December last year it ordered eight A320s, all of which will be delivered in 2014. They add to 12 737s on order that will be delivered between 2012 and 2014.

### Pembroke

Irish lessor Pembroke has eased back its portfolio from 111 to 76 aircraft over the last

12 months, of which 46 are owned and 30 managed on behalf of others.

They are placed with 24 airlines, including Air China, Emirates, SIA and TUI. Most of Pembroke's fleet are narrowbodies, including 15 A320 family aircraft and 35 737s (including 16 737-700s and 13 737-800s), although it also eight 777s and four A330s. The lessor is owned by Standard Chartered.

### Hong Kong Aviation

After the HNA Group - a Chinese state-owned transport and logistics group that also owns Hainan Airline - bought the leasing assets of Sydney-based Allco Finance in early 2010, these were later transferred into Hong Kong Aviation, a partnership between Bravia Capital Partners, the Agricultural Bank of China, the China Development Bank and HNA Group.

With offices also in London and Sydney, Hong Kong Aviation has a portfolio of 70 aircraft, with the majority of aircraft placed with customers in the Asia/Pacific region, including Qantas and Singapore Airlines.

### Airplanes Group

Based in Delaware and Jersey (in the Channel Islands), Airplanes Group now has a portfolio of 69 jet aircraft as it continues to slim down its fleet. They are entirely older model aircraft, including 11 MD-83s and 20 737-400s, all of which are at least 18 years' old. Unsurprisingly the lessor says that "the environment is deeply challenging for aircraft of the age and type comprising our portfolio".

The aircraft are leased to an eclectic mix of smaller airlines all around the world, with the largest single market being Russia, where it has placed 12 aircraft. In its 2010/11 financial year (ending March 31st), revenue rose 8% to \$226m, although \$35m of that came from the sales of assets, including 14 jet aircraft.

### Air Lease Corporation

Los Angeles-based Air Lease Corporation - the lessor launched in 2010 by ILFC founder Steven Udvar-Hazy - had \$1.3bn in equity funding and \$2bn in debt financing under its belt even before it completed an IPO on the

New York stock exchange in April this year, which raised gross proceeds of \$923m.

In the first six months of this year Air Lease Corporation reported revenue of \$130m and a net profit of \$10m, but its priority is expansion, and with a substantial amount of financial backing it's no surprise that the lessor is growing rapidly, adding 16 aircraft in the second quarter of 2011 to bring its fleet up to 65 aircraft. The portfolio has an average age of less than four years and comprises 26 A320 family aircraft, five A330s, 29 737NGs, a 767 and four 777s. They are placed with customers all around the world, with the two most important markets being Europe (where 24 aircraft are leased) and the Asia/Pacific region (22 aircraft).

The fleet will reach at least 100 aircraft by the end of 2011, and it has 53 new aircraft on order - 24 A320s, 22 A321s and seven A330s.

### ICBC Leasing

ICBC Leasing, owned by the Industrial and Commercial Bank of China, is experiencing strong growth and its fleet has risen from 20 to 54 in the last 12 months. Through this year and 2012 ICBC is buying 18 A320s and 737s from Air Berlin, eight of which will be leased back to the German airline, while in March ICBC signed a deal to provide US\$8bn in financing to support customers of Bombardier.

### Aergo Capital

Aergo Capital is headquartered in Dublin and has other offices in Chicago, Johannesburg, Nairobi and Santiago de Chile. It's a specialist in older narrowbodies, with its portfolio of 53 aircraft comprised largely of classic 737s and MD-80s, leased to clients that include British Airways, South African Airlines and Transaero.

### CDB Financial Leasing

CDB Financial Leasing is a subsidiary of state-owned China Development Bank, with some 52 aircraft in its portfolio. It has a strategic agreement with Embraer to finance the sale of its regional jets into China, and in January this year signed a deal to buy and

lease 10 E-190s to China Southern, with the first aircraft being delivered in the second half of 2011.

### GAAM

Global Aviation Asset Management (GAAM) has headquarters in Sydney and other offices in London and Dublin, and currently has a portfolio of 49 aircraft, of which 23 are A320 family aircraft and 17 are 737s. They are leased to 23 airlines, including Air France and British Airways in Europe, Qantas, Air China and China Eastern in the Asia/Pacific region and South African Airways and Kenya Airways in Africa.

### Guggenheim Aviation Partners

Guggenheim Aviation Partners is part of Guggenheim Partners, a financial services company with 25 offices around the world and more than \$80bn of assets under management. The aviation leasing arm operates out of Chicago and has a portfolio of 49 aircraft worth around \$2.7bn, with four aircraft on order - two 777s and two A330s. Guggenheim did have four 747-8Fs on order, but cancelled two in 2010 and the other two in January this year, due to the delays in delivering the variant by Boeing.

### Alafco

Kuwaiti lessor Alafco continues to expand, from 34 owned and managed aircraft a year ago to 47 today as it chases a targeted 100-strong fleet by 2015. The current portfolio includes 27 A320s, 14 737-800s, two 737-900ERs and four 777s.

Those aircraft are placed at 14 airlines, with the most important market – unsurprisingly – being the Middle East, where 18 aircraft are placed. Saudi Arabian Airlines has 13 A320s, though in March the collapse of Kuwaiti customer Wataniya Airways, to which Alafco had three A320s on lease, led the lessor to pursue the airline for US\$70m in lease payments it would have received for aircraft that were contracted through to 2017. Elsewhere, Alafco has 14 aircraft in Europe (including five at THY), 11 with Asia/Pacific customers and four 737-800s at Ethiopian Airlines.

In the first half of its 2010/11 financial year (the six months ending March 31st 2011) Alafco posted a 39% rise in revenue to US\$92m; Alafco is majority-owned by the Kuwait Finance House and also has a listing on the Kuwait stock exchange.

Alafco has outstanding orders for 33 aircraft – 14 787s, one A320 and 18 A350-900s – although at this year's Paris air show Alafco also signed an MoU for 30 A320neos.

### DAE Capital

DAE Capital is the leasing arm of the state's Dubai Aerospace Enterprise (DAE), which has continued to suffer from the troubles affecting the Dubai economy. As a result the leasing subsidiary in is nothing short of turmoil, with its CEO - Robert Genise - leaving his post in the summer in order to "fulfil his desire to be involved in a more entrepreneurial venture", according to the lessor.

Only 12 months ago DAE Capital had outstanding order for a massive 166 aircraft, including 91 from Boeing and 75 Airbus, but earlier this year it cancelled orders for 30 Airbuses and 32 Boeing aircraft, and in July this was followed by the news that it had cancelled a further 34 A320s and 11 A350-900s, completely wiping out its Airbus order book. Other DAE orders have also disappeared from the outstanding Boeing order book, which now lists just 15 747s and six 777s for DAE Capital – and these outstanding orders must also be in severe doubt.

Unsurprisingly, the cancellation of new aircraft orders has been accompanied by a contraction of the portfolio, which has gone from 67 to 46 owned aircraft in just 12 months. Those aircraft comprise 15 A320 family aircraft, 11 A330s, 16 737NGs and four 777s, which are leased to 19 airlines, including easyJet, Emirates, Eva Air, China Southern and Virgin Blue.

The cancellation of so many orders and the departure of its well-known CEO puts the future of DAE's commercial aircraft leasing subsidiary in severe doubt.

### Jackson Square Aviation

Based in San Francisco and with offices in London, Seattle, Miami, Toulouse and

Singapore, Jackson Square Aviation was funded with \$0.5bn of equity from Oaktree Capital Management at the end of 2009 and added a \$400m in secured credit in 2010 and another \$220m secured credit facility in June this year, this one underwritten by Norddeutsche Landesbank Girozentrale and UniCredit Bank. It currently manages a fleet of 30 aircraft and will increase the portfolio to around 70 by 2012, with a longer-term target of 100-plus aircraft.

### Waha Capital

Based in Abu Dhabi and majority-owned by the emirate, Waha Capital is a holding company for a variety of finance and infrastructure subsidiaries, including leasing arm Waha Leasing. Waha Capital had also owned 50% of AerVenture, but in late 2010 it restructured its leasing interests in a deal that exchanged that stake, a 40% share in Waha Leasing and US\$105m for a 20% equity position in AerCap (which had owned the other 50% of AerVenture). Waha Leasing owns a mixed portfolio of 16 narrowbody and widebody aircraft, which are now managed by AerCap.

### Other lessors

Dublin-based **ORIX Aviation** is owned by the Orix Corporation, a Japanese financial services group, and manages a portfolio of 94 aircraft. **Sky Holding** is a San Francisco-based lessor that also has offices in Miami, Tucson and Buenos Aires. It manages or owns an estimated 65 aircraft, currently leased to customers that include Spanair, Transaero, American, China Eastern and China Southern.

**World Star Aviation** is a San Francisco-based lessor managing 54 aircraft placed with 30 airlines, including 737s, 747, 757s, MD-80s, 747 freighters and A320s.

Based at Gatwick airport, **Aircraft Leasing and Management** manages 53 aircraft, the majority of which are narrowbodies, including 23 737s and 10 A320 family aircraft.

**Volito Aviation Services** and its subsidiary **VGS** manage a fleet of 50 aircraft out of Malmo and Dublin. A narrowbody specialist, its single largest is Europe, where 25 aircraft

are placed with 17 airlines, including two A320s at Air Berlin, three 737-800s at Transavia and two A319s at Meridiana.

