How integrated are Air France and KLM?

LEADING up to the peak of the last cycle in 2008, Air France-KLM had managed to convince investors that the 2004 merger with KLM was working: operating profits increased and the first-mover advantage of removing a major competitor along with providing joint-hub pricing suggested that consolidation in Europe could really work.

This in itself persuaded its major competitors — BA and Lufthansa — that it was a "good idea", and spurred on the era of European consolidation. Since then the group has lost a total of €6bn at the net level and €2bn in operating results. The group's market capitalisation on the stock markets has fallen from a peak of €11bn to €2bn now.

It is unusual, but perhaps an aspect of the original merger deal, that KLM, the acquired airline, still makes public its annual reports. KLM, an expert at 6th freedom traffic and having a relatively low level of pure O&D demand, has been able to generate underlying operating profits of €1.1bn and net profits of €0.5bn in the past five years (see chart page 2). This only represents an average operating margin of 3% — insufficient to cover the cost of capital maybe, but at least positive. This is in significant contrast to the results for the group as a whole.

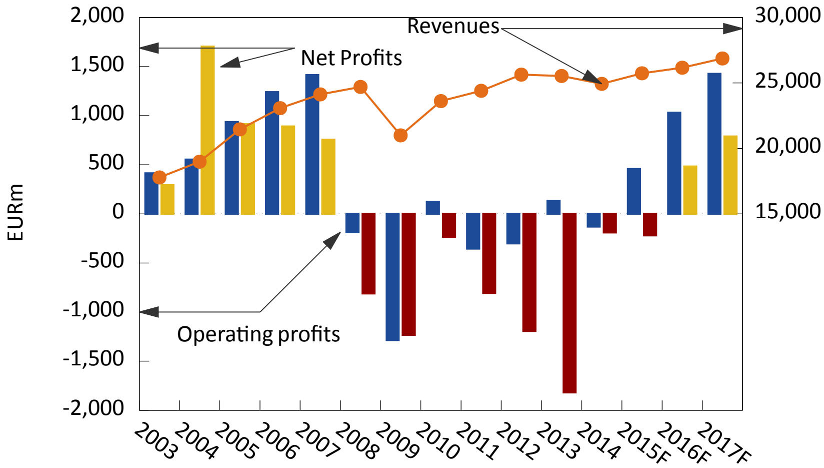
There appear to be many differences between the two carriers. KLM's staff costs are 25% of revenues, compared with 29% for the group as a whole (and 32% for the group excluding KLM) — and this is despite having a slightly higher average number of pilots and cabin crew per aircraft. Industrial relations also appear markedly in contrast. KLM seems to have a better ability to negotiate consensual pragmatic agreements with its unions.

Air France in contrast had a significantly damaging strike this time last year (costing over €400m), and is caught up in a major fight with its pilots over productivity, pay and future direction of the company. This culminated in a public brawl early in October, with physical attacks on senior management.

Annette Groeneveld, the leader of the Dutch carrier's cabin crew union, was recently quoted as saying "At KLM, we have been able to strike a deal between the pilots, cabin crew and ground staff to reduce labour

This issue includes

AIR FRANCE-KLM FINANCIAL RESULTS



Note: 2003-2010 Years ending March in following year. 2011 on years ending December. Source: Company reports. Concensus forecasts.

Published by Aviation Strategy Ltd

Aviation Strategy

ISSN 2041-4021 (Online)

This newsletter is published ten times a year by Aviation Strategy Limited Jan/Feb and Jul/Aug usually appear as combined issues. Our editorial policy is to analyse and cover contemporary aviation issues and airline strategies in a clear, original and objective manner. Aviation Strategy does not shy away from critical analysis, and takes a global perspective — with balanced coverage of the European, American and Asian markets.

Publisher:

Keith McMullan
James Halstead

Editorial Team

Keith McMullan
kgm@aviationstrategy.aero

James Halstead
jch@aviationstrategy.aero

Tel: +44(0)207-490-4453
Fax: +44(0)207-504-8298

Subscriptions:

info@aviationstrategy.aero

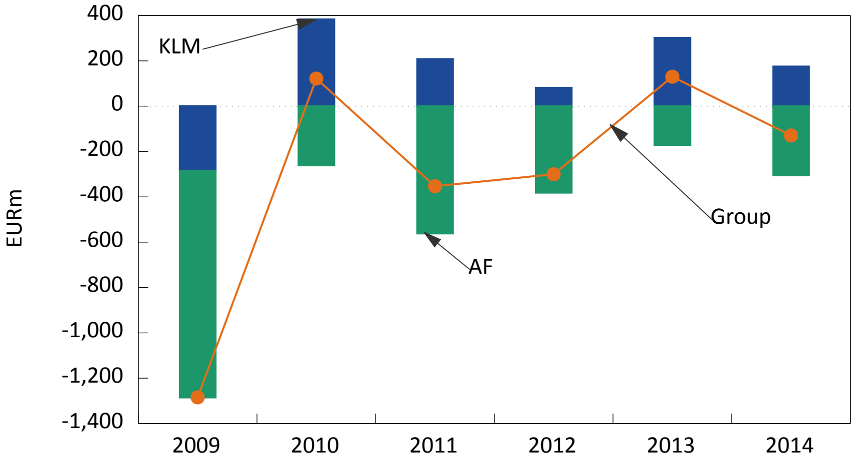
Copyright:

©2015. All rights reserved

Aviation Strategy Ltd
Registered No: 8511732 (England)
Registered Office:
137-149 Goswell Rd
London EC1V 7ET
VAT No: GB 162 7100 38
ISSN 2041-4021 (Online)

The opinions expressed in this publication do not necessarily reflect the opinions of the editors, publisher or contributors. Every effort is made to ensure that the information contained in this publication is accurate, but no legal reponsibility is accepted for any errors or omissions. The contents of this publication, either in whole or in part, may not be copied, stored or reproduced in any format, printed or electronic form, without the written consent of the publisher.

AIR FRANCE AND KLM OPERATING RESULTS (€m)

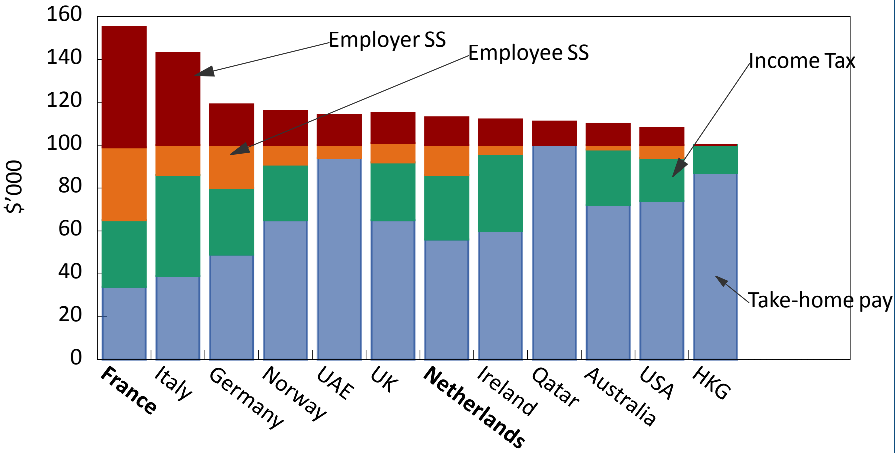


Note: KLM operating result from KLM Annual reports. AF operating result = group operating result minus KLM operating result.

costs, and improve the efficiency of KLM... KLM did not enforce anything on us. We have been negotiating for a very long time and we struck a deal in the best interests of the company. I must admit I don't know what Air France is doing... negotiating by the unions in France is a bit difficult because I think that French culture is difficult, well different at least." Cultural differences still lurk across borders in Europe — and the Dutch unions do not have the same history of *anarcho-syndicalisme*.

One of the major reasons for the disparity in costs arises from the substantially higher rate of employers' social costs in France which makes French companies less competitive in hiring employees from a global workforce such as pilots. In the graph below we show data extracted from a

TAX & SOCIAL COSTS FOR $100,000 SALARY



Source: KPMG 2011. Figures estimated for unmarried individual without children.

KPMG study of comparative employment costs showing that for an advertised salary of $100k per annum a French company could have to pay over 50% on top of the salary to the government and the French based pilot would take home less than 30% of what he could achieve if employed in eg Qatar. (Hardly surprising that Ryanair has decided not to base pilots in France).

Balance sheets

KLM's net asset value at the end of 2014 was virtually zero — although this was affected by writedowns against reserves of some €1.6bn in the year from pension fund revaluations and cash flow hedges. Reclassifying its cumulative preference shares and perpetual subordinated loans to equity would boost the NAV to over €600m.

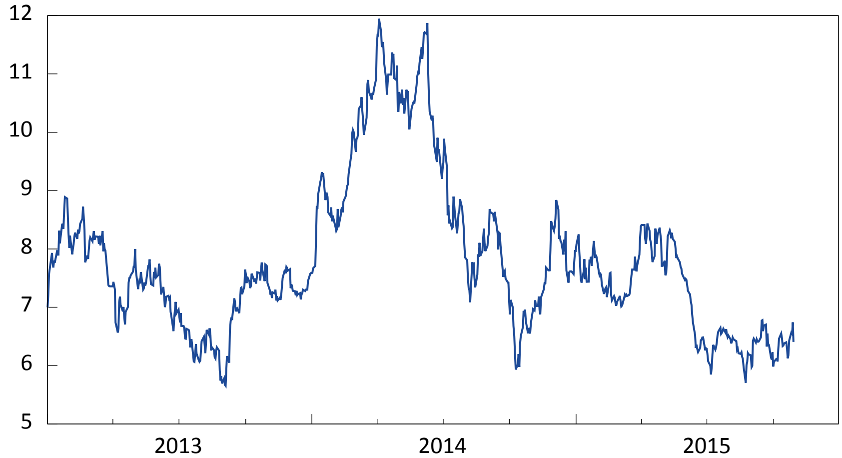
In contrast the Air France-KLM group balance sheet showed a negative shareholders' funds of €(0.6)bn (since the year end this has been covered by a new perpetual loan treated as equity) — although the underlying level excluding the carrying amount of intangible assets would be nearer a negative €(1.9)bn. This is against net debt of €6.2bn at the year and and €5bn at the end of September 2015. Helped by the sale of six pairs of Heathrow slots to Delta for an astounding $276m it plans to reduce net debt to €4.4bn by the year end.

