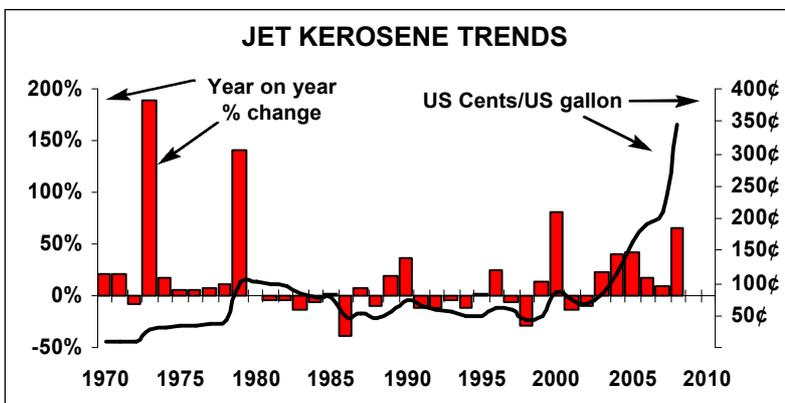


## The full-blown fuel crisis

Headwinds have been building for the aviation industry for some time - the weakening US and UK economies, the credit crunch, the continual increase in competition from new entrants, and the increase in fuel costs. This latter headwind has now developed into a full blown crisis. Crude spot prices are currently double the average of two years ago and 65% higher than the average for 2007. At the same time the kerosene crack spread has been widening, and jet kerosene prices are currently 75% higher than the 2007 average. At this level fuel costs would represent more than 40% of total industry costs - higher even than that reached in the fuel crisis recession of 1979-81 - and could add more than \$100bn to the total industry cost base on an annualised basis. All other things being equal, this could create global losses of some \$95bn - and possibly bankrupt the industry.

In Europe some carriers - particularly Air France/KLM, Lufthansa and British Airways - have excellent fuel hedge positions that provide some element of protection. Some (particularly Air France/KLM, Lufthansa, British Airways and Ryanair) have strong balance sheets and good cash positions. Two - Air France/KLM and Lufthansa - are still generating synergistic benefits from their respective acquisitions of KLM and SWISS. The Euro based carriers can afford some benefit from the dollar weakness. One consequence of the jump in fuel prices is a significant increase in working capital requirements, and some of those without these benefits are likely to be heading for a severe cash crisis - and there may even be some major bankruptcies before the end of the normally cash-generative summer season. The likelihood is that this will also accelerate consolidation in the industry and the strong will emerge stronger from the crisis.

Fuel generally is a non-competitive element of airline operations. Historically, prices and yields have responded to changes in this input cost that is totally outside an airline's control - albeit with an inevitable lag between price movements in fuel and the ability to change tariffs and prices. In the past few years the increases in fuel [continued on page 2]



[www.aviationeconomics.com](http://www.aviationeconomics.com)

## CONTENTS

### Analysis

Impact of record fuel prices 1-3

### Briefing

Ryanair bets on growth through recession 4-8

US airlines respond aggressively to record fuel 9-13

JAL: Can it continue its recovery? 14-18

### Databases 19-23

Freighter values

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

e-mail: [info@aviationeconomics.com](mailto:info@aviationeconomics.com)

### Aviation Strategy

is published 10 times a year  
by **Aviation Economics**

#### Publisher:

Keith McMullan  
kgm@aviationeconomics.com

#### Editor:

Nick Moreno  
nm@aviationeconomics.com

#### Contributing Editors:

Heini Nuutinen  
Robert Cullemore

#### Sub-editor:

Julian Longin  
jil@aviationeconomics.com

#### Subscriptions:

info@aviationeconomics.com

Tel: +44 (0)20 7490 5215

#### Copyright:

**Aviation Economics**  
All rights reserved

#### Aviation Economics

Registered No: 2967706  
(England)

#### Registered Office:

James House, 1st Floor  
22/24 Corsham St  
London N1 6DR  
VAT No: 701780947

ISSN 1463-9254

*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 responsibility 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, without the written consent of the publisher.*

prices have been moderately high but containable. Helped by restrained capacity growth, continuing cost reductions (and Chapter 11 reorganisations in the US) and a positive economic background, the industry overall has been able to improve unit revenues comfortably to cover underlying unit cost increases. The extraordinary rise in the cost of fuel in the past six months changes this - and is redolent of the OPEC-inspired oil shock of 1979. In that year oil prices trebled: airline unit costs increased by 15% a year in each of 1979 and 1980 while unit revenues increased by 13% and 20% respectively. Thirty years on and the world is very different. IATA is no longer the pricing cartel it was. Then, the US industry had just embarked on full deregulation while there were very few international airlines outside the US in private ownership, let alone quoted. Then, almost all international routes were restricted by bilateral air service agreements, where access, service levels and tariffs were laid down by government treaty. Admittedly, there were no fuel hedging tools available.