**Compass Capital** is an asset finance company based in San Francisco and with other offices in the US and Singapore that manages or owns 45 narrowbodies and widebodies. Dublin's **Amentum Capital** is owned by the HSH Nordbank and manages a fleet of 40 aircraft, including five A319s at easyJet, five 737-800s at TUI and four 737-900s with Lion Air.

Fort Lauderdale-based **Jetscape** owns or manages 40 aircraft, including seven E-170s, 19 E-190s and eight 737 family aircraft, which are placed with 22 customers in 16 countries. Chicago-based **BCI Aircraft Leasing** has eased back its portfolio from 45 aircraft a year ago to 32 at present. SkyWorks Leasing manages an estimated 30 jet aircraft out of its Connecticut office.

**Q Aviation** operates out of Dublin and Texas, and currently has a fleet of 26 aircraft with an average age of just over seven years. Three quarters of the fleet are narrowbodies, including 14 A320 family aircraft. **AAR** is an aviation support group based in Chicago and with 60 offices across the world. Its leasing arm manages or owns a portfolio of 26 aircraft, the majority of which are 737 family aircraft.

Based, in Frankfurt, **Doric Asset Finance** also operates out of London and New York, and its portfolio has grown yet again in the last year, to 26 aircraft. The majority of these are widebodies, of which 10 are A380s. Operating out of San Francisco, **Vx Capital Partners** bought seven aircraft last year – a 737-300, three 737-400s, two 747-300s and an MD-11 – and its fleet now totals 23.

**GA Telesis** is an aerospace support and maintenance company based in Florida, and with a portfolio of 22 aircraft. Munich-based **Goal** is owned 40% by Lufthansa and 60% by KG Allgemeine Leasing, and its portfolio has remained steady over the last year, at 22 aircraft, comprising A320s, 737s, A310s, CRJs and Embraer 195LRs.

**AerVenture**, (now completely owned by AerCap), owns a fleet of 22 A320 family aircraft, and has outstanding orders for another

five of the model. **First Greenwich Kahala** is headquartered in New Jersey and manages or owns 22 aircraft. California's **Mitsui Bussan Aerospace** is owned by Japan's Matsui & Co and has a fleet of 21 aircraft, which includes the assets of Tombo Aviation.

**Deucalion Capital**, part of Germany's DVB Bank group, has a portfolio of 21 aircraft, half of which are passenger or freighter widebodies. **Automatic** is based in Orlando, Florida, and in June this year signed a deal to buy seven 737-500s from Lufthansa in the second half of 2011. It has an estimated 20 aircraft in its fleet.

**Global Knafaim Leasing** (GKL) is an Israeli lessor based in Tel Aviv, with a fleet of 18 aircraft, while Dublin-based **GMT Global Republic Aviation** (GMT Global) also has an office in Colorado and owns or manages 18 aircraft, including both narrowbodies and widebodies. **Aldus Aviation** is an Irish lessor that specialises in Embraer E170/175s and E190/195s, with 16 of the type currently in its portfolio.

**Deutsche Bank Equipment Leasing** is a New York lessor specialising in older model A320s, 737s and 757s, and has 16 aircraft in its portfolio. With offices in the Mauritius and the UK, **Veling** has 15 aircraft, including four A340-300s (on lease to Sri Lankan Airlines), three A310-300Fs (with cargo specialist Deccan 360) and six 777-200s (on lease to Emirates).

Munich lessor **Bavaria International Aircraft Leasing** - owned by German corporate group Schorghuber - has eased back its fleet to 15 aircraft over the last 12 months, all of which are narrowbodies.

**Novus Aviation** is a Swiss lessor with a 15-strong portfolio, including A320 family aircraft, 737s and 747s, while **Skytech-AIC** is a British lessor that specialises in widebodies, and owns or manages a fleet of approximately 15 aircraft.

**Airbus Asset Management** sells and leases aircraft for the manufacturer, with 14 aircraft in its portfolio, while **Lease Corporation International** has offices in Dublin, London and Singapore, and has a fleet of 13 aircraft. **Sojitz Aircraft Leasing** is based in Amsterdam and owned by the Sojitz Corporation, a Japanese conglomerate. It has 12 Boeing air-

craft in its portfolio, down from 20 as of a year ago.

Singapore-based **Avation** obtained a listing on the London stock exchange at the end of 2010 and has 11 aircraft in its portfolio. In January it entered into a contract to lease up to 18 aircraft to Virgin Blue on 10-year leases, starting in the second half of 2011.

China-based **Dragon Aviation Leasing** has a subsidiary called AerDragon Aviation Partners operating out of Shannon Ireland, and is a joint venture owned 50% by the China Aviation Supplies Import & Export Group Corporation, 25% by AerCap and 25% by Caylon AirFinance. It has received 11 aircraft from an order for 13 A320s.

**Itochu Airlease**, owned by Japan's Itochu Corporation and based in Amsterdam, has a portfolio of 10 aircraft, while **Global Aviation Leasing** has offices in Gibraltar and South Africa and has a fleet of nine DC-9/10s and MD-80s. Also with nine aircraft in its portfolio is **RPK Capital Management**, which is based in Chicago.

## Upcoming entrants

Based in New York and Memphis, **Intrepid Aviation** is a freighter leasing specialist that in June appointed Frank Pray - formerly CEO at AWAS between 2006 and 2010 - as its CEO. It manages three aircraft at present but has 20 A330-200 freighters on order. **AlphaStream Capital Management** is based in Switzerland and has an outstanding order for 15 A320 family aircraft.

US-based **OH Avion** has eight A330-200Fs on order, while US private equity company MatlinPatterson also has six A330-200Fs on order. Based in Dubai, **Low-Cost Aircraft Leasing** (LCAL) has five 787s on order, while **Oak Hill Capital Partners**, another US private equity firm, has two 777s on order.

**Infinity Aviation Capital** was launched this summer in joint venture with Perella Weinberg Partners by a trio of leasing industry veterans - Richard Baudouin (co-founder of Aviation Capital Group), Khawer Ali and Jerrold Rosen. Based in New York, Infinity Aviation Capital has already acquired three 737s-600s on lease to SAS.

### JAL and ANA implement LCC JVs: Jetstar Japan, AirAsia Japan and Peach

Six months after the devastating earthquake and tsunami that hit north-eastern Japan and the subsequent nuclear crisis, recovery in the Japan inbound travel market remains painfully slow. Japan's economy and tourism industry have taken a massive hit. However, the country's leading carriers, Japan Airlines (JAL) and All Nippon Airways (ANA) have weathered the crisis well.

From the airlines' point of view, perhaps the most gratifying development was the quick recovery of business travel. ANA reported that business passenger numbers, which had bottomed out in April, were almost back to the year-earlier levels in June. This reflected the strong economic growth in many Asian countries and the reconstruction work in Japan.

The airlines were also helped by the fact that the Japan outbound travel market, which for obvious reasons was not so severely affected by the crisis, is twice as large as the inbound market even in normal times. By July there were more Japanese tourists travelling abroad than a year earlier, while overseas visitors to Japan were still down by 36.1% (see chart, right). The very weak state of the inbound leisure market is illustrated by the fact that both Delta and American have suspended their new Haneda flights until next spring or summer.

Domestically, JAL and ANA did not fare too badly because most regions in Japan were largely unaffected by the crisis (except for nationwide problems such as lingering power shortages), because in the affected areas air travel was often the only possible mode of transport, and because the rebuilding efforts generated new travel.

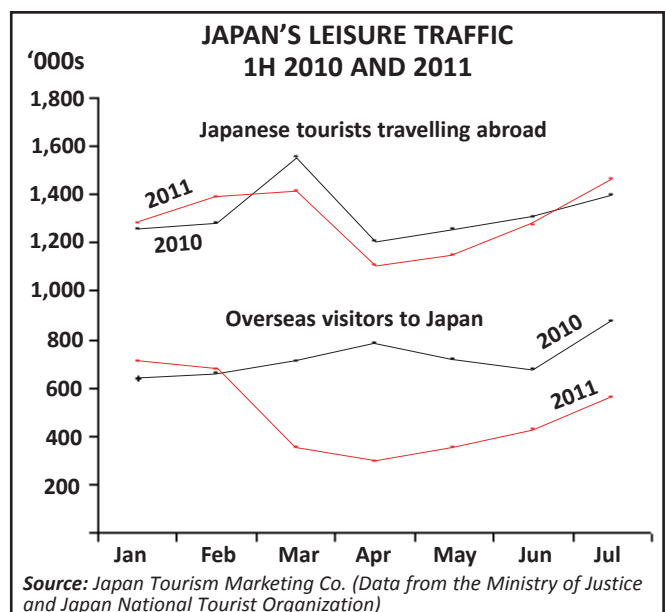
JAL and ANA coped with the crisis, in the first place, by reducing frequencies or switching to smaller aircraft in the worst-affected markets. But they were able to limit the impact by stimulating leisure demand with discount fares, capturing

more international connecting traffic through Narita, carrying more traffic to Western Japan and operating special flights to the north as part of support for rescue and recovery efforts.