The group has been trying hard to recover profitability since the financial crisis. Its first restructuring plan entitled "Transform 2015" was designed to return it to a level of profits sufficient to provide a return to shareholders in excess of cost of capital by 2015 (the same targets were made by IAG and Lufthansa — but only IAG it seems will achieve it). This proved impossible as the economic performance in Europe flat-lined and, while fuel has fallen substantially, locked-in fuel hedges have restrained the benefits as industry ticket pricing has been led by carriers benefiting fully from the decline. Last year the group extended its target return to profitability to 2017 through a new programme "Perform 2020".

Plan "A" was to continue to grow at around 1%-2%, concentrate on unit cost reductions, develop Transavia into a pan-European LCC (or at least eventually transfer more of the Air France non-hub flying into a leaner operation). Failing to negotiate with the French pilots, plan "B" is to shrink into profitability. (This is far harder to do — but BA *did* achieve it fifteen years ago). It will focus on cutting its long haul capacity by 10% between 2015 and 2017 and reduce the long haul fleet from 107 aircraft to 93. If it fails to reach agreement with the French unions it may well accelerate the shrinkage further. Plan "C" no doubt is to push more activity towards a more efficient KLM — getting rid of the implicit agreement for parallel equal growth.

Plan "D", which may only exist in the minds of some interested observers, might be a de-merger.

AIR FRANCE-KLM GROUP SHARE PRICE



EUROPEAN NETWORK CARRIERS' 9 MONTH RESULTS

	Air France-KLM		Lufthansa		IAG	
€m	2015	2014	2015	2014	2015	2014
Revenues	19,714	18,717	24,304	22,624	17,119	15,155
Operating result	666	40	1,663	1,048	1,805	1,130
Net result	-153	-526	1,748	482	1,180	694
Operating margin	3.4%	0.2%	6.8%	4.6%	10.5%	7.5%

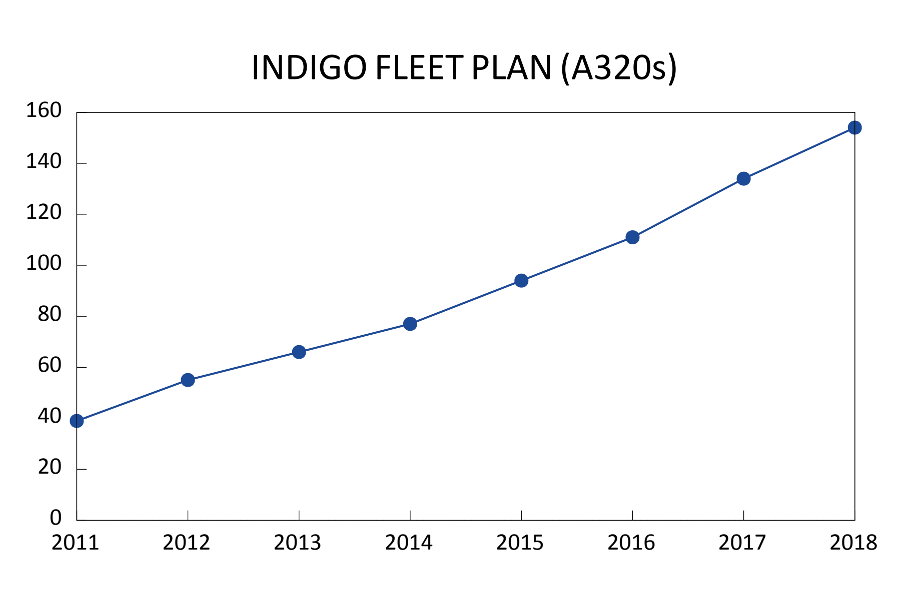
Aviation Strategy

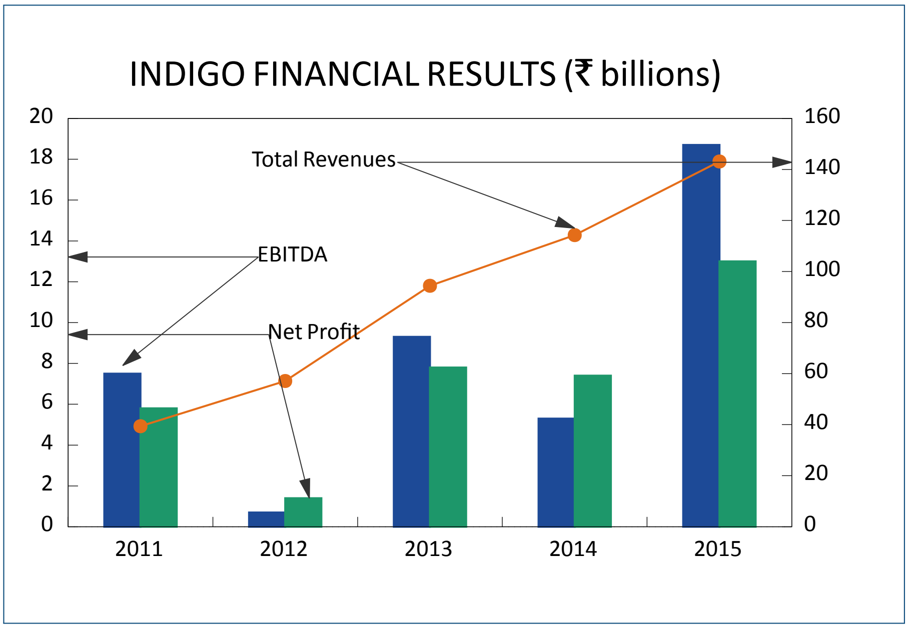
IndiGo: Airline investing can be fun

IndiGo, India's leading LCC, was floated on the Delhi stock exchange in late October, a combination of new shares and the disposal of shares by the airline's founders, raising an estimated $460m. The implied market capitalisation of the carrier would then be around $4.3bn, with an historic p/e of 21, roughly the same as Ryanair.

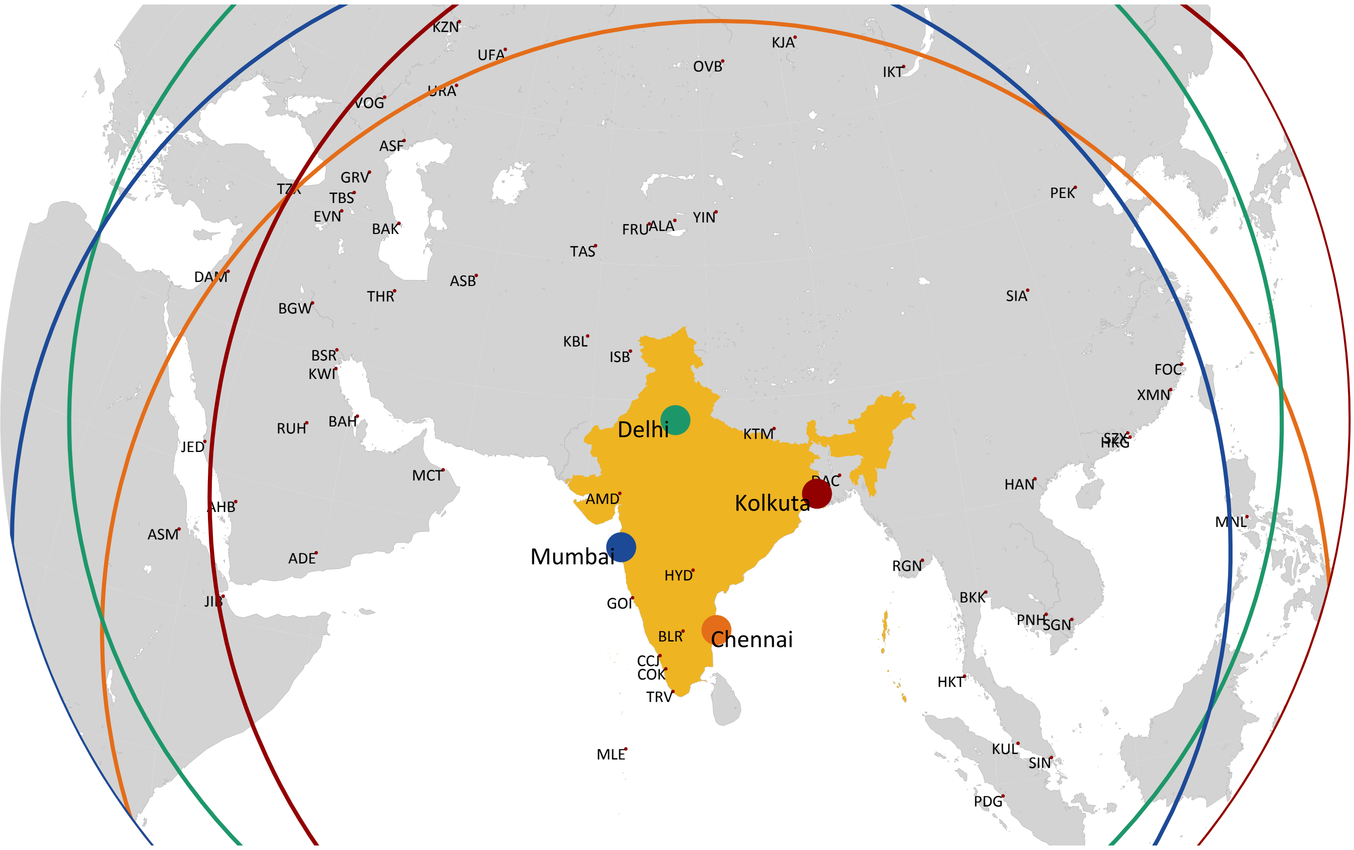
IndiGo is the leading Indian LCC with a 37% share of domestic traffic and, unlike every other Indian airline, it has been consistently profitable over the past seven years — in FY 2015, it achieved total revenues of ₹143bn ($2.2bn) and net profits of ₹13bn ($200m). The latest balance sheet (June 2015), however, showed negative shareholders funds, ₹(1.4)bn, largely the result of a generous dividend policy. Over the past five years, the shareholders — principally Rahul Bhatia, head of the InterGlobe tourism, air transport and technology conglomerate, and Rakesh Gangwal, who, among many other achievements, was a CEO of USAirways — have received ₹35bn ($530m) of dividends, for a modest initial investment in the start-up (and they will continue to be majority shareholders after the IPO). At least this proves that it is possible to make a decent fortune in airlines, providing the timing, model and implementation are all correct.