### IATA revision

Earlier this year, with crude prices hovering around \$85/bbl, IATA produced a global forecast suggesting a modest fall in total profitability for the industry, after a possible industry peak in 2007. Recently at the annual IATA conference it announced a revision - based on an average of \$105/bbl for the year - suggesting losses of between \$4bn and \$6bn for the global industry. In this revised forecast IATA has undoubtedly assumed that the industry will be able to recover nearly two-thirds of the increase in fuel prices - primarily no doubt through fuel surcharges (or in the case of some carriers the imposition of luggage fees) - and may have made some assumptions for the prevalence of fuel hedge programmes.

The industry rule of thumb is that passenger traffic grows at twice the rate of GDP - but to view this correlation as direct causation is erroneous. There is a subtle interplay between capacity, costs, prices and income, and the big unknown is the current price and income elasticity of demand or, as some are hoping, inelasticity. (It has generally been assumed - probably more on the basis of common sense - that business traffic has a price elasticity of less than 1,

leisure traffic a price elasticity of greater than 1, while both have income elasticity below 1). It appears that, all other things being equal, global air transport revenues have followed a fairly consistent proportion of world GDP - although badly hit by specific geopolitical events such as the terrorist attacks in 2001 and the SARS epidemic in 2002-3. Admittedly there was a significant jump in the ratio in the aftermath of the 1979-80 oil shock; roughly equivalent to the underlying increase in fuel costs - even though this may also partly be explained by the effects of US deregulation.

The revised IATA forecast may in the end be very conservative. On current expected capacity plans the industry suffers an estimated increase in costs of \$1.6bn for each \$1 movement in the price of crude oil. With crude at \$140/bbl, this could mean an annualised additional \$120bn above last year's total fuel cost - equivalent to 25% of revenues - and translates into a 22% increase in overall unit costs. To put this in context, the industry probably only made a profit of \$5.6bn in 2007. To cover this shortfall to merely break-even at the operating level the industry will need to increase unit revenues by some 17%.

If indeed the relationship between air transport revenues and global GDP is fixed this would require a dramatic cut in capacity on the order of 10-15%. There is always a problem with shrinking capacity in this industry so dependent on growth - a greater proportion of overheads have to be spread over the reduced level of seat kilometres flown, which automatically increases unit costs. Even though all other things being equal this would remove the absolute need for the very deep discounted fares required to attract unnecessary traffic, it also builds in a requirement to increase unit revenues further.

### Capacity cuts

As discussed on pages 9-13, the first signs of a potential capacity reduction have been signalled by major US carriers. In Europe, Ryanair has signalled its intention to stand down 10% of its fleet in the coming winter (see pages 4-8) - although this is more related to the operating costs at Stansted and Dublin and its fight with the respective airports and regulators than the age of its fleet - but it is still likely to put an additional 15% growth

# Aviation Strategy

## Analysis

into the market in the off-season. British Airways has signalled its intention to cut winter capacity. In Asia/Pacific Qantas has announced a major realignment of capacity on the tourist routes to and from Japan.

One of the fundamental changes to industry operating parameters that this massive cost increase imposes is a large increase in working capital requirements. Fuel is effectively paid for in cash on monthly contract terms - the price to be paid tends to be related to the average spot prices for the previous month (with some major variations around the world depending on local conditions and delivery costs). The industry is cyclical - not merely dependent on the economic cycle but also on the seasons. Normally the lowest point of the year - in the northern hemisphere at least - is the post Christmas period: the common adage being that there are far too many wet Tuesdays in February and not enough Saturdays in August. If an airline is going to fail it is usually because of a lack of hard cash, and usually in the run up to the main summer season. This year things may be different - with this jump in fuel prices there is probably a near 25% increase in monthly cash needs - and this is for travel through the main summer season when a large proportion of the ticket sales will have been booked well before the date of travel. We have already seen some highly publicised failures: it is likely that there are more to come.

The fuel crisis is going to have a fundamental impact on the airline industry. If we are indeed set for a period of sustained high fuel prices there will be a need for a significant cut in world capacity - and some of this will come voluntarily. There is likely to be a substantial fall in aircraft asset prices - at least for the older generation equipment - many of which are unlikely to re-emerge from the Mojave once parked. At the same time there will be an attempt to raise fares, tariffs and yields - to which there may well be customer reluctance. The higher the price of crude goes, the greater the real danger that the US industry - only just recovered from the aftermath of the 2001 atrocities - goes into liquidation; there may not be much more room for further restructuring under Chapter 11. There have already been some calls for reregulation in the US; and some European governments may start calling (in Italian or Greek?) for a suspension of the state aid rules.

\$bn	AIRLINE INDUSTRY (MIS)FORTUNES										
	00	01	02	03	04	05	06	07	08F		
									\$85/b bl	\$105/ bbl	\$140/ bbl
Revenues	329	307	306	322	379	413	452	485	508	530	508
Fuel costs	46	43	40	44	61	90	111	136	156	190	255
Other costs	272	276	270	279	314	319	328	333	339	339	340
Operating profits	11	-12	-5	-1	3	4	13	16	12	1	-87
Net profits	