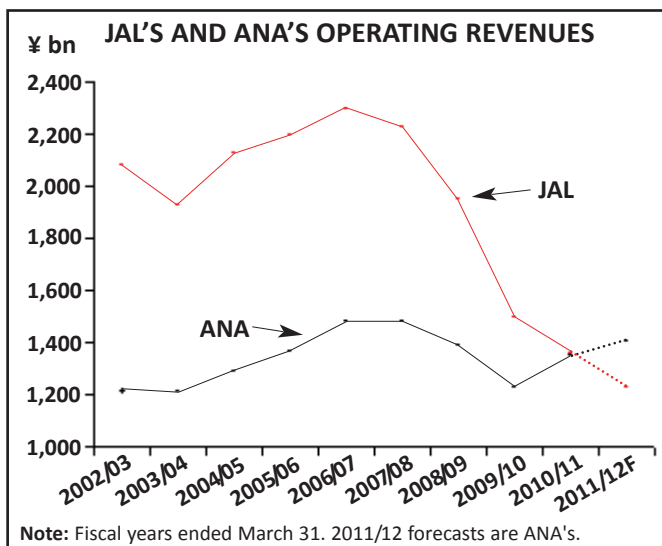
Those factors - and especially the rapid recovery of business travel and the airlines' sharp capacity cuts and service adjustments - helped rescue JAL's and ANA's June quarter financial results. JAL even achieved profits in the quarter, thanks to its earlier bankruptcy-related drastic restructuring and downsizing.

JAL and ANA now expect to post profits for the current fiscal year (to March 31, 2012) and maybe even achieve their pre-crisis earnings targets. JAL is on track to relist its shares on the Tokyo Stock Exchange by March 2013, as originally envisaged.

Although the airlines say that they do not expect leisure travel demand to recover fully before next spring, they are working aggressively with the government and tourism authorities to try to stimulate inbound demand. For example, visa regulations have been eased and aggressive joint advertising campaigns







have been mounted in Australia and elsewhere promoting Japan as a cultural and skiing destination.

Importantly, JAL and ANA have moved aggressively to position themselves for the longer term. They have embraced international collaboration on a major scale.

First, the immunised joint ventures in the Japan-US market – JAL's with American and ANA's with United Continental – went into effect in April, as planned. These JVs have also helped the Japanese carriers weather this year's challenges.

ANA is preparing to launch a similar JV with Lufthansa on Japan-Europe routes next month (October), after receiving antitrust immunity (ATI) from Japan in June. All eyes are now on JAL and BA/IAG to see if and when they will follow suit.

As the latest development, to take advantage of Asia's enormous growth potential and safeguard their market shares in Japan, ANA and JAL have teamed up with Asia's leading LCCs - AirAsia and Jetstar - to establish new Japan-based joint venture LCCs.

As a result, 2012 will be a pivotal year for LCC activity in Japan. Including ANA's Peach, the next 12 months or so will witness the launch of three LCC units partially owned by ANA and JAL.

2012 is also likely to be a spectacular growth year in Japan, as the aviation market recovers from this year's crisis. And, following the long-awaited first delivery of the 787 Dreamliner to ANA this month,

and subsequently to JAL this winter, the next six months or so will see many exciting 787 plans come to fruition.

At long last, Japan is beginning to come up with solutions to the problem of exorbitant airport charges. Two key airports are building low-cost terminals for LCCs. Will the government now take the big decision to fully privatise the country's airports, which could help normalise user charges?

### JAL's spectacular turnaround

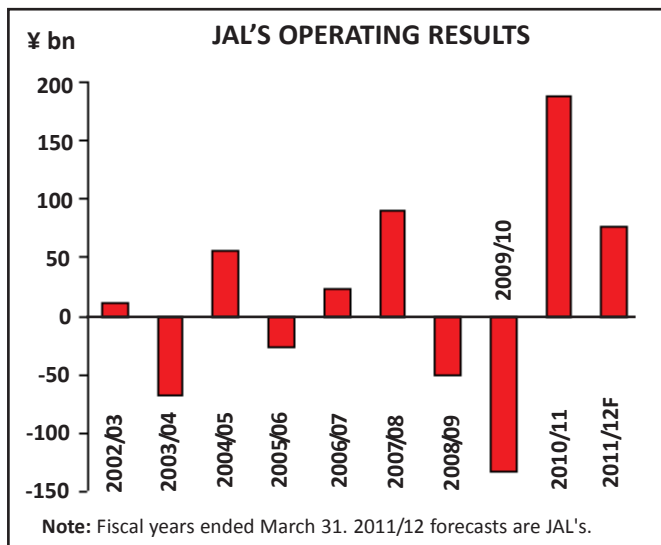
JAL emerged from its 14-month court-ordered restructuring on schedule at the end of March. Having received a ¥350bn (\$4.6bn) equity injection from state-backed ETIC in December 2010, which made ETIC its sole shareholder, by the time it exited bankruptcy JAL had procured ¥255bn (\$3.3bn) in loans from 11 banks, repaid debt totalling ¥395bn (\$5.1bn) and raised an additional ¥12.7bn (\$165m) through a share sale to eight companies.

The only disappointment was that JAL was not able to meet its fundraising goal, leaving it undercapitalised just as it faced extra challenges and uncertainty. That said, JAL has accomplished an amazing financial turnaround in the past year, having gone through a much more substantial and swift business restructuring than anyone could have imagined.

In the fiscal year ended March 31, JAL achieved a group operating profit of ¥188.4bn (\$2.5bn) on revenues of ¥1,362.2bn (\$17.7bn). The profit was almost triple that targeted in the August 2010 rehabilitation plan and represented a very strong 13.8% margin. It contrasted with a ¥133.7bn operating loss in FY 2009/10.

JAL also achieved a ¥17.2bn (\$224m) operating profit (6.7% of revenues) in the three months ended June 30. This was similar to the year-earlier result despite a sharp decline in traffic, which was largely due to the drastic downsizing rather than the March 11 effects.

JAL's restructuring in FY 2010/11 included closing some 49 unprofitable routes, withdrawing from 11 overseas and eight domestic destinations, shedding more



than 100 aircraft, slashing the headcount by about one third and implementing sharp pay reductions. The airline has disposed of its 747-400s and A300-600s (with MD-81s and MD-90s still to go) as part of a strategy to switch to smaller, more fuel-efficient aircraft and rationalise the mainline fleet from seven to four types.

All of that has collectively led to a dramatic reduction in operating costs. Between 2008's and 2011's June quarters, as JAL's ASKs fell by 43%, its total operating costs more than halved, leading to a 14.3% reduction in unit costs.

Importantly, JAL's restructuring has included changing from a rigid, multi-layer organisational structure to a more streamlined managerial framework. This has been one of the contributions of Kazuo Inamori, the 79-year old founder of electronics maker Kyocera who took over as chairman when JAL filed for bankruptcy. Inamori trained JAL's management to better monitor cash flow and profits on a daily, weekly and monthly basis and to execute business plans more reliably. A key part of this effort was to update JAL's overly complicated and obsolete IT systems.

The effects of this year's crisis are obscured by the drastic downsizing; perhaps the most visible effect was the 11-point decline in the international passenger load in the June quarter (international ASKs fell by 29.4% and RPKs by 40.2%). But international yields improved because pre-

mium traffic recovered quickly. Domestically, JAL was able to limit the load factor decline to only 1.9 points.

JAL is now confident of meeting or exceeding the ¥75.7bn (\$985m) operating profit target set by the August 2010 rehabilitation plan for the current fiscal year.

But JAL's management will be kept busy in the next 18 months. In addition to dealing with the post-March 11 crisis, they will have to complete the restructuring and cost cutting programmes initiated in bankruptcy, find ways to strengthen the balance sheet, fund the 787 acquisitions, win market confidence and prepare for the IPO.

The IPO has to take place because ETIC needs to recoup its investment. In July JAL took the first step by selecting the lead underwriter (Nomura Holdings).

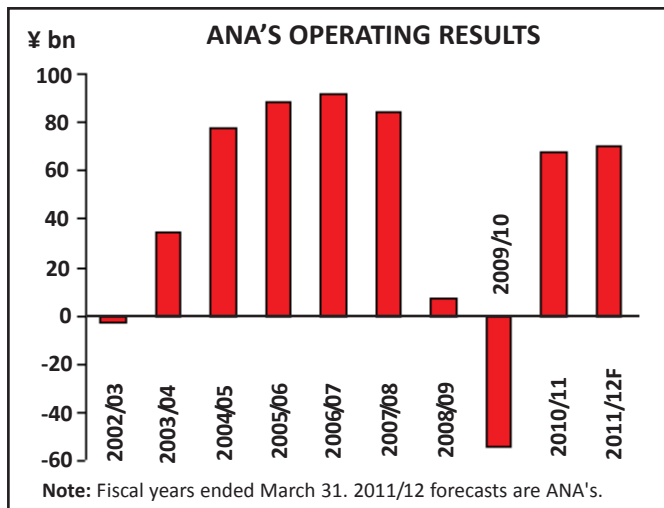
### ANA's temporary losses

While ANA also staged a strong turnaround in FY 2010/11 from the recession-hit 2009, it has posted small losses for the past two quarters – undoubtedly a temporary phenomenon.

The ¥67.8bn (\$882m) operating profit posted for FY 2010/11 represented a 5% margin and contrasted with a ¥54.2bn loss in the previous year. Revenues rose by 10.5% thanks to traffic growth and expansion of services from Tokyo Haneda. International revenues soared by 31%, reflecting a strong recovery in business demand and the Haneda services. ANA also benefited from a ¥86bn (\$1.1bn) cost cutting programme.