IndiGo was launched in 2006, just after SpiceJet, the first of the Indian LCCs (indeed the founders of the two airlines were originally in the same investment syndicate). The timing was propitious — the new LCC model had already been proven in Europe and was being adapted to the Middle East and Asia. Indian bureaucrats were gradually releasing their stranglehold on domestic aviation, glimly perceiving that protecting Air India/Indian Airways was not such a good idea. The immediate target for IndiGo was to divert middle class passengers from the very slow railways to aeroplanes. In FY 2015 IndiGo carried 25.2m passengers, roughly twice the *total* domestic air traffic volume of ten years ago. 10-15% domestic traffic growth in the





A320neo FLYING RANGE FROM KEY INDIAN CITIES



next ten years is feasible.

IndiGo's operating model is (almost) classic LCC:

- A320 utilisation of 11.4 block hours per day on a point-to-point network with no interlining.
- 180 seats per aircraft, load factor of 90%.
- On time performance of 88% (brilliant for India).
- No frills, of any type, but consistent service — Skytrax awarded IndiGo the "Best Low Cost Airline in India and Central Asia" title each year from 2010 to 2015.
- Ancillaries are about 11% of revenues, quite low by Western standards.
- Travel agents still account for 78% of sales, reflecting their dominance of Indian distribution channels.
- Highly efficient, low maintenance fleet, 3 years old on average, based on short- term sale and leasebacks.
- Building in a capital cost advantage through mega-orders: IndiGo ordered 180 A320neos in 2011 and a further 250 in August this year, the single largest order for this type received by Airbus.

Even by the standards of Indian regulatory overkill, the prospectus seems obsessed by identifying risk. Indeed some of the key risks identified appear more like opportunities.

Fuel costs in India are still a major problem. Government owned monopoly suppliers dominate the market, and sales and excise taxes push per gallon costs up by at least 40%. In the peak oil market, 2009-2012, over half of IndiGo's operating costs were accounted for by fuel; now it is down to about 40%. Still, it is reasonable to expect that the Indian authorities will start to deregulate the fuel supply sector, as they have other sectors of the Indian economy.

IndiGo is a relative newcomer to the international market, starting up services in 2011, and still only operating six routes. There, are however, are at least 60 viable points that could be served with the A320neo from Delhi or Mumbai, many of which would generate 50,000 pax/year which is IndiGo's minimum target.

Leasing survey: More strong growth, looking peaky – but is the peak approaching?

IT HAS been another 12 months of growth for the global jet leasing industry — the fleet of the top lessors has risen 2% in a year and outstanding orders are up by almost 10%.

However, while strong market demand in the leasing industry is being driven by rising passenger growth and lower oil prices, inevitably the next market peak is approaching.

Just as inevitably, though, there is no consensus as to when that might be — speak to various leasing CXOs and their estimates range from 2016 to 2026, and all points in-between. The most common view, however, is that the peak is not imminent. For example Domhnal Slattery, CEO of Avolon, says that "the used aircraft market is firm and vibrant; there just isn't a lot of used, young equipment around, and so the market feels good. Clearly there are places in the world that are a little softer than others, but that's the nature of a global market."

Davy Research also expects the next couple of years to see continuing, solid growth, with the global leasing industry forecast to grow at 10-12% p.a. to 2018, driven by "growth in aircraft deliveries (6-7% of the fleet per annum)" and a continuing rise in leasing's share of the total fleet, which it believes will be "close to 50% by the end of the decade".

Some analysts though are concerned that when the peak (and inevitable downturn) does occur, then recent new entrants to the industry — including the rapidly growing Chinese lessors backed by local banks (with AWAS reportedly the latest acquisition target; see entry on page 8) — will face problems when it comes to remarketing aircraft since they are not global businesses.

Aengus Kelly, CEO of AerCap, comments: "The banks think it's a spread business — they pile in and realise there's a lot more to it than just being a spread business. And then what historically happens is they run for the hills once they realise that it actually is a big barrier to entry in this business to build a global platform and very difficult and time-consuming thing to do. So I think we'll see the same behaviour here — they'll run for the hills when the going gets tough".

Aviation Strategy's annual survey of the leasing industry (see table on the next page) shows that the total fleet for lessors with a portfolio of more than 100 owned or managed aircraft totals 6,534 — compared with a total of 6,347 as of 12 months ago (see *Aviation Strategy,* October 2014) and 6,287 two years ago.

The Big Two — GECAS and AerCap — together account for 42.9% of the total 100+ lessor fleet, down from the 45.6% figure as of a year ago thanks to a trimming of their fleets as they dispose of older models. Nevertheless, there is still a huge gap between the Big Two and the next tier of lessors, who are now headed by SMBC Aviation Capital with a portfolio of 419 aircraft (and which has overtaken BBAM in the last year).

The gap between the Big Two and the rest of the large lessors in terms of firm orders is less pronounced; GECAS and AerCap account for 36.4% of the total outstanding orders from lessors with 100+ aircraft, compared with 34% as of 12 months ago.

Air Lease Corporation still has the single biggest lessor order book (with 386 aircraft), but that is now only just ahead of AerCap, which added 62 new orders over the last year and bring its total order book to 376. SMBC Aviation Capital was the other lessor to add significant new orders, with an extra 68 over the last year.

This year has seen the first significant move towards developing a major operating lessor in the private jet sector (where less than 1% of the fleet were under operating leases in contrast to over 40% for commercial jets) following Global Jet Capital's purchase of GE's fixed wing corporate aircraft financing portfolio in the Americas, which is worth about $2.5bn in net assets. Global Jet Capital will specialise in large cabin, long range private jet market.

The shareholders in Global Jet Capital are premier rank investors: Blackstone, Franklin Square Carlyle Group and AE Industrial Partners. Other investment groups are currently investigating opportunities in the potentially lucrative private jet leasing sector.

Over the following pages *Aviation Strategy* profiles the leading lessors — which we define as owning or managing more than 100 commercial jet aircraft — in descending order of portfolio size.

MAJOR LESSORS

			Orders			
Company	Total portfolio	Change†	Boeing	Airbus	Total	Change†
GECAS	**1,540**	**(60)**	147	129	**276**	**32**
AerCap	**1,267**	**(29)**	157	219	**376**	**62**
SMBC Aviation Capital	**419**	**45**	93	118	**211**	**68**
BBAM	**408**	**(42)**				
CIT	**342**	**(8)**	51	92	**143**	**15**
AWAS	**320**	**20**		5	**5**	**(15)**
ACG	**260**	**10**	75	30	**105**	**(13)**
BOC Aviation	**256**	**8**	82	99	**181**	**(12)**
Air Lease Corporation	**247**	**58**	191	195	**386**	**23**
BCC	**230**					
ICBC Leasing	**188**	**20**		44	**44**	**(17)**
Macquarie AirFinance	**170**	**34**				
Aircastle	**161**	**13**				
ORIX Aviation	**160**	**(10)**				
Avolon	**152**	**19**	27	39	**66**	**10**
CDB Leasing	**110**	**20**				
Standard Chartered	**104**	**(1)**				
SkyWorks Leasing	**100**					
MCAP	**100**					
Total	**6,534**	**97**	**823**	**970**	**1,793**	**153**

Note: This table includes jet lessors with at least 100 owned or managed aircraft; we exclude entities set up solely to manage the leasing activities of a specific airline. † from 12 months ago

General Electric Capital Aviation Services (GECAS)

GECAS continues to scale back its jet portfolio, with 60 fewer aircraft than a year ago and a total owned and managed fleet of 1,540. That compares with a fleet of 1,840 as of four years ago.

Older aircraft are slowly leaving the fleet, and the average age of the portfolio is continuing to fall — as at the end of June this year, 48.6% of GECAS's owned portfolio by value is five years old or less (compared with 43.8% a year ago and 41% three years previously). As at mid-year 2015, narrowbodies accounted for 74.1% of the total jet portfolio by value (compared with 74.2% as of a year ago), with 20.9% being widebodies (20.4% 12 months ago) and 5.0% cargo variants (5.4%).

GECAS's fleet is placed with 270 customers in 75 countries. The US remains the largest market for GECAS, but yet again its importance has fallen, as it now accounts for 25.4% of the lessor's fleet by value (compared with 29% two years ago and 47% in 2009), followed by Europe with a 24.6% share.

Owned by the huge conglomerate GE, GECAS operates a huge network of 24 offices around the globe, with a head office in Stamford, Connecticut. In the January to June period of 2015 GECAS posted a 2.4% fall in revenue year-on-year, to $2.6bn, with net profit of $668m, 3.9% down on the first half of 2014,

Though GECAS ordered 45 A320neos and 15 A321neos in June 2015, its net order book rose by just 32 aircraft over the last year to stand at 276.

AerCap

With the former ILFC now fully integrated into AerCap after its purchase last year, the Amsterdam-based lessor trimmed its enlarged portfolio by 29 aircraft over the past 12 months, to a fleet of 1,267 aircraft.

1,130 of the total portfolio are owned, and they have an average age of less than eight years and an asset value of $44bn. Almost 70% of the owned fleet is comprised of A320 family aircraft (475 units) and 737NGs (313 aircraft), with the most important other models being A330s (121 aircraft), 777s (71), 767s (44) and 787s (25).

Though older aircraft have been disposed of and AerCap has achieved its goal of reducing the average age of the total portfolio to between five and eight years, it is only just in that range, and so further weeding out of older models will occur over the next 12 months.

Having amalgamated ILFC locations, AerCap also has offices in Dublin, Toulouse, Shannon, Abu Dhabi, Shanghai, Singapore, Miami, Fort Lauderdale, Los Angeles and Seattle. Its staff serve more than 200 customers in approximately 90 countries, with a global client list that ranges from Air Arabia to Yamal Airlines.

In the first half of 2015 AerCap reported a net profit of $665.7m, based on revenue of $2.6bn. As part of its deal with AIG to acquire ILFC, AerCap took on a large debt pile that ILFC was carrying, and over the last year it has managed to trim this by $659m, to stand at $30.7bn as at the end of June 2015. AerCap points out that this is mostly long-term debt, and that in the second quarter of 2015 AerCap also spent $750m repurchasing 15.7m shares amounting to 7% of its total outstanding equity, while in addition raising $3.5bn through a secondary share offering.

AerCap has again expanded its net order book significantly over the last year, growing it from 314 to 376 thanks largely to an order for 100 737 MAX 8s made in June, with deliveries starting in 2019.

AerCap's total outstanding firm orders stands at 219 Airbus aircraft and 157 Boeing models, and over the next four years the rate of new aircraft being delivered will gradually rise, from 46 next year to 66 in 2017, 77 in 2018 and 82 in 2019.

SMBC Aviation Capital

SMBC Aviation Capital, part of the Sumitomo Mitsui Banking Corporation, increased the size of its portfolio yet again, adding 45 aircraft to bring its portfolio of to 419, of which 284 are owned and 135 are managed.

The vast majority of aircraft are narrowbodies, including 187 737-800s, 133 A320s, 46 A319s and 18 A321s, and the average age of the fleet is of five years. The portfolio is leased to customers that include Alaska Airlines and American in North America; Aeroflot, Ryanair and Norwegian in Europe; and JAL and Air China in the Asia/Pacific region.

SMBC Aviation Capital is based in Dublin and has other offices in New York, Seattle, Toulouse, Amsterdam, Tokyo, Hong Kong, Beijing, Shanghai and Singapore.

SMBC has had the largest increase in net orders in any lessor over the last year; in November 2014 it ordered 80 737 MAX 8s, for delivery between 2018 and 2022 — the largest ever order from a lessor for the type — and in June this year it ordered another 10 of the model. This brings its total order book to 211 aircraft.

BBAM

BBAM trimmed its portfolio by more than 10% over the last year, to stand at 408 aircraft. The mixed fleet includes 175 737NGs, 1146 A320 family aircraft, 29 777s and 13 787s, and they are leased to approximately 80 airlines.

That customer list includes China Southern and ANA in the Asia/Pacific region; easyJet and Iberia in Europe; Air Canada and United in the US; and Etihad and Emirates in the Middle East.

BBAM has a substantial global presence — as well as a headquarters in San Francisco, BBAM has offices in New York, Nevada, London, Zurich, Santiago, Singapore, Dublin and Tokyo.

BBAM still has no outstanding orders, again making it the only Top 10 lessor (excluding BCC) not to have any firm orders, and having dropped from third to fourth place in the lessor table in terms of portfolio size over the last 12 months, it is inevitable that it will drop further over the next few years unless it reverses its strategy.

CIT Aerospace

CIT Aerospace is owned by US bank holding company CIT Group and has its headquarters in Dublin and other offices in New York, Fort Lauderdale, Los Angeles, Washington, Toulouse and Singapore.

Following the sale of aircraft, its owned and managed portfolio has eased back by eight units over the last year to 342, of which 272 are owned. That owned fleet has a net value of $9bn and an average age of six years, and the majority are narrowbodies (223 aircraft), with 156 of the owned portfolio being Airbuses and 94 Boeing models.

The owned aircraft are leased to 100 airlines in more than 50 countries, with the Asia/Pacific market being the most important (87 aircraft are placed there), followed by Europe (76), the US and Canada (60), Latin America (35) and Africa and the Middle East (14 aircraft). CIT Aerospace's order book has increased by 15 units to 143 aircraft.

AWAS

AWAS's fleet has risen by another 20 aircraft, to reach 320, although this total will fall once an agreed deal goes through in the next month or two to sell 90 aircraft to Macquarie AirFinance (see Macquarie entry on page 10).

The sale is part of the strategy

of AWAS's owners — private equity house Terra Firma and the Canada Pension Plan Investment Board — to cash out while the leasing market is robust; Terra Firma acquired the company nine years ago, before more recently merging it with another lessor, Pegasus. A sale of the lessor now looks imminent; Terra Firma is reportedly negotiating a sale with at least two Chinese suitors — ICBC Leasing and Aviation Industry Corp (a subsidiary of the state-owned aerospace company AVIC). A price close to $5bn is being mooted, though if a deal can't be done with one of the parties it's believed that an IPO might subsequently be considered.

The current portfolio includes a mix of narrowbodies (which account for 84% of the total fleet by number), widebodies and freighters that — prior to the sale of 90 aircraft — are placed with more than 110 airlines in 49 countries, from Lion Air and Ethiopian Airlines to Aeroflot and Vueling. It's interesting to note that the aircraft being sold to Macquarie are very young (with an average age of two years), and as a result the average age of the remaining AWAS fleet will rise to more than six years.

AWAS is headquartered in Dublin and has offices in New York, Miami and Singapore, and over the last 12 months its order book has fallen to just five aircraft.

Aviation Capital Group

Aviation Capital Group (ACG) is owned by US insurance group Pacific Life and is based in Newport Beach, California, with other offices in Beijing, Dublin, Santiago, Seattle, Shanghai and Singapore.

Its fleet of owned or managed aircraft has nudged up by 10 aircraft over the last 12 months, to 260. The mixed portfolio of narrowbodies and widebodies is placed with around 90 customers in 40 countries, and in 2014 ACG saw its lease revenue rise by 8.2% to $796m, with net income increasing 18.4% to $90m. Its outstanding orderbook has dropped by 15 to 105 aircraft.

BOC Aviation

BOC Aviation has increased its portfolio yet again, adding eight units over the last 12 months so that it now owns 236 aircraft while managing another 20. The owned fleet includes 112 A320ceos, 83 737NGs, 16 777s and eight A330s, and has an average age of less than four years.

That portfolio is placed with 61 customers in 30 countries, with almost half the fleet placed with airlines in the Asia/Pacific region, and most of the rest located in Europe and the Americas.

Owned by the Bank of China, BOC Aviation recorded revenue of US$535m for the first six months of 2015, 2.9% up on January-June 2014, and a net profit of $171.5m, 4.9% up year-on-year. BOC Aviation is based in Singapore and other offices in Dublin, London, Seattle and — launched in November 2014 — in Tianjin.

BOC Aviation appears to have halted the expansion of its order book, as it has dropped by 12 aircraft over the last 12 months to 181 today.

Air Lease Corporation

Based in Los Angeles and Dublin, the lessor that was only launched in 2010 by ILFC founder Steven Udvar-Házy is continuing its rapid growth and today owns or manages 247 aircraft — an increase of more than 30% in a year.

It now has a portfolio with a net book value of more than $10bn with an average age of around three and a half years. Its owned fleet of 223 aircraft includes 73 737NGs, 68 A320 family, 26 E175/190s, 16 777s and 21 A330s, and by net book value the largest market remains the Asia/Pacific region, accounting for 42.2%, followed by Europe with 30.8%, the Middle East and Africa (10.1%), Latin America and Mexico (8.8%), and the rest of the world (8.1%).

For the first half of 2015 ALC posted revenue of $583m, 16% up on the same period in 2014, although net profit fell 22.7% to $95.5m thanks to settlement of litigation with AIG/ILFC, in which Air Lease Corporation agreed to pay a $72m to AIG in several stages.

In March ALC ordered 30 A321neos and 25 A330-900s, and its order book stands at 386 — still the largest of any lessor. They are arriving at a rate of between 30 to 40 new aircraft a year until the end of the decade, and will almost certainly ensure that ALC becomes a Top Five lessor sooner rather than later.

Boeing Capital Corporation

Based at Renton, Washington, Boeing Capital Corporation (BCC) provides "last resort" finance for all Boeing products, and although it has been reducing its commercial aircraft exposure, its portfolio (containing fully owned and partially owned aircraft, plus aircraft in which it has an interest) has remained "stable" over the last year, according to Boeing, and is estimated by *Aviation Strategy* to be around the 230 mark.

According to BCC "a substantial portion of the portfolio is concentrated among certain US commercial airline customers", and much of its aircraft are out-of-production types such as the 717.

In the January-June period of 2015 BCC saw revenue rise 16.9% to $201m, with earnings from operations fell 59.7% to $31m. As at the end of June 2015, the net value of BCC's portfolio's value was $3.3bn, slightly down from the $3.3bn valuation as of a year previously, but that's significantly down on the value of $6.4bn as of six years ago.

ICBC Leasing

ICBC Leasing is owned by the Industrial and Commercial Bank of China and operates out of headquarters in Beijing with other offices in Tianjin, Bangkok and Dublin.

ICBC is being encouraged to grow in line with the Chinese government's plan to develop the country into one of the world's leading "leasing hubs" by 2030 (and hence ICBC's reported bid for AWAS). Accurate data is hard to find, but *Aviation Strategy* believes ICBC has increased its jet portfolio by 20 to 188 aircraft over the last year.

Half of the portfolio is placed in the Asia/Pacific region (with half of that business in China alone), with approximately 25% each placed in Europe and the Middle East.

The lessor has outstanding orders for 44 Airbus aircraft, and although not included in our table, in March the lessor also ordered 30 ARJ21-700 regional jets from COMAC.

Macquarie AirFinance

Macquarie AirFinance has reversed the recent deline of its portfolio by adding 34 aircraft over the last year, bring its fleet up to 166 owned and four managed units. They are overwhelmingly narrowbodies, with the owned fleet including 90 A320 family aircraft and 66 737NGs, topped up by A330s, 777s and a single 757.

The fleet will rise further once a deal (announced earlier this year) is completed to buy 90 aircraft from AWAS for US$4bn. The aircraft have an average age of two years and are leased to 40 airlines, with an average remaining lease term of 6.5 years. More than 90% of the aircraft by value are A320s and 737-800s, with the rest being A330s.

The current portfolio is placed all around the globe, but the most important market remains Europe where 61 aircraft are on lease (to customers that include, BA, Air France and Vueling), followed by the Asia/Pacific region (53 aircraft) and Latin America (21).

Macquarie AirFinance is owned by Macquarie Group and is based in in Dublin, with other offices in Singapore and San Francisco. The lessor has no aircraft on firm order.

Aircastle

Aircastle's fleet increased by 13 over the last year and now stands at 161 owned aircraft, comprising 111 narrowbodies, 35 widebodies and 15 freighters. They are placed with 52 airlines in 32 countries, and the most important market remains Europe, where 67 aircraft are leased, followed by the Asia/Pacific region with 55 aircraft and the rest in South America (18), North America (15) and the Middle East and Africa (six).

The largest single customer is Iberia, which leases 18 aircraft, although the largest exposure is to LATAM, whose three aircraft account for more than 6% of the lessor's total net book value.

Based in Connecticut and with offices in Dublin and Singapore, Aircastle is continuing with a push to drive down the average age of the portfolio, and it's now standing at just over eight years, compared with an average age of more than 11 years as of five years ago.

In the first half of 2015 Aircastle reported a 1% fall in revenue to $399m (partly due to newer aircraft acquisitions having lower revenue yields, though on longer lease terms), although net profit rose by 60% to $97.7m.

Aircastle has no outstanding orders from Airbus or Boeing, although in June it placed a firm order for 15 E190-E2s and 10 E195-E2 jets, with options for another 25 aircraft. Deliveries of the E190s begin in 2018 and the E195s a year later, with aircraft coming in at the rate of around seven a year.