In the June quarter ANA's total revenues declined by only 0.6%, but since costs rose by 3.1%, the airline swung to a small operating loss of ¥8.1bn (\$105m).

The measures taken in the wake of the March events, which included a new ¥30bn (\$390m) cost cutting programme, and the relatively swift business traffic recovery helped rescue ANA's domestic revenues, which declined by only 6.2% in the June quarter, despite a 14.7% fall in passenger numbers. International passenger revenues rose by 8%, reflecting 25% ASK growth, but the load factor plummeted by 11.2 points to 65.7%.



Despite the June quarter losses, ANA expects to be profitable in FY 2011/12 and is currently projecting broadly similar earnings to last year's: an operating profit of ¥70bn (5% of revenues) and a net profit of ¥20bn. The airline is aiming for 10% operating margins in 3-4 years' time.

Even though it has underperformed JAL in recent months, ANA of course remains much stronger financially. In FY 2010/11 it also overtook JAL to become Japan's largest airline in terms of passenger numbers, and this year it is also likely to become the largest in terms of revenues.

### Long-haul plans: 787s and immunised JVs

ANA's immediate focus is to successfully introduce to service the 787 Dreamliner, for which it is the launch customer. After a seven-year wait since the initial order was placed, all now seems set for the first delivery on September 26.

ANA has 55 of the type on firm order. It recently deferred four deliveries to the post-March 2013 period, so the current near-term delivery schedule is 12 aircraft in FY 1011/12 and eight in FY 2012/13.

The first commercial 787 service will be a one-off Narita-Hong Kong charter flight on October 26. The type will enter regular domestic service from Haneda on November 1, initially to Okayama and Hiroshima. December will see the 787

enter international service on the Haneda-Beijing route. In January the 787 will be deployed on Haneda-Frankfurt, a new route that will be operated as part of the planned JV with Lufthansa.

After previously intending to operate the 787 only domestically and in Asia this winter, ANA is now taking the 787 to Frankfurt and is believed to be considering deploying it also on other European and US routes this winter.

ANA could use the 787 to add new European cities that would not support larger aircraft; Brussels, Düsseldorf and Barcelona have been mentioned as potential additions to the current roster of four cities (London, Paris, Frankfurt and Munich). In the US, ANA is believed to be considering new cities such as Houston (United Continental's hub), Boston and Miami. All of the long-haul operations would be from Haneda. Of course, the 787 will also play a significant role in ANA's Asian expansion plans, which continue to be a major focus for the company.

ANA does not appear to have scaled down its growth plans at all, which projected 33% international ASK growth in the two years to March 2013. In the near term the airline faces a fine balancing act between the need to stay disciplined on the capacity front until demand recovers and the desire to quickly take advantage of unique growth opportunities before new competitors enter the scene. The opportunities arise from JAL's contraction, the substantial increase in slots at Tokyo airports, the opening of Haneda to international flights and new open skies ASAs.

ANA has two new weapons at its disposal that will help it strike the right balance: the Japan-US immunised joint venture with United Continental and the upcoming Japan-Europe immunised joint venture with Lufthansa. The latter represents the first granting of ATI on Asia-Europe routes.

In contrast to ANA, JAL (having just shrunk to profitability) is not looking to grow in the short- to medium-term. However, the JV with American and the upcoming 787 deliveries will open up some new long-haul opportunities. JAL

will use the 787s to add Boston to its network in April 2012 - its first new gateway in the US in 13 years and its fifth continental US city. The four-per-week service from Narita (daily from June) will be operated as a codeshare with American.

Interestingly, since there are currently no direct connections between Tokyo and Boston and the market is dominated by Delta and United, JAL is in discussions with JetBlue (which has a hub operation in Boston and a marketing partnership with American) to provide additional feed in Boston.

Of course, JAL will be introducing the 787 first on regional routes this winter, most likely on Tokyo-Singapore. JAL has 35 firm orders and 20 options for the 787.

Having contracted sharply internationally, JAL's post-bankruptcy strategy is to "maintain a global network with a focus on pivotal routes that can yield higher business demand". The surviving network centres on major US and European cities and the high-growth Asian routes. Of the Pacific resort routes, JAL will specialise on Honolulu and Guam. JAL's long-term strategy includes major expansion of international flights at Haneda and strengthening Narita's role as a global hub between North America and Asia. The plan is to also continue operating short-haul Asian flights from Osaka's Kansai and Nagoya's Chubu with smaller aircraft.

Domestically, the strategy emphasises maintaining a network centred on Haneda and operating more frequent service using smaller aircraft. In respect to cargo, JAL terminated its scheduled freighter operations in favour of solely utilising the belly space of its passenger flights.

Alliances and JVs are especially important to JAL because of its drastic downsizing. The rehabilitation plan called for "aggressive utilisation of alliances" and stipulated that JAL should also reap benefits from the "managerial know-how, facilities, IT systems and other tangible and intangible assets of alliance partners".

Bloomberg News recently quoted JAL's president Masaru Onishi saying that the JV with American had boosted JAL's competitiveness on the Pacific and that JAL had

even learned from American new techniques for adjusting its schedule on a weekly basis after the earthquake.

However, Onishi's comments in that same interview that even though JAL's alliance with oneworld partner BA "is the key", "we could expand our business in Europe with Air France and KLM" added an interesting twist to the speculation about JAL's European intentions. IAG CEO Willie Walsh has stated that the company is keen to enter a JV with JAL on Europe-Japan routes. But Paris is historically a key destination for the Japanese and JAL currently codeshares on Air France to 13 cities around Europe. The most likely scenario is that BA and JAL will go for ATI and JAL and AF will just retain their existing codeshare relationship.

### ANA's LCC JVs

Peach Aviation, the JV that ANA established earlier this year with Hong Kong-based First Eastern Investment Group, will be the first of the three planned LCCs to take to the air in March 2012. It has an initial capitalisation of ¥30m (\$390m), with Far Eastern holding 33.3%, ANA 33.4% and Innovation Network Corporation of Japan 33.3%. The venture hopes to raise up to ¥15bn in additional funding prior to start of service.

Three years in the making, Peach was ANA's first major response to the growing competitive threat from LCCs. But ANA's and AirAsia's announcement on July 21 that they were forming another LCC joint venture, AirAsia Japan, to operate from Narita from August 2012, stole the limelight from Peach. AirAsia Japan clearly looks potentially more powerful. There may also be overlap issues, even though the two will be operating from different bases.

Peach, which will operate independently from ANA, will be based at Osaka's Kansai International Airport, which has better immediate slot availability than the Tokyo airports. It will serve both domestic and Asian destinations. The first routes will be Osaka-Sapporo and Osaka-

Fukuoka. Since the AirAsia announcement there has been talk that Peach's international operations may focus on mainline China. The venture has signed agreements to lease 10 A320s from GECAS and hopes to grow the fleet to 15-20 aircraft within five years.

Peach aims to create new demand with domestic fares that are competitive with bus and rail fares and international fares that are 50% below current prices. To achieve the required low costs, the business model will be Ryanair-style: point-to-point operations, single aircraft type, maximum seating, high aircraft utilisation, extensive use of automation, bare-bones service, charging for extras and high employee productivity.

Importantly, Kansai airport is making special provisions for Peach and other LCCs that will lower their user costs. It will offer simpler facilities with options, for example, to omit boarding bridges, and even has plans to build a dedicated terminal for budget airlines. Kansai is also offering airlines that start service there a year's exemption from landing fees. But Kansai's normal charges are even higher than Narita's, because it is saddled with debt. It has reportedly mapped out a turnaround strategy based on attracting LCCs.

The other low-cost JV planned by ANA, AirAsia Japan, will be the first LCC based at Narita. It will benefit from the successful business model and well-known brand of AirAsia. The venture was established in August with initial paid-in capital of ¥5bn (\$65m). ANA contributed 51% and AirAsia 49%, though ANA holds 67% of the voting shares.

Like Peach, AirAsia Japan will operate both domestically and to Northeast Asia. It is likely to get an A320 fleet (and eventually A320neos) from AirAsia's orderbook. It is targeting annual revenues of ¥150bn (\$1.9bn) and a fleet of over 30 aircraft in five years' time.

AirAsia Japan intends to undercut ANA's current fares by 33-50% to offer the lowest fares in every market. Its unit costs will be "less than half" of ANA's

though more than double Malaysia-based AirAsia's.

The AirAsia brand is already known in Japan thanks to AirAsia X, which began serving Haneda from Kuala Lumpur in December 2010. This November AirAsia X is adding Osaka as its second destination in Japan. It is expected to gain access to Narita by the time AirAsia Japan begins operations, facilitating connections between the two networks.

ANA is clearly confident of making the dual-LCC strategy work. On the one hand, Tokyo and Kansai are different markets, catering for leisure travel originating in eastern and western Japan, respectively. The cities themselves will generate much local traffic. So Peach and AirAsia Japan can probably coexist nicely for many years. But eventually the strategy will limit their growth because they will not be able to establish second bases at each other's hubs. ANA, Peach, AirAsia Japan and AirAsia X are bound to pinch traffic from one another, and the web of relationships will get even more complicated if AirAsia sets up another branded unit in northern Asia (as its leadership has hinted).

That said, ANA has indicated that its priority is to quickly cover as many future LCC markets as possible. The business models are experimental, totally new to Japan. Who knows what will happen in a few years' time in a market that is seeing so much structural change. Perhaps AirAsia Japan will eventually acquire Peach?

## JAL's LCC JV

JAL finally confirmed on August 16 that it is teaming up with Qantas' Jetstar and the Japanese trading house Mitsubishi Corp to form Jetstar Japan, which is expected to commence operations by the end of 2012, probably from Narita.

The venture will be initially capitalised at ¥4.8bn (\$62.4m), with JAL and Jetstar each contributing 42% and Mitsubishi 16%, though the three partners will have equal voting interests. After start of ser-

vice the capitalisation will be increased to a maximum of ¥12bn (\$156m) and more Japanese shareholders may be invited to invest. Qantas' Jetstar will have operational control of the carrier.

Many aspects of Jetstar Japan's strategy are virtually identical to AirAsia Japan's: operate to domestic and Asian leisure destinations with A320s (and later A320neos) provided by the foreign airline partner, leverage the partner's brand position, stimulate fresh travel demand in Japan with fares about 40% below current fares and achieve low cost levels.

However, there are differences. Jetstar Japan will have more flexibility in terms of bases and markets than the other LCCs. It may set up bases at both Narita and Kansai (partly depending on the outcome of negotiations with Narita) and certainly expects to fly from both airports. According to Jetstar Group CEO Bruce Buchanan, it is also exploring other potential bases in Japan that might offer the right infrastructure, cost levels and operating efficiencies.

Domestic destinations under consideration include Sapporo, Fukuoka and Okinawa. International destinations are likely to include China, Korea and Southeast Asia. In the longer term, Jetstar Japan will consider any destination within the A320's range from Japan.

The venture will launch with an initial fleet of three A320s, which will grow to 24 "within a few years". The aircraft will be part of a \$9bn order for 110 A320/A320neos that Qantas announced that same day for the group businesses. The Jetstar Japan A320s will be off balance sheet to Qantas.

Jetstar is comparable in size and reach to AirAsia. While AirAsia is the region's largest LCC in terms of passengers carried, Jetstar has the highest sales. The group comprises Jetstar Airways in Australia and New Zealand, as well as Singapore-based Jetstar Asia and Vietnam-based Jetstar Pacific.

This partnership offers several special advantages. First, Qantas is particularly well-qualified to help JAL on the LCC front because of its experience with Jetstar.

Second, Jetstar is already used to working closely with a full-service airline and its business model is open to codesharing. Third, JAL and Qantas are already partners through oneworld and have a history of codesharing (as do JAL and Jetstar).

Fourth, Jetstar is arguably the most experienced foreign LCC in the Japan market, because it began serving Tokyo and Osaka from Cairns and the Gold Coast in 2007 and in July 2010 also connected Osaka to Singapore and Taipei. JAL's new venture will be able to get feed from those services to its domestic network. Also, the Jetstar brand is already well known in Japan.

JAL's and ANA's LCC plans are in line with the trends in Asia, where multiple brands and JV airlines have become commonplace. According to CAPA, at least 13 full-service airlines have LCC units operating or planned in the region. However, such units have a dismal track record in the more mature US and European markets, and even in Asia only Qantas/Jetstar seems a proven financial success.

LCC units have become popular in Asia because of the rapid demand growth (especially at the low end of the market), relatively low LCC penetration (about 20%), flag carriers' determination to maintain leisure traffic market share, and their greater success in negotiating the labour issues. A recent CAPA report suggested that there was a "seemingly unavoidable imperative to adopt the low-cost sub-brand model" in the region.

Within Asia, the best market opportunities for LCCs are currently in the northern part of the region, where LCC penetration is the lowest. LCCs account for just 6.8% of intra-northern Asia industry seats and 9.1% of the capacity in Japan (according to CAPA). Reasons for the low penetration include government policies protecting flag carriers and - in Japan's case historically - airport capacity constraints and high cost levels.

Japan's domestic aviation market is particularly attractive because of its size (83 million passengers) and immediate development potential. Gaining access to that market is the main attraction in the JV deals for AirAsia and Qantas/Jetstar. Even

though it is not certain that the Japanese will be as quick as other Asian consumers to identify with a low-cost brand (they like package holidays, to start with), AirAsia noted in a regulatory filing that the Japanese market “possesses the necessary ingredients for growth such as the population’s strong propensity to travel, its high per-capita income coupled with its deep and significant internet penetration”.

But AirAsia and Jetstar are considering branded units also in other northern Asia countries, with China being the ultimate and highest-prized target. The eventual China-based units could be a mixed blessing for AirAsia Japan, Jetstar Japan and Peach, but at least the Japan-based airlines will have several years’ head-start in developing the Japan-China LCC market.

Opportunities for LCCs in Japan are suddenly improving dramatically because of a massive increase in airport capacity in the Tokyo metropolitan area in 2010-2013. The opening of a fourth runway and a new passenger terminal at Haneda in October 2010 boosted maximum annual aircraft movements there by 43%. Haneda was opened to scheduled international flights. LCCs are getting their fair share of the new slots, which are allocated in stages over three years. Narita, in turn, will also have space for LCCs, in part because of the shift of many long-haul services to Haneda and because a new terminal is being built. Total slots at Narita are slated to increase by 40% in 2013.

Since part of the impetus to expand Haneda and Narita is to attract more visitors to Japan, LCCs will be particularly welcome. The Japanese government is sticking to its earlier target of 30m visitors by 2020. Over the past year Japan has signed new open skies ASAs with several Asian countries that fully liberalise access to Tokyo from 2013.

It is easy to see why JAL and ANA found the JV option attractive. First, they lack experience with developing LCCs. Second, given the mistakes made by their counterparts in Europe and the US, they liked the proven business models of AirAsia and Jetstar (which expect the Japan-based units to become profitable early). Third,

the brands are already known in Japan, thus requiring less investment to build brand awareness. Fourth, JAL and ANA have high cost levels in Japan, making it hard to set up home-grown LCCs.

The single largest challenge that the planned ventures will face is Japan’s high cost environment. As well as having steep labour costs, Japan has the highest airport charges and jet fuel taxes in the world. The high cost levels have prevented the emergence of a full-fledged sizeable Japan-based LCC. Are fleet sizes of 20-30 really large enough to profitably operate in that environment?

However, there are positive developments. One early solution: low-cost terminals at airports that offer minimal services. After receiving permission from local governments to increase slots, Narita decided late last year to build a terminal exclusively for LCCs. The airport expects seven or eight LCCs to use the facility when it opens in FY 2013.

After dabbling with temporary fuel tax reductions, the Japanese government is now considering major airport reforms in an effort to reduce the exorbitant user charges. Currently, runways are operated by the central government and terminals are operated by private companies or public-private partnerships. The separate management of facilities makes it hard to use profits from non-aeronautical activities to lower landing fees. So Japan’s airports may be fully privatised from FY 2014; the decision is expected in 2012.

As ANA’s and JAL’s LCC units prepare to launch, there is likely to be a scramble by the existing Japan-based LCCs (Skymark, Starflyer, Solaseed - formerly Skynet Asia, etc.) to position themselves for the new environment. The airlines will accelerate and refine their growth strategies and perhaps even enter into joint ventures of their own. Also, more Asian LCCs will be entering the Tokyo market as more slots become available. The good news is that the market is believed to be large enough for them all.