ORIX Aviation

ORIX Aviation has eased back its owned and managed fleet by 10 to 160 aircraft since last year, but this appears to be a temporary dip as it's on the look-out for further assets. Last year it bid unsuccessfully for AWAS's portfolio, and in July this year agreed to buy 17 aircraft, including A320s and 737s, from GECAS for $750m.

The lessor has a mixed portfolio, although mostly narrowbodies, and these are placed with more than 60 airlines in around 30 countries, including BA, China Southern and Lufthansa.

ORIX is headquartered in Dublin and has offices in Singapore and — now — Dubai, and is owned by the Orix Corporation, a Japanese financial services group. There are no aircraft on outstanding order.

OTHER LESSORS WITH ORDERS

	Boeing orders	Airbus orders	Total orders
Alafco	28	97	**125**
CALC		115	**115**
HKAC		70	**70**
International AirFinance Corporation		52	**52**
Aerospace International Group		27	**27**
Amedeo		20	**20**
Alphastream		15	**15**
Global Aircraft Trading		11	**11**
Intrepid Aviation	6	5	**11**
Sberbank Leasing	11		**11**
Total	**45**	**412**	**457**

Avolon

Avolon has increased its portfolio yet again, from 133 aircraft as of 12 months ago to 152 today, of which all but nine are owned. The fleet is young — the average age is under three years — and the majority are narrowbodies, including 60 A320 family neos and 61 737-800s, although there are also three 787s and three 777-300ERs.

The fleet increase is due largely to the arrival of new orders; in September last year Avolon ordered six 787-9s, bringing the total order book to 66.

Based in Dublin, Avolon also has offices in Connecticut, Dubai, Shanghai and Singapore, and its portfolio is placed with 56 airlines in 33 countries globally. After undergoing an IPO on the NYSE in December 2014, over the summer Avolon received an offer from China-based Bohai Leasing (owned by Chinese conglomerate HNA Group, which has stakes in 14 airlines in China, including Hainan Airlines) to acquire a 20% stake, which Avolon called "a strategic investment". Acceptance of that last offer was a condition of a sale and leaseback deal signed in July with Hainan Airlines for five 787-9 aircraft, valued at $1.3bn at current lease prices. The aircraft will be leased to Hainan on 12 year terms, with three aircraft being delivered in 2016 and two in 2017.

Subsequent to that Bohai offer two separate acquisition bids — for 100% of its equity — were received from undisclosed companies, though one was believed to have come from another Chinese company — Avic Capital. As a result Bohai decided to up its offer to acquire 100% of the lessor, a deal that Avolon's shareholders (CVC Capital, Cinven, Oak Hill Capital and GIC) accepted in early September. Bohai will pay $2.6bn for Avolon, with the deal expected to close in the first quarter of 2016.

In the first six months of 2015 Avolon posted a 33.7% rise in revenue to $359.6m, with net income up 73.9% to $105m.

CDB Leasing

CDB Leasing appears in our survey this year after adding 20 jets to its fleet and bringing the total portfolio to 110 aircraft, of which 80 are narrowbodies and 30 widebodies. Most of CDB's customers are in the Asia/Pacific region, and particularly within the growing Chinese market.

Based in Shenzhen, 89% of CDB Leasing is owned by the China Development Bank, and the lessor is reportedly planning an IPO on the Hong Kong stock exchange by the end of this year, at a valuation somewhere between US$1bn and US$1.5bn. It has no orders with Boeing or Airbus.

Standard Chartered

London-based banking group Standard Chartered bought the Pembroke Group in 2007, and although the lessor had been operating under its original name since then, its standalone website has now disappeared and is redirected to the "aviation finance" business unit at Standard Charted, under which the Pembroke name doesn't feature.

The Dublin-based lessor's fleet has decreased by a single unit over the last year, to stand at 104 aircraft. The portfolio is dominated by narrowbodies, including 41 A320 family aircraft and 34 737-800s, although the rest of the fleet is varied, including nine 777s, five 787s and four A330s. There are no aircraft on order.

SkyWorks Leasing

SkyWorks Leasing is based in Greenwich, Connecticut and manages a fleet of 100 aircraft (a number that hasn't changed over the last 12 months).

The portfolio is diverse and includes A320 family aircraft, A300s, 737s, 757s, 767s and 777s, and they are placed with airlines that include JAL, Air China and Virgin America. The lessor has no aircraft on order.

MC Aviation Partners

A subsidiary of Japanese conglomerate the Mitsubishi Corporation, MC Aviation Partners (MCAP) has seen its fleet of owned and managed aircraft remain stable at 100 units over the last year.

It is largely a narrowbody specialist, with 47 737-800s and 43 A320 family aircraft complemented by a handful of 777s, 787s and other types. It has lessened its dependency on Asia/Pacific customers over the last 12 months, coming down from half to 37% of its placed aircraft, with the second largest market being Europe and Africa, within which 25% of aircraft are leased. It has no outstanding orders.

MCAP is headquartered in Tokyo and has other offices in Dublin, Los Angeles and Dublin.

Other lessor orders

Other lessors with outstanding orders include **Alafco,** majority owned by the Kuwait Finance House, which has 125 aircraft on order. **China Aircraft Leasing Company (CALC)** has 115 Airbus models on order, while **Hong Kong Aviation Capital (HKAC)** has orders for 70 Airbuses.

Dubai-based lessor **International AirFinance Corporation** placed a firm order for 30 A320ceos and 20 A330-300s in June this year, and also has two others aircraft on order. New York-based **Aerospace International Group** has 27 Airbus aircraft on order, and Dublin-based **Amedeo** has 20 A380s on order.

Swiss lessor **AlphaStream Capital Management** has outstanding orders for 15 A320 family aircraft while Moscow-based **Sberbank Leasing** has 11 737-800s on order. Also with 11 outstanding orders each are **Intrepid Aviation,** based in Connecticut and with other offices in Dublin and Singapore, and new Singaporean lessor **Global Aircraft Trading.**

Aviation Strategy

The Principals and Associates of Aviation Strategy apply a problem-solving, creative and pragmatic approach to commercial aviation projects. Our expertise is in strategic and financial consulting in Europe, the Americas, Asia, Africa and the Middle East

- Start-up business plans
- Due diligence
- Antitrust investigations
- Credit analysis
- IPO prospectuses
- Turnaround strategies
- Privatisation projects
- Merger/takeover proposals
- Corporate strategy reviews
- Antitrust investigations
- State aid applications
- Asset valuations
- Competitor analyses
- Market analyses
- Traffic/revenue forecasts

For further information please contact:
James Halstead or **Keith McMullan**,
Aviation Strategy Ltd
e-mail: info@aviationstrategy.aero

Southwest begins new international chapter

SOUTHWEST Airlines, the largest US carrier in terms of domestic passengers, reached another significant milestone on October 15, when it began daily flights to six destinations in Mexico, the Caribbean and Central America out of its brand new international terminal at Houston Hobby.

With a few more destinations from HOU following by year-end and more cities likely in 2016, together with plans to add international service out of Baltimore and Fort Lauderdale-Hollywood (FLL) in 2017, it is clear that Southwest's near-to-medium term growth efforts will focus on the international arena.

However, Southwest also currently expects to moderate its ASM growth to around 5-6% in 2016, compared to this year's 7%, mainly to allow its network to mature after significant expansion in 2014 and this year. Southwest has added something like 90 new routes since April 2014.

While Southwest continues to report stellar profits, has met or exceeded all of its financial targets and continues to have an exceptionally strong balance sheet, the past 12-15 months have been extremely eventful for the carrier.

2014 was an historic year, with three important milestones. First, Southwest became an international operator in July 2014, when it took over the first of AirTran's near-international services. The AirTran-to-Southwest international conversion was completed in November 2014, and in the first half of 2015 Southwest added two new international destinations — San José (Costa Rica) and Puerto Vallarta (Mexico).

Second, October 2014 saw the full expiration of the Wright Amendment — an unusual 1979 piece of legislation that had limited nonstop flights from Southwest's home base at Dallas Love Field to Texas and a handful of nearby states. It was the culmination of an eight-year process to relax the restrictions, stipulated by a reform act passed by Congress in 2006.

Southwest was suddenly free to fly to any US destination from Love Field. It jumped at the opportunity. Since October 2014 Southwest has increased the number of cities it serves from Love Field from 16 to 50 and grown its daily departures from 118 to 180. In September its passenger numbers at Love Field were 78% higher than a year earlier.

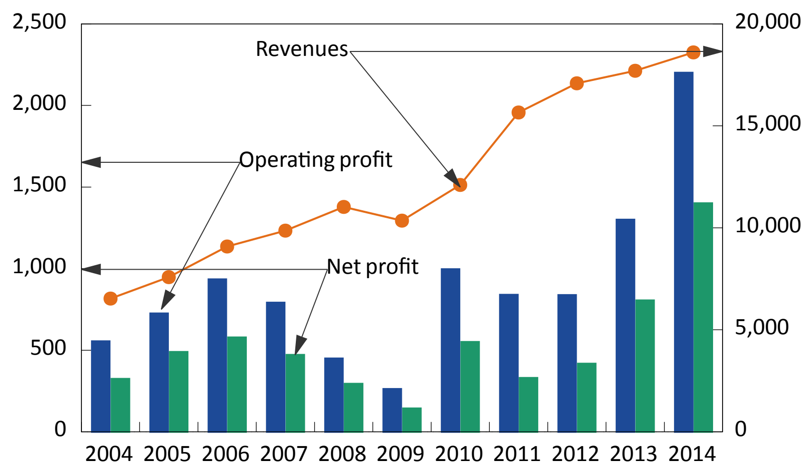
Last year's third major milestone was the completion of the AirTran integration by year-end 2014, following the May 2011 acquisition and somewhat challenging initial year. It meant the retirement of the AirTran brand.

In addition to those three milestones, Southwest got an opportunity in 2014 to enter and build a substantial presence at Washington Reagan National (DCA), thanks to the American-US Airways slot divestitures.

A year ago, to signal the expanded US footprint and new international capabilities — while retaining the original 1971 purpose of providing "friendly, reliable and low-cost air travel" — Southwest also unveiled a new "Heart" livery, branding and logo.

Recent weeks have been extremely eventful at Southwest. There were the opening ceremonies of the $156m international concourse at Houston Hobby, which was entirely

SOUTHWEST FINANCIAL DATA



Notes: The figures include AirTran's results from May 2, 2011 onwards.

SOUTHWEST'S AIRCRAFT DELIVERY SCHEDULE

	737NG				737MAX			
	-700	-800	Options	Extra -700s	-7	-8	Options	Total
2015		19		24				43
2016		31		15				46
2017	15		12	14		14		55
2018	10		12	4		13		39
2019					15	10		25
2020					14	22		36
2021					1	33	18	52
2022						30	19	49
2023						24	23	47
2024						24	23	47
2025							36	36
2026							36	36
2027							36	36
Total	25†	50	24	57	30	170‡	191	547

† Southwest has flexibility to substitute 737-800s for 737-700 firm orders.
‡ Southwest has flexibility to substitute MAX 7s for MAX 8 firm orders beginning in 2019.
As of Sept 30, Southwest had taken delivery of 13 737-800s and 16 737-700s this year.

paid for by Southwest, and the launch of the six new international routes on the same day.

A week earlier, Southwest held its annual media day, giving the world's journalists tours of the new facilities and no doubt fielding endless questions about growth plans.

In early October Southwest also launched a new advertising campaign called "*Transfarency*", which highlights the airline's "low-fare credo and its lack of bag fees, change fees or hidden fees for passengers".

Among the less desirable management diversions, Dallas Love Field has been experiencing gate constraints and congestion issues. In a highly unusual turn of events, Southwest and Delta have been in federal court fighting over Delta's part-time use of one Southwest gate at the airport.

Other than network expansion, big projects on the horizon include a new reservations system in 2016 or 2017, which will facilitate significant passenger service improvements, revenue enhancements and perhaps more codesharing deals. The management is not yet ready to indicate the timing of the switchover.

In addition to funding Houston Hobby, Southwest is making significant investments in airport infrastructure at Los Angeles and FLL. At the latter, Southwest is overseeing $295m of investments to upgrade T1, which it plans to use to launch international expansion in 2017.

Southwest is also investing heavily on the operations side, aimed at improving the reliability of its operations.

Currently, there appear to be no product enhancements in the works. A few years ago, Southwest moved past the "one size fits all" approach, in particular to appeal more to the business customer. It went through a multi-year process to develop the technology necessary to support the new ancillary revenue streams. The result was up-sell products such as "EarlyBird" check-in and "Upgraded Boarding" that continue to be hugely successful.

International plans

Southwest has moved characteristically cautiously to the international arena. The 2014 AirTran-to-Southwest route conversions were the result of three years' efforts by Southwest to upgrade its reservations systems to handle international flights, learn from AirTran's international experience and best practices, and convert aircraft and train employees.

Southwest said at that time that the international transition took so long because the company found itself tackling "by far the largest technology project that we ever had".

The six new international routes introduced from Hobby on October 15 were to four cities in Mexico (Cancun, Mexico City, Puerto Vallarta and Los Cabos), as well as San José (Costa Rica) and Belize City. The latter was a new destination, Southwest's 96th city. Liberia (Costa Rica) and Montego Bay (Jamaica) were due to follow on November 1. Southwest will also launch seasonal service from HOU to San Juan (Puerto Rico) and Aruba.

By year-end 2015, Southwest expects its total international network to cover 12 destinations in eight countries, served from 12 US cities. But that will only account for around 2% of the airline's total capacity.

Southwest has not yet announced any international plans for 2016, though the management estimates that 1-2 points of the anticipated system 5-6% ASM growth in 2016 will be international.

Southwest believes that the overall international opportunity is significant.

Some analysts have speculated

SOUTHWEST AIRLINES INTERNATIONAL ROUTES

Note: Azimuthal equal distance map projection (great circle routes appear as straight lines)
Contour lines show distance from Houston.
737 range estimated from Boeing data.

that international operations could account for 20% of Southwest's ASMs in 5-8 years' time. But Southwest executives have given the impression of having a more modest goal. Or they simply do not know, because it will depend on so many factors, including the extent of domestic growth opportunities.

A recent Bloomberg article quoted a Southwest vice-president saying that non-US destinations were the carrier's only option to expand its network, which implied that Southwest was beginning to reach the limit of its domestic expansion.

Kelly clarified the matter in the Q3 call, drawing a distinction between ASM growth and the addition of new destinations. Domestically, with 85 mainland cities already in the network, Southwest will not be able to add many more dots. But Kelly believes that there is significant opportunity to "connect the dots". He estimated at the media day that Southwest could add 50 more domestic routes to its current 97 routes, but he was vague about the timing: "It may not be in five years, it may not be in 10 years and it may not be in 20 years, but that is our overall opportunity".

Kelly believes that there could be domestic growth opportunities especially in short-haul markets, where demand fell sharply after 9/11 but now appears to be starting to come back. If demand in such markets recovers to pre-2000 levels, there could be many opportunities for Southwest to add frequencies.

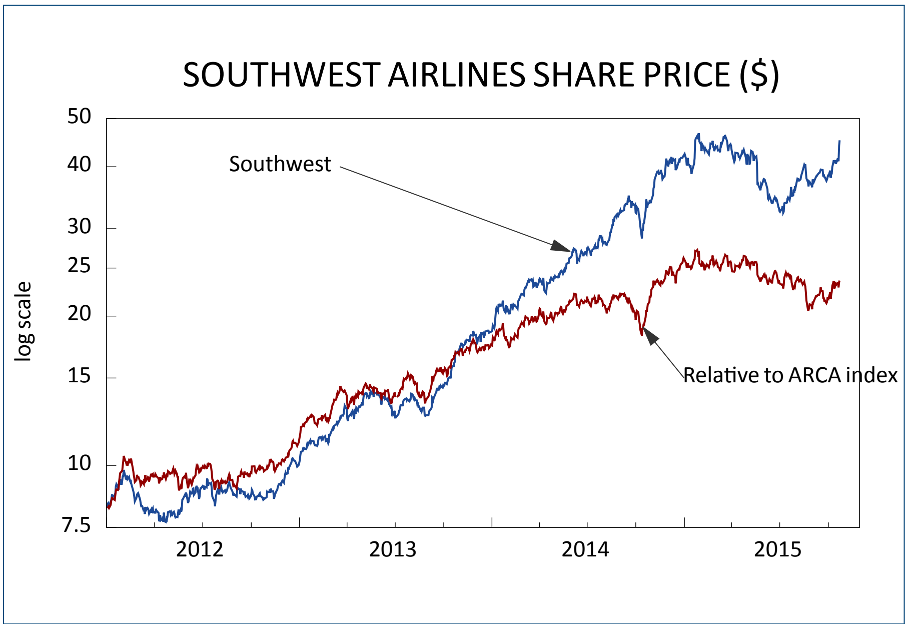
Kelly put it as follows: "Over time, I think most of our growth opportunities will skew towards the domestic. But all of the new destinations will be international". The stronger the domestic network, the better the feed to the international services (and *vice versa*). Being the nation's number one carrier in terms of domestic passengers makes Southwest well positioned to be successful in the international markets.

Southwest's credentials also include its cost advantage, which has narrowed a little in the past decade (as the workforce has aged and as the carrier has entered more expensive and congested primary airports) but is still estimated to be 30-40% over the network carriers.

The Southwest brand is likely to be just as highly regarded internationally as in the domestic market. Southwest offers an attractive product to both the leisure and business traveller.

It has been suggested that even though Southwest is not a major threat to the network carriers, it can win the business traffic in cities where it is the leading airline. As industry consolidation has led to a reduction in the number of hubs, Southwest is now the top airline in many cities, including San Diego, Las Vegas, St. Louis, Nashville, Baltimore, Tampa and Orlando. Having international routes is important to FFP members, many of whom are business travellers, and to Southwest employees.

International operations bring new challenges and risks, including higher costs, more complexity and



possibly tougher competition. But other North American LCCs, which began venturing into Mexico and the Caribbean a decade or so ago, have benefited enormously from those operations. JetBlue has said that the routes require minimal investment, become profitable quickly and are recession-resistant because of the VFR traffic.

At Houston, Southwest is now competing internationally with United, which Kelly noted had had a "monopoly" of flights to the south. United of course operates from Houston IAH but will be matching Southwest's fares when necessary. FLL, where Southwest plans to expand from 2017, is a Latin America/Caribbean gateway for both Spirit and JetBlue.

But Southwest thrives on head-to-head competition with other carriers. As always, it has planned things meticulously and is moving cautiously. The initial international expansion from Hobby was mainly to destinations that Southwest already served from other US points. The carrier is reportedly also initially requiring that all international tickets are purchased through its website, which means that it will avoid any currency headwinds.

Southwest will not be able to operate international flights from Dallas Love Field, because the Wright Amendment's international nonstop restrictions continue to apply. But Houston, with its sizable Latin population and large local market, makes an excellent gateway to Latin America. Southwest already operates extensive domestic service out of HOU. Its new international concourse has five gates, with an estimated capacity of 25 daily departures.

Promising financial outlook

Southwest has produced 43 consecutive years of profitability (including 2015). Until recently there was just one issue: the airline was not meeting its financial targets (15% ROIC and the like).

But a seven-year growth suspension (2008-2014) and especially a batch of strategic initiatives announced in 2011 (the AirTran merger, fleet modernisation and upgauging, an all-new "Rapid Rewards" FFP) did the trick. Southwest earned a 19% pretax ROIC in the 12 months ended September 2014 — up from 10.6% a year earlier.

Like other US carriers, Southwest has benefited enormously from the sharp fall in fuel prices this year. In the third quarter of 2015, it earned a record $1bn adjusted operating profit and an ex-item net profit of $623m (20.3% and 12.1% of revenues, respectively). Pretax ROIC in the 12 months ended September was 31.1%.

But it was not just because of fuel. Southwest also benefited from good non-fuel cost controls, a solid overall revenue performance and a significant contribution from Rapid Rewards FFP (which the management has described as a "phenomenal success").

Demand has continued to be strong throughout Southwest's network, as was indicated by the carrier's record 85.4% load factor in the third quarter. Southwest's RASM also held up relatively well, despite a longer average stage length, higher average gauge, a large number of markets under development (18% operated for less than a year) and a softer yield environment.

The new Dallas Love Field markets added in the past year have performed exceptionally well, reflecting pent-up demand for the nonstop services. Almost every route has been a financial success right from the start.

As a result, Southwest has paid a record $484m in profit sharing to employees so far this year. It has also returned to shareholders (via dividends and stock repurchases) as much as $1.4bn of the $1.6bn free cash flow generated in the first nine months of 2015.

Southwest has also repaid $170m in debt and capital leases this year. It benefits from an investment-grade balance sheet, with lease-adjusted leverage only in the low-to-mid 30% range. Credit rating upgrades are likely over the next year.

The fleet modernisation programme remains on track and is estimated to have produced $700m in EBIT this year, even with the fall in fuel prices. Southwest expects to operate a 700-strong fleet at year-end and add roughly 15 aircraft in 2016 (see table for details of the delivery schedule).