By Heini Nuutinen  
hnuutinen@nyct.net

# Aviation Strategy

## Databases

		Group revenue US\$m	Group costs US\$m	Group op. profit US\$m	Group net profit US\$m	Operating margin	Net margin	Total ASK m	Total RPK m	Load factor	Total pax. 000s	Group emp.	
Air France/ KLM Group YE 31/03	Year 2008/09	34,152	34,335	-184	-1,160	-0.5%	-3.4%	262,359	209,060	79.7%	73,844	106,933	
	Apr-Jun 09	7,042	7,717	-676	-580	-9.6%	-8.2%	63,578	50,467	79.4%	18,703	106,800	
	Jul-Sep 09	8,015	8,082	-67	-210	-0.8%	-2.6%	66,862	56,141	84.0%	19,668	105,444	
	Oct-Dec 09	7,679	8,041	-362	-436	-4.7%	-5.7%	61,407	49,220	80.2%	17,264	105,925	
	Year 2009/10	29,096	31,357	-2,261	-2,162	-7.8%	-7.4%	251,012	202,453	80.7%	71,394	104,721	
	Apr-Jun 10	7,301	7,469	-168	939	-2.3%	12.9%	60,345	49,283	81.7%	17,623	102,918	
	Jul-Sep 10	8,579	7,835	743	374	8.7%	4.4%	66,558	56,457	84.8%	19,704		
	Oct-Dec 10	7,956	7,847	109	-62	1.4%	-0.8%	62,379	50,753	81.4%	17,551	101,946	
	Year 2010/11	31,219	19,236	1,171	810	3.8%	2.6%	250,836	204,737	81.6%	71,320	102,012	
British Airways YE 31/03	Year 2008/09	15,481	15,860	-379	-616	-2.4%	-4.0%	148,504	114,346	77.0%	33,117	41,473	
	Apr-Jun 09	3,070	3,216	-146	-164	-4.7%	-5.3%	36,645	28,446	77.6%	8,446		
	Jul-Sep 09	3,479	3,507	-28	-167	-0.8%	-4.8%	37,767	31,552	83.5%	9,297	38,704	
	Oct-Dec 09	3,328	3,287	41	-60	1.2%	-1.8%	34,248	26,667	77.9%	7,502		
	Year 2009/10	12,761	13,130	-369	-678	-2.9%	-5.3%	141,178	110,851	78.5%	31,825	37,595	
	Apr-Jun 10	3,092	3,207	-115	-195	-3.7%	-6.3%	32,496	24,192	74.4%	7,013		
Jul-Sep 10	3,908	3,332	576	365	14.7%	9.3%	37,163	31,066	83.6%	9,339			
IAG Group	Oct-Dec 10	5,124	5,116	8	121	0.2%	2.4%	50,417	39,305	78.0%		56,243	
	Jan-Mar 11	4,969	5,109	-139	45	-2.8%	0.9%	51,118	37,768	73.9%		56,159	
Iberia YE 31/12	Jan-Mar 09	1,436	1,629	-193	-121	-13.4%	-8.4%	15,369	11,752	76.5%		20,715	
	Apr-Jun 09	1,455	1,632	-177	-99	-12.1%	-6.8%	15,668	12,733	81.3%		20,760	
	Jul-Sep 09	1,667	1,744	-77	-23	-4.6%	-1.4%	16,275	13,369	82.1%		21,113	
	Oct-Dec 09	1,589	1,784	-195	-134	-12.3%	-8.5%	14,846	11,759	79.2%		20,096	
	Year 2009	6,149	6,796	-647	-381	-10.5%	-6.2%	62,158	49,612	79.8%		20,671	
	Jan-Mar 10	1,453	1,552	-98	-72	-6.8%	-5.0%	14,360	11,605	80.8%		19,643	
	Apr-Jun 10	1,502	1,498	27	40	1.8%	2.6%	15,324	12,648	82.5%		20,045	
	Jul-Sep 10	1,730	1,637	93	95	5.4%	5.5%	16,834	14,404	85.6%		20,668	
Lufthansa YE 31/12	Jan-Mar 09	6,560	6,617	-58	-335	-0.9%	-5.1%	44,179	32,681	74.0%	15,033	106,840	
	Apr-Jun 09	7,098	7,027	71	54	1.0%	0.8%	49,939	38,076	76.2%	18,142	105,499	
	Jul-Sep 09	8,484	8,061	423	272	5.0%	3.2%	56,756	46,780	82.4%	22,164	118,945	
	Year 2009	31,077	30,699	378	-139	1.2%	-0.4%	206,269	160,647	77.9%	76,543	112,320	
	Jan-Mar 10	7,978	8,435	-457	-413	-5.7%	-5.2%	52,292	39,181	74.9%	19,031	117,732	
	Apr-Jun 10	8,763	8,560	203	248	2.3%	2.8%	57,565	45,788	79.5%	22,713	116,844	
	Jul-Sep 10	9,764	8,754	1,010	810	10.3%	8.3%	63,883	53,355	83.5%	26,089	116,838	
	Year 2010	36,057	34,420	1,636	1,492	4.5%	4.1%	235,837	187,700	79.3%	91,157	117,019	
	Jan-Mar 11	8,792	9,031	-239	-692	-2.7%	-7.9%	60,326	43,726	72.5%	22,078	117,000	
	SAS YE 31/12	Jan-Mar 09	1,352	1,469	-118	-90	-8.7%	-6.6%	8,870	5,541	62.5%	5,748	22,133
		Apr-Jun 09	1,546	1,665	-119	-132	-7.7%	-8.6%	9,584	7,055	73.6%	6,850	18,676
Jul-Sep 09		1,522	1,486	36	21	2.3%	1.4%	8,958	6,868	76.7%	6,245	17,825	
Oct-Dec 09		1,474	1,676	-202	-186	-13.7%	-12.6%	8,160	5,764	70.6%	6,055	16,510	
Year 2009		5,914	6,320	-406	-388	-6.9%	-6.6%	35,571	25,228	70.9%	24,898	18,786	
Jan-Mar 10		1,322	1,428	-106	-99	-8.0%	-7.5%	7,951	5,471	68.8%	5,735	15,835	
Apr-Jun 10		1,321	1,367	-46	-66	-3.5%	-5.0%	8,769	6,612	75.4%	6,282	15,709	
Jul-Sep 10		1,471	1,538	-67	-145	-4.6%	-9.8%	9,180	7,239	78.9%	6,655	15,570	
Oct-Dec 10		1,556	1,606	-51	7	-3.2%	0.4%	8,761	6,389	72.9%	6,557	15,123	
Year 2010		5,660	5,930	-270	-308	-4.8%	-5.4%	34,660	25,711	74.2%	25,228	15,559	
Jan-Mar 11		1,336	1,395	-59	-54	-4.4%	-4.0%	8,528	5,655	66.3%	6,093	14,972	
Ryanair YE 31/03	Year 2008/09	4,191	3,986	205	-241	4.9%	-5.7%			81.0%	58,559		
	Apr-Jun 09	1,055	844	211	168	20.0%	15.9%			83.0%	16,600		
	Jul-Sep 09	1,418	992	426	358	30.0%	25.2%			88.0%	19,800		
	Oct-Dec 09	904	902	2	-16	0.2%	-1.8%			82.0%	16,021		
	Year 2009/10	4,244	3,656	568	431	13.5%	10.2%			82.0%	66,500		
	Apr-Jun 10	1,145	992	152	120	13.3%	10.5%			83.0%	18,000	7,828	
	Jul-Sep 10	1,658	1,150	508	426	30.7%	25.7%			85.0%	22,000	8,100	
	Oct-Dec 10	1,015	1,016	-1	-14	-0.1%	-1.3%			85.0%	17,060	8,045	
	Year 2010/11	4,797	4,114	682	530	14.2%	11.0%			83.0%	72,100		
easyJet YE 30/09	Apr-Sep 08	2,867	2,710	157	251	5.5%	8.7%	32,245	28,390	88.0%	24,800		
	Year 2007/08	4,662	4,483	180	164	3.9%	3.5%	55,687	47,690	85.6%	43,700	6,107	
	Oct 08-Mar 09	1,557	1,731	-174	-130	-11.2%	-8.3%	24,754	21,017	84.9%	19,400		
	Year 2008/09	4,138	3,789	93	110	2.3%	2.7%	58,165	50,566	86.9%	45,200		
	Oct 09 - Mar 10	1,871	1,995	-106	-94	-5.6%	-5.0%	27,077	23,633	87.3%	21,500		
	Year 2009/10	4,635	4,364	271	240	5.9%	5.2%	62,945	56,128	87.0%	48,800		
	Oct 10 - Mar 11	1,950	2,243	-229	-181	-11.7%	-9.3%	29,988	26,085	87.0%	23,900		

Note: Annual figures may not add up to sum of interim results due to adjustments and consolidation.