This year's total capital spending is around $1.8bn, of which $1.1bn is for aircraft. Next year's capex is projected to be about $2bn, including $1.3-1.4bn for aircraft.

On the negative side, Southwest faces some cost pressures in 2016. Labour costs will increase if the pilots ratify a recently announced tentative agreement (the results are expected November 4). There will be costs associated with the reservations system implementation. But some of the hikes will be offset by ongoing benefits from fleet modernisation and the restoration of aircraft utilisation to historic levels (after a temporary decline during the merger integration).

Southwest's Q3 revenue data and Q4 projections were skewed by huge special revenue benefits from an amended co-branded credit card agreement with Chase. But one analyst calculated that the airline was projecting a 2.4% decline in core passenger RASM in Q4, which was an improvement over Q3's 4% decline.

The fact the Southwest is moderating growth and allowing its network to mature bodes well for favourable unit revenue and profit margin trends in 2016.

Southwest expects the percentage of markets under development to come down from September's 18% to 4-5% a year from now — a typical level for other US airlines. LCCs such as JetBlue and Virgin America have in the past demonstrated how important that particular measure is for an airline's profitability.

By Heini Nuutinen
heini@theaviationeconomist.com

Aviation Strategy

We welcome feedback from subscribers on the analyses contained in the newsletter. If you would like to suggest a company or a subject that you would like to see covered, please contact us:

Email: info@aviationstrategy.aero
or go to www.aviationstrategy.aero

Davies Commission: Hub questions

If the Davies Commission's Final Report — recommending a third Heathrow runway — were to have been expected to resolve the very difficult question of airport capacity in London, it has clearly failed. Here Chris Tarry (CTAIRA), as part of an assignment for Gatwick Airport, highlights major areas of contention, specifically the Commission's analysis of the role of transfer traffic in the future.

Future of London as a connecting hub

The Commission assigns great importance to transfer traffic for the London market in the future. There are, however, a number of disconnects in the arguments and assumptions that it makes.

The Commission appears to assume that the provision of additional airport capacity alone is a sufficient condition, that will result both in more connecting traffic and the operation of routes which were previously not possible from London.

We consider that this to be an heroic assumption as there are a range of other factors that need to be taken into account.

These include: where passengers are flying from and to, given the importance of geography and its impact on direction of flow; whether by the time additional capacity becomes available, transferring via London will be a more attractive option for travellers than via the growing number of alternatives.

More generally, passenger value is of particular importance to airlines, and there appears to be insufficient recognition by the Commission of this basic fact.

The Commission also takes a view that "a key objective for expansion should be to facilitate new connections on more marginal routes to emerging markets". While this is a laudable objective it appears to neglect the range of the other conditions that will need to be satisfied for this to be the outcome.

The Commission asserts that for Heathrow "to grow its route network it needs to attract significant levels of transfer traffic to supplement local demand. But declining domestic connectivity, pressure on fares and limited resilience are causing difficulties in attracting these transfer passengers".

One of the key issues is that the only airline group that currently has access to intra-airline/airline group domestic transfers is BA/IAG and this is unlikely to change given the closure of Virgin Atlantic's Little Red services to Manchester, Edinburgh and Aberdeen.

Even if easyJet were to establish a base at Heathrow post-expansion — made much more difficult by the operating day restrictions proposed by the Commission — that airline's management is sticking to its view that passengers will self-connect.

Given that the proposal is for easyJet to operate from the current Terminal 4, the minimum self-connecting times are likely to be significant and it is inevitable that there will be more attractive options for connecting at airports elsewhere.

Among the key questions that the Commission fails to address includes where this additional transfer traffic will come from, and go to, not least as London's importance as a connecting point, (particularly for emerging markets), will continue to decline. London is not well placed for new flows, and increased competition is already reducing its importance in established flows as well.

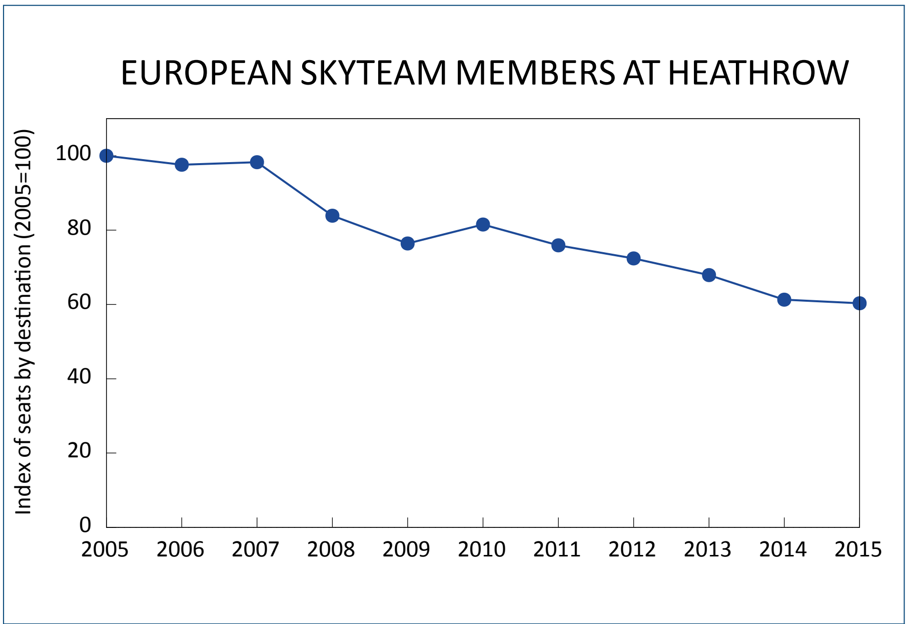
There are unanswered questions relating to the fare levels this traffic will be carried at, and how these compare with current and likely future options both from a traveller as well as an airline perspective.

The reality, as the Commission itself states, is that "the world's economic centre of gravity continues to shift eastwards". The rather more important issue remains of accommodating the growth in the point to point traffic delivered by "momentum airlines" which see London as an attractive O&D market rather than as a connecting point.

Some observers might suggest that the Commission's near fixation with transfer traffic has resulted in it failing to identify what is both happening now and likely to happen in the future.

Travel options for passengers outside London and the South East

We are somewhat bemused by the Commission's views that: "*Links to other hub airports in both Europe and further afield are generally considered a supplement rather than a replacement for connections at*



Heathrow" and "*Passengers to or from other UK nations or regions who are obliged to transfer through other European airports or Middle Eastern hubs... costs time and money*".

Although there are undoubtedly some cases at the margin where this is the case, where there is additional cost and time involved in connecting at a continental hub, for the majority of travellers the services to/from the UK regions that are offered across other connecting airports have dramatically increased the travel options.

Against this background we have examined the travel options that exist to connect Manchester (designated as the core of the proposed Northern Powerhouse) with the Indian Sub Continent and also China and Hong Kong. Our analysis provided few examples where either (let alone both) of the Commission's statements hold.

Indeed one stop flights via most of the connecting points other than Heathrow are not only competitive in terms of timing (many better than via Heathrow) but also transferring via another connecting point offers a much greater range of final destinations (for outbound passengers) or origins (for inbound passengers).

This should immediately raise doubts over whether, when additional capacity is added in London, there will be a significant change in traveller behaviour, shifting away from the current routings. We would expect that by the time the capacity in London were to be available there would be both an increase in the number of direct services from eg Manchester as well as in the number of destinations served by one-stop services connecting across non UK airports, reflecting the strategies of non-UK airlines.

The Commission's view also contrasts with the objectives that IAG has set out for the development of Aer Lingus to 2020. A key opportunity is increasing the volume of traffic that is connected across Dublin to and from the UK regions and North America, much of which currently connects across London and in particular Heathrow.

Our analysis shows that these traffic flows alone, before taking into account the potential that exists from boosting traffic over Dublin from airports that are not connected to London, represent a significant proportion of the additional 2.4 million passengers that IAG has suggested Aer Lingus and IAG could deliver to an enhanced Aer Lingus transatlantic network by 2020 which would grow from the current six routes to/from North America to ten over the 2015-2020 period.

Further consolidation in the European airline industry is inevitable and we would expect to see IAG playing a leading role. Finnair has stated that it is looking for an investor/partner. Becoming a member of IAG is an option and this would provide the opportunity to connect more traffic from other UK regional airports, in addition to Manchester, across Helsinki to North Asia and China and *vice versa*.

There will be further developments in terms of connecting opportunities for passengers travelling to/from the UK regions via non-UK connecting points, as well as new direct services when new capacity becomes available in the London area.

This will not only reinforce existing travel patterns but will also mean that a change away from these routings is highly unlikely. This is another conclusion that is at odds with the one reached by the Commission.

Role and development of alliances

As the Commission observes, alliances have grown hugely in importance over the past 30 years, but there is again a need to look at the specifics rather than the generalities. While the Commission notes that all alliances have grown their presence at Heathrow it is necessary to look at why, how and on what routes.

It is only the **one**world alliance that has intra-alliance connecting traffic to/from UK domestic airports;

when bmi was sold by Lufthansa to British Airways the Star alliance members lost their domestic intra-alliance feed.

Unsurprisingly, the European members of Skyteam and Star have focused their attention on their home hubs, as have their partners from other parts of the world, and this is a trend that we expect to continue.

At Heathrow the European members of the Skyteam alliance have reduced their presence (see chart on the previous page) while, with a few exceptions, the European members of the Star alliance maintained a broadly similar presence over the period from 2005. Looking to the future it is unlikely, other than in perhaps the case of THY, that any European member of an alliance other than **one**world will increase its presence at Heathrow, and as a result such alliance members cannot be seen as a source of new traffic growth.

The Commission highlights Africa as a potential connecting market; against this background it is of interest to compare the changes in services, for example, to Nairobi where Kenya Airways (a Skyteam member) has reduced its presence on the route to Heathrow yet markedly increased it at both Amsterdam and Paris CDG — providing more evidence that alliances will direct traffic through the airports of their regional members.

Although Terminal 2 has improved the position of Star in terms of its ability to connect passengers across Heathrow, and while connecting traffic is important to these alliance members for perhaps eight months of the year, it is unlikely that there will be a significant change in transfer patterns or volumes for these alliance members at Heathrow.

Over time we are likely to see additional services from some of the long haul members of the Skyteam and Star alliances (not least from China) but this is because London is an attractive destination and origin point for them; any traffic aggregation or disaggregation will occur at the home end of their route. Only some 3% of Air China's traffic to Heathrow connects to points beyond.

Development of traffic from emerging markets

Throughout the Commission's report there is a focus on emerging markets, emphasising how the UK needs to be linked with them. Indeed in the foreword the Chairman notes that while "*Gatwick is well placed to cater for growth in intra-European leisure flying it is unlikely to provide as much of the type of capacity that is urgently required; long haul destinations in new markets. Heathrow can provide that capacity most easily and quickly*".

However, an increase in airport capacity alone is not a sufficient condition to ensure such an outcome as it is for an airline that will need to be able to operate such routes profitably. Furthermore, as discussed above, in terms of emerging markets London is not well placed for connecting traffic although it will increasingly be a destination city for services operated by airlines based in the emerging markets, from China in particular.

A recent study by IHG and Oxford Economics also provides some very clear views on how (and where) the Chinese outbound market will develop. In terms of importance, China, by the end of 2014, had overtaken the US as the largest source of international travel spending. However, there is a need to keep a sense of perspective in terms of the importance of Europe and the UK for Chinese tourists; they will remain amongst the smaller destination markets for this group of travellers.

In terms of measuring the benefit of tourists it is their value (and in particular what they spend), rather than volume, that is seen as a better measure. Against this background and while in absolute terms the UK might have fewer Chinese visitors than some other European countries, they spend more in London than anywhere else. Paris for example has three times the number of hotel guests from China than London but London hotels sell more room nights to visitors from China than Parisian hotels. In terms of expenditure by Chinese travellers the figure for London in 2013 was $338.3m compared with $254.5m for Paris; by 2023 these totals are forecast to reach $1.85bn for London and close to $370m for Paris.

In the near term changes in UK-China visa arrangements are likely to provide a further boost to the number of inbound visitors; other countries have seen visa changes resulting in a step change increase in visitors of some 20%. However, the reality is that in volume terms the UK is likely to remain a relatively small market for inbound tourists from China given the other opportunities that are open to them.

Against this background an increasing number of inbound passengers will be carried by airlines from the home end of the route and from a growing number of originating cities; but in all cases London will be seen as a destination city.

Importance of airline economics

In various places in its report the Commission appears not to appreciate how important airline economics are to the actual outcomes, how

BA: DEVELOPMENT OF HEATHROW-BASED LONG HAUL FLEET (Units)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
A321	7	7	7	7	7	7	7	7	7	7	7
A350-1000				4	7	11	16	22	28	34	40
A380	10	12	12	12	16	19	19	19	19	19	19
B747-400	39	37	37	31	23	15	10	5			
767-300	4	1									
777-200	34	34	34	34	31	34	34	27	22	20	12
777-300ER	12	12	12	12	12	12	12	12	12	12	12
B787-8	8	8	8	8	8	8	8	8	8	8	8
B787-9	5	12	16	16	16	16	18	20	22	24	24
B787-10				6	8	10	14	20	26	28	32
Long haul fleet	119	123	126	130	128	132	138	140	144	152	154
Change		3.4%	2.4%	3.2%	-1.5%	3.1%	4.5%	1.4%	2.9%	5.6%	1.3%

they might work and with what consequences.

At times the Commission argues for more capacity to bring fares down — entirely correct in terms of economic theory — but elsewhere in the report there appears to be surprise that new entrants in the first instance are likely to select thick routes on which to compete.

In so doing they will be providing additional opportunities for existing travellers and also growing the size of the market as fares fall; outcomes which accord both with economic theory and what happens in any competitive business.

Indeed in a UK context both bmi and Virgin Atlantic initially cherry-picked what they saw as the most profitable routes operated by their competitors and in particular British Airways; most recently this is exactly the approach that easyJet and Ryanair have adopted as they increase their focus on higher value routes.

Most airlines since 2009/10 have exercised capacity discipline. BA's strategy has been described as ˝Fortress Heathrow˝ with a clear focus on value maximisation; almost no growth in the short haul market after 2017, and measured growth in the long haul market taking advantage of the strength of London's O&D

BA: DEVELOPMENT OF HEATHROW BASED LONG-HAUL FLEET (Seats)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
A321	1,078	1,078	1,078	1,078	1,078	1,078	1,078	1,078	1,078	1,078	1,078
A350-1000				1,140	1,995	3,135	4,560	6,270	7,980	9,690	11,400
A380	4,690	5,628	5,628	5,628	7,504	8,911	8,911	8,911	8,911	8,911	8,911
B747-400	12,441	11,803	11,803	9,889	7,337	4,785	3,190	1,595			
767-300	756	189									
777-200	7,956	7,956	7,956	7,956	7,254	7,956	7,956	6,318	5,148	4,680	2,808
777-300ER	3,564	3,564	3,564	3,564	3,564	3,564	3,564	3,564	3,564	3,564	3,564
B787-8	1,712	1,712	1,712	1,712	1,712	1,712	1,712	1,712	1,712	1,712	1,712
B787-9	1,080	2,592	3,456	3,456	3,456	3,456	3,888	4,320	4,752	5,184	5,184
B787-10				1,500	2,000	2,500	3,500	5,000	6,500	7,000	8,000
Total	33,277	34,522	35,197	35,923	35,900	37,097	38,359	38,768	39,645	41,819	42,657
Av size	280	281	279	276	280	281	278	277	275	275	277

market.

On the basis of known orders and options, and making reasonable assumptions as to the timing of the retirement of aircraft, we have estimated BA's long haul fleet development at Heathrow and shown this in the tables on the preceding page.

We have assumed that there will be little change in the short haul fleet given the maturity of the network and that any additional capacity will result from a combination of more seats per aircraft on the current fleet or through the introduction of larger aircraft on the route.

On our estimates the long haul fleet increases from 119 aircraft now to 154 by 2025, which will enable BA to operate some 25-30 additional long haul services by the end of the period. There is an inevitable reduction in short haul services as slots are migrated to use for long haul but we estimate that this will only represent some 10% of BA's current short haul slot portfolio.

Our analysis also shows that the average number of seats per aircraft will remain broadly similar over the period under review and in the range of 275-280; an outcome which will be yield positive and, when combined with the step change in operating costs delivered by the new generation aircraft, further demonstrates the focus on value rather than just volume.

Another key area that needs further examination is the impact that the expansion at Heathrow will have on passenger charges and consequently on passenger numbers.

The scenario selected by the Commission reflects an assumption of pre-funding whereby today's travellers are paying for facilities that future travellers will use; the smoothing effect spreads the recovery of costs over a far greater population and results both in smaller increments, as the charge rises, and a lower ongoing level of charges.

In the case of Heathrow, and the chosen option of the North West runway, the increase the "weighted average charge" is stated to be £9.00 (in 2014 prices) where the increase takes place through a series of increments over the 2019-2025 period.

We have already seen the managements of some airlines make their views known on the proposed cost of Heathrow expansion generally — most recently the CEO of IAG at the time of the company's interim statement.

More generally, many airline managements have made their opposition to pre-funding very clear too. Their focus of attention is on the charges, the assumptions made, and the outcomes forecast for the scenarios where there is no pre-funding.

While the level of any charge will have an underlying or ongoing effect on demand, it is the speed of the change in the level of the charge, and the nature of the adjustment to the new level, that are the most important dynamics to be considered.

Where pre-funding is not accepted (in the face of the opposition from the airlines) there are a number of issues that need to be considered: the consequences of the airlines passing on the additional charges (as they will not want to absorb them); the impact on potential demand; and the wider consequences for the Commission's current assumptions and conclusions on the structure and level of short haul traffic to/from the airport.

At the simplest level funding the North West Runway at Heathrow on what the Commission describes as an "operational funding" basis, and on a like for like basis, results in an increase in the average charge on a per passenger basis at Heathrow of some £13.00 (in 2014 prices). This increase takes place in two stages between 2025 and 2028 with one increase of c£9.00 and the other of c£4.00. To put this into context the current level of APD on short haul flights is £13 and this is only levied on departing passengers.

In broad terms the increase in charges resulting from this "operational funding" scenario would appear to represent an increase in the average European economy fare ex-Heathrow of some 12% which will inevitably have an impact on demand if the increase is passed through; it is particularly unreasonable to expect airlines to absorb this.

By Chris Tarry (CTAIRA)
christarry@ctaira.com

Aviation Strategy

The Principals and Associates of Aviation Strategy apply a problem-solving, creative and pragmatic approach to commercial aviation projects.
Our expertise is in strategic and financial consulting in Europe, the Americas, Asia, Africa and the Middle East, covering:

- Start-up business plans
- Due diligence
- Antitrust investigations
- Credit analysis
- IPO prospectuses
- Turnaround strategies
- Privatisation projects
- Merger/takeover proposals
- Corporate strategy reviews
- Antitrust investigations
- State aid applications
- Asset valuations
- Competitor analyses
- Market analyses
- Traffic/revenue forecasts

For further information please contact:

James Halstead or **Keith McMullan**

Aviation Strategy Ltd

e-mail: info@aviationstrategy.aero

Subscription Form

Enter my Aviation Strategy subscription for: 1 year (10 issues – Jan/Feb and Jul/Aug are combined)

- UK: £475 + VAT
- EU: €610 + VAT (unless valid VAT number supplied)
- USA and Rest of world: US$780

starting with the ________________ issue

❑ I enclose a Sterling or Euro cheque made payable to Aviation Strategy Ltd

❑ Please invoice me

❑ Please charge my Visa/Mastercard/American Express credit card £475+VAT

Card number ______________________________ Expiry________

Name on Card ______________________________ CV2 ________

❑ I am sending a direct bank transfer of the the relevant sum net of all charges to Aviation Strategy's bank account:

Metro Bank Ltd, 1 Southampton Row, London WC1B 5HA
IBAN: GB04 MYMB 2305 8013 1203 74
Sort code: 23-05-80 Account no: 13120374
Swift: MYMBGB2L

Delivery Address

Name ______________________
Position ______________________
Company ______________________
e-mail ______________________
Telephone ______________________
VAT No ______________________

Invoice Address

Name ______________________
Position ______________________
Company ______________________
Address ______________________
____
____
Country ______________________
Postcode ______________________

DATA PROTECTION ACT

The information you provide wil be held on our database and may be used to keep you informed of our products and services or for selected third party mailings

PLEASE RETURN THIS FORM TO:

Aviation Strategy Ltd, Davina House, 137-149 Goswell Road
London EC1V 7ET, UK
e-mail:info@aviationstrategy.aero
Tel: +44(0)207-490-4453, Fax: +44(0)207-504-8298
VAT Registration No: GB 162 7100 38