# Aviation Strategy

## Databases

		Group revenue US\$m	Group costs US\$m	Group op. profit US\$m	Group net profit US\$m	Operating margin	Net margin	Total ASK m	Total RPK m	Load factor	Total pax. 000s	Group emp.
Alaska	Year 2009	3,399	3,132	267	122	7.9%	3.6%	37,246	29,550	79.3%	15,561	8,915
	Jan - Mar 10	830	804	26	5	3.1%	0.6%	8,917	7,197	80.7%	3,641	8,537
	Apr - Jun 10	976	866	110	59	11.3%	6.0%	9,836	8,162	83.0%	4,170	8,621
	Jul - Sep 10	1,068	851	216	122	20.2%	11.4%	10,531	8,980	85.3%	4,562	8,737
	Oct - Dec 10	959	839	119	65	12.4%	6.8%	10,037	8,410	83.8%	4,141	8,711
	Year 2010	3,832	3,361	472	251	12.3%	6.6%	39,322	32,749	83.3%	16,514	8,651
	Jan - Mar 11	965	831	134	74	13.9%	7.7%	11,445	9,419	82.3%	5,752	11,884
Apr - Jun 11	1,110	1,052	58	29	5.2%	2.6%	12,020	10,127	84.3%	6,246	11,907	
American	Year 2009	19,917	20,921	-1,004	-1,468	-5.0%	-7.4%	244,250	197,007	80.7%	85,719	78,900
	Jan - Mar 10	5,068	5,366	-298	-505	-5.9%	-10.0%	59,296	46,187	77.9%	20,168	77,800
	Apr - Jun 10	5,674	5,478	196	-11	3.5%	-0.2%	61,788	51,821	83.9%	22,166	78,300
	Jul - Sep 10	5,842	5,500	342	143	5.9%	2.4%	64,277	53,985	84.0%	22,468	78,600
	Oct - Dec 10	5,586	5,518	68	-97	1.2%	-1.7%	61,219	49,927	81.6%	21,299	78,300
	Year 2010	22,170	21,862	308	-471	1.4%	-2.1%	246,611	201,945	81.9%	86,130	78,250
	Jan - Mar 11	5,533	5,765	-232	-436	-4.2%	-7.9%	60,912	46,935	77.1%	20,102	79,000
Apr-Jun 11	6,114	6,192	-78	-286	-1.3%	-4.7%	63,130	52,766	83.6%	22,188	80,500	
Continental	Year 2009	12,586	12,732	-146	-282	-1.2%	-2.2%	176,305	143,447	81.4%	62,809	41,000
	Jan - Mar 10	3,169	3,220	-51	-146	-1.6%	-4.6%	42,350	33,665	79.5%	14,535	39,365
	Apr - Jun 10	3,708	3,380	328	233	8.8%	6.3%	39,893	33,910	85.0%	16,300	38,800
Jul - Sep 10	3,953	3,512	441	354	11.2%	9.0%	46,844	40,257	85.9%	16,587	38,900	
Delta	Year 2009	28,063	28,387	-324	-1,237	-1.2%	-4.4%	370,672	304,066	82.0%	161,049	81,106
	Jan - Mar 10	6,848	6,780	68	-256	1.0%	-3.7%	85,777	68,181	79.5%	36,553	81,096
	Apr - Jun 10	8,168	7,316	852	467	10.4%	5.7%	94,463	80,294	85.0%	42,207	81,916
	Jul - Sep 10	8,950	7,947	1,003	363	11.2%	4.1%	102,445	87,644	85.6%	44,165	79,005
	Oct - Dec 10	7,789	7,495	294	19	3.8%	0.2%	91,774	74,403	81.1%	39,695	79,684
	Year 2010	31,755	29,538	2,217	593	7.0%	1.9%	374,458	310,867	83.0%	162,620	79,684
	Jan - Mar 11	7,747	7,839	-92	-318	-1.2%	-4.1%	90,473	69,086	76.4%	36,764	81,563
Southwest	Year 2009	10,350	10,088	262	99	2.5%	1.0%	157,714	119,823	76.0%	86,310	34,726
	Jan - Mar 10	2,630	2,576	54	11	2.1%	0.4%	36,401	27,618	75.9%	23,694	34,637
	Apr - Jun 10	3,168	2,805	363	112	11.5%	3.5%	40,992	32,517	79.3%	22,883	34,636
	Jul - Sep 10	3,192	2,837	355	205	11.1%	6.4%	41,130	33,269	80.9%	22,879	34,836
	Oct - Dec 10	3,114	2,898	216	131	6.9%	4.2%	38,891	32,196	80.7%	22,452	34,901
	Year 2010	12,104	11,116	988	459	8.2%	3.8%	158,415	125,601	79.3%	88,191	34,901
Jan - Mar 11	3,103	2,989	114	5	3.7%	0.2%	39,438	30,892	78.3%	25,599	35,452	
United	Year 2009	16,335	16,496	-161	-651	-1.0%	-4.0%	226,454	183,854	81.2%	81,246	43,600
	Jan - Mar 10	4,241	4,172	69	-82	1.6%	-1.9%	53,023	42,614	80.4%	18,818	42,800
	Apr - Jun 10	5,161	4,727	434	273	8.4%	5.3%	58,522	49,319	84.3%	21,234	42,600
Jul - Sep 10	5,394	4,859	535	387	9.9%	7.2%	61,134	52,534	85.9%	22,253	42,700	
United/Continental Pro-forma FY 2010	Oct-Dec 10	8,433	8,515	-82	-325	-1.0%	-3.9%	100,201	82,214	82.0%	35,733	80,800
	Year 2010	34,013	32,195	1,818	854	5.3%	2.5%	407,304	338,824	83.2%	145,550	81,500
	Jan - Mar 11	8,202	8,168	34	-213	0.4%	-2.6%	96,835	75,579	78.0%	32,589	82,000
Apr-Jun 11	9,809	9,001	808	538	8.2%	5.5%	104,614	87,296	83.4%	37,000	81,100	
US Airways Group	Year 2009	10,458	10,340	118	-205	1.1%	-2.0%	136,939	110,171	80.5%	77,965	31,333
	Jan - Mar 10	2,651	2,661	-10	-45	-0.4%	-1.7%	31,957	24,659	77.2%	17,931	30,439
	Apr - Jun 10	3,171	2,800	371	279	11.7%	8.7%	35,517	29,461	82.9%	20,642	30,860
	Jul - Sep 10	3,179	2,864	315	240	9.9%	7.5%	36,808	30,604	83.1%	20,868	30,445
	Oct - Dec 10	2,907	2,802	105	28	3.6%	1.0%	33,823	27,271	80.6%	20,118	
	Year 2010	11,908	11,127	781	502	6.6%	4.2%	138,107	111,996	81.1%	79,560	
	Jan - Mar 11	2,961	3,000	-39	-114	-1.3%	-3.9%	33,034	25,762	78.0%	18,851	30,621
Apr-Jun 11	3,503	3,326	177	92	5.1%	2.6%	36,698	30,754	83.8%	21,209	31,321	
JetBlue	Oct - Dec 09	832	768	64	11	7.7%	1.3%	12,855	10,208	79.4%	5,457	10,704
	Year 2009	3,286	3,007	279	58	8.5%	1.8%	52,396	41,769	79.7%	22,450	10,704
	Jan - Mar 10	870	828	42	-1	4.8%	-0.1%	13,557	10,412	76.8%	5,528	11,084
	Apr - Jun 10	939	845	94	30	10.0%	3.2%	13,981	11,468	82.0%	6,114	10,906
	Jul - Sep 10	1,039	890	140	59	13.5%	5.7%	14,648	12,390	84.6%	6,573	10,669
	Oct - Dec 10	940	883	57	9	6.1%	1.0%	13,727	11,239	81.9%	6,039	11,121
	Year 2010	3,779	3,446	333	97	8.8%	2.6%	55,914	45,509	81.4%	24,254	11,121
	Jan - Mar 11	1,012	967	45	3	4.4%	0.3%	13,696	11,143	81.4%	6,039	11,281

Note: Annual figures may not add up to sum of interim results due to adjustments and consolidation. 1 ASM = 1.6093 ASK. All US airline financial year ends are December 31st.

# Aviation Strategy

## Databases

		Group revenue US\$m	Group costs US\$m	Group op. profit US\$m	Group net profit US\$m	Operating margin	Net margin	Total ASK m	Total RPK m	Load factor	Total pax. 000s	Group emp.
ANA YE 31/03	Year 2006/07	12,763	11,973	790	280	6.2%	2.2%	85,728	58,456	68.2%	49,500	32,460
	Year 2007/08	13,063	12,322	740	563	5.7%	4.3%	90,936	61,219	67.3%	50,384	
	Year 2008/09	13,925	13,849	75	-42	0.5%	-0.3%	87,127	56,957	65.4%	47,185	
	Year 2009/10	13,238	13,831	-582	-614	-4.4%	-4.6%	83,827	55,617	66.3%	44,560	
	Year 2010/11	15,889	15,093	796	269	5.0%	1.7%	85,562	59,458	69.5%	45,748	33,000
Cathay Pacific YE 31/12	Year 2007	9,661	8,670	991	900	10.3%	9.3%	102,462	81,101	79.8%	23,250	19,840
	Jan-Jun 08	5,443	5,461	-18	-71	-0.3%	-1.3%	56,949	45,559	80.0%	12,463	
	Year 2008	11,119	12,138	-1,018	-1,070	-9.2%	-9.6%	115,478	90,975	78.8%	24,959	18,718
	Jan-Jun 09	3,988	3,725	263	119	6.6%	3.0%	55,750	43,758	78.5%	11,938	18,800
	Year 2009	8,640	7,901	740	627	8.6%	7.3%	111,167	96,382	86.7%	24,558	18,511
	Jan-Jun 10	5,320	4,681	917	892	17.2%	16.8%	55,681	46,784	84.0%	12,954	
	Year 2010	11,522	10,099	1,813	1,790	15.7%	15.5%	115,748	96,548	84.0%	26,796	21,592
JAL YE 31/03	Year 2005/06	19,346	19,582	-236	-416	-1.2%	-2.2%	148,591	100,345	67.5%	58,040	53,010
	Year 2006/07	19,723	19,527	196	-139	1.0%	-0.7%	139,851	95,786	68.5%	57,510	
	Year 2007/08	19,583	18,793	790	148	4.0%	0.8%	134,214	92,173	68.7%	55,273	
	Year 2008/09	19,512	20,020	-508	-632	-2.6%	-3.2%	128,744	83,487	64.8%	52,858	
Korean Air YE 31/12	Year 2006	8,498	7,975	523	363	6.2%	4.3%	71,895	52,178	72.6%	22,140	16,623
	Year 2007	9,496	8,809	687	12	7.2%	0.1%	76,181	55,354	72.7%	22,830	16,825
	Year 2008	9,498	9,590	-92	-1,806	-1.0%	-19.0%	77,139	55,054	71.4%	21,960	18,600
	Year 2009	7,421	7,316	105	-49	1.4%	-0.7%	80,139	55,138	68.8%	20,750	19,178
	Year 2010	10,313	8,116	120	421	1.2%	4.1%	79,457	60,553	76.2%	22,930	
Malaysian YE 31/12	Year 2006	3,696	3,751	-55	-37	-1.5%	-1.0%	58,924	41,129	69.8%	15,466	19,596
	Year 2007	4,464	4,208	256	248	5.7%	5.6%	56,104	40,096	71.5%	13,962	19,423
	Year 2008	4,671	4,579	92	74	2.0%	1.6%	52,868	35,868	67.8%	12,630	19,094
	Year 2009	3,296	3,475	-179	140	-5.4%	4.3%	42,790	32,894	76.9%	11,950	19,147
	Year 2010	4,237	4,155	82	73	1.9%	1.7%	49,624	37,838	76.2%	13,110	
Qantas YE 30/6	Year 2007/08	14,515	13,283	1,232	869	8.5%	6.0%	127,019	102,466	80.7%	38,621	33,670
	Jul-Dec 08	6,755	6,521	234	184	3.5%	2.7%	63,853	50,889	79.7%	19,639	34,110
	Year 2008/09	10,855	10,733	152	92	1.4%	0.8%	124,595	99,176	79.6%	38,348	33,966
	Jul-Dec 09	6,014	5,889	124	52	2.1%	0.9%	62,476	51,494	82.4%	21,038	32,386
	Year 2009/10	12,150	11,926	223	102	1.8%	0.8%	124,717	100,727	80.8%	41,428	32,490
	Jul - Dec 10	7,176	6,832	344	226	4.8%	3.1%	66,821	54,592	81.7%	22,948	32,369
Singapore YE 31/03	Year 2005/06	6,201	5,809	392	449	6.3%	7.2%	109,484	82,742	75.6%	17,000	13,729
	Year 2006/07	9,555	8,688	866	1,403	9.1%	14.7%	112,544	89,149	79.2%	18,346	13,847
	Year 2007/08	10,831	9,390	1,441	1,449	13.3%	13.4%	113,919	91,485	80.3%	19,120	14,071
	Year 2008/09	11,135	10,506	629	798	5.6%	7.2%	117,789	90,128	76.5%	18,293	14,343
	Year 2009/10	8,908	8,864	44	196	0.5%	2.2%	105,674	82,882	78.4%	16,480	
	Year 2010/11	10,911	9,956	955	863	8.8%	7.9%	108,060	81,801	75.7%	16,647	
Air China YE 31/12	Year 2006	5,647	5,331	316	338	5.6%	6.0%	79,383	60,276	75.9%	31,490	18,872
	Year 2007	6,770	6,264	506	558	7.5%	8.2%	85,257	66,986	78.6%	34,830	19,334
	Year 2008	7,627	7,902	-275	-1,350	-3.6%	-17.7%	88,078	66,013	74.9%	34,250	19,972
	Year 2009	7,523	6,718	805	710	10.7%	9.4%	95,489	73,374	76.8%	39,840	23,506
	Year 2010	12,203	10,587	1,616	1,825	13.2%	15.0%	107,404	86,193	80.3%	46,420	
China Southern YE 31/12	Year 2006	5,808	5,769	39	26	0.7%	0.4%	97,044	69,575	71.7%	49,200	45,575
	Year 2007	7,188	6,974	214	272	3.0%	3.8%	109,733	81,172	74.0%	56,910	45,474
	Year 2008	7,970	8,912	-942	-690	-11.8%	-8.7%	112,767	83,184	73.8%	58,240	46,209
	Year 2009	8,022	7,811	211	48	2.6%	0.6%	123,440	93,000	75.3%	66,280	50,412
	Year 2010	11,317	10,387	930	857	8.2%	7.6%	140,498	111,328	79.2%	76,460	
China Eastern YE 31/12	Year 2006	3,825	4,201	-376	-416	-9.8%	-10.9%	70,428	50,243	71.3%	35,020	38,392
	Year 2007	5,608	5,603	5	32	0.1%	0.6%	77,713	57,180	73.6%	39,160	40,477
	Year 2008	6,018	8,192	-2,174	-2,201	-36.1%	-36.6%	75,919	53,754	70.8%	37,220	44,153
	Year 2009	5,896	5,629	267	25	4.5%	0.4%	84,422	60,918	72.2%	44,030	45,938
	Year 2010	11,089	10,248	841	734	7.6%	6.6%	119,451	93,153	78.0%	64,930	
Air Asia (Malaysia) YE 31/12	Year 2008	796	592	203	-142	25.5%	-17.9%	14,353	10,515	73.3%	9,183	4,593
	Year 2009	905	539	366	156	40.4%	17.3%	21,977	15,432	70.2%	14,253	
	Year 2010	1,245	887	358	333	28.8%	26.7%	24,362	18,499	75.9%	16,050	

Note: Annual figures may not add up to sum of interim results due to adjustments and consolidation..

# Aviation Strategy

## Databases

### EUROPEAN SCHEDULED TRAFFIC

	Intra-Europe			North Atlantic			Europe-Far East			Total long-haul			Total International		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
1992	129.6	73.5	56.7	134.5	95.0	70.6	89.4	61.6	68.9	296.8	207.1	69.8	445.8	293.4	65.8
1993	137.8	79.8	57.9	145.1	102.0	70.3	96.3	68.1	70.7	319.1	223.7	70.1	479.7	318.0	66.3
1994	144.7	87.7	60.6	150.3	108.8	72.4	102.8	76.1	74.0	334.0	243.6	72.9	503.7	346.7	68.8
1995	154.8	94.9	61.3	154.1	117.6	76.3	111.1	81.1	73.0	362.6	269.5	74.3	532.8	373.7	70.1
1996	165.1	100.8	61.1	163.9	126.4	77.1	121.1	88.8	73.3	391.9	292.8	74.7	583.5	410.9	70.4
1997	174.8	110.9	63.4	176.5	138.2	78.3	130.4	96.9	74.3	419.0	320.5	76.5	621.9	450.2	72.4
1998	188.3	120.3	63.9	194.2	149.7	77.1	135.4	100.6	74.3	453.6	344.2	75.9	673.2	484.8	72.0
1999	200.0	124.9	62.5	218.9	166.5	76.1	134.5	103.1	76.7	492.3	371.0	75.4	727.2	519.5	71.4
2000	208.2	132.8	63.8	229.9	179.4	78.1	137.8	108.0	78.3	508.9	396.5	77.9	755.0	555.2	73.5
2001	212.9	133.4	62.7	217.6	161.3	74.1	131.7	100.9	76.6	492.2	372.6	75.7	743.3	530.5	71.4
2002	197.2	129.3	65.6	181.0	144.4	79.8	129.1	104.4	80.9	447.8	355.1	79.3	679.2	507.7	74.7
2003	210.7	136.7	64.9	215.0	171.3	79.7	131.7	101.2	76.8	497.2	390.8	78.6	742.6	551.3	74.2
2004	220.6	144.2	65.4	224.0	182.9	81.6	153.6	119.9	78.0	535.2	428.7	80.1	795.7	600.7	75.5
2005	309.3	207.7	67.2	225.9	186.6	82.6	168.6	134.4	79.7	562.6	456.4	81.1	830.8	639.3	76.9
2006	329.9	226.6	68.7	230.5	188.0	81.5	182.7	147.5	80.7	588.2	478.4	81.3	874.6	677.3	77.4
2007	346.6	239.9	69.2	241.4	196.1	81.2	184.2	152.1	82.6	610.6	500.4	81.9	915.2	713.9	78.0
2008	354.8	241.5	68.1	244.8	199.2	81.4	191.1	153.8	80.5	634.7	512.4	80.7	955.7	735.0	76.9
2009	322.1	219.3	68.1	227.8	187.7	82.4	181.2	145.8	80.5	603.8	488.7	80.9	912.7	701.1	76.8
2010	332.3	232.6	70.0	224.2	188.1	83.9	180.2	150.0	83.2	604.1	500.4	82.8	922.7	752.8	78.7
June 11	30.9	23.0	74.6	22.9	20.0	87.3	17.1	13.6	79.3	56.9	47.1	82.7	86.5	69.0	79.8
Ann. change	4.7%	7.8%	2.1	8.0%	10.4%	-2.0	13.7%	7.3%	-4.7	10.5%	7.2%	-2.5	8.7%	7.5%	-0.9
Jan-June 11	169.0	115.9	68.6	118.5	94.8	80.0	98.7	76.9	77.9	322.1	255.0	79.2	484.5	366.5	75.6
Ann. change	7.7%	10.3%	1.6	13.0%	9.8%	-2.3	14.8%	8.8%	-4.3	12.4%	9.1%	-2.4	11.0%	9.3%	-1.2

Source: AEA.

### JET ORDERS

	Date	Buyer	Order	Delivery/other information
Boeing	01 Aug	Korean Air	2 x 737-900ER	
	04 Aug	GECAS	8 x 777-300ER, 2 x 747-8F	
	10 Aug	Cathay Pacific	8 x 777F, 4 x 777-300ER	
	15 Aug	Air Lease Corp.	14 x 737-800, 5 x 777-300ER	plus 4 x 737-800 options
	18 Aug	Thai Airways	6 x 777-300ER	
	25 Aug	Delta Air Lines	100 x 737-900ER	
Airbus	27 July	Lufthansa	30 x A320neo	
	08 Aug	Cebu Pacific	30 x A321neo	
	09 Aug	Garuda Indonesia	25 x A320 family	
	10 Aug	CIT Aerospace	50 x A320neo	
	26 Aug	Lao Airlines	2 x A320	

Note: Only firm orders from identifiable airlines/lessors are included. Source: Manufacturers.

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For further information please contact:

**Tim Coombs or Keith McMullan**

Aviation Economics

James House, 1st Floor, 22/24 Corsham Street, London N1 6DR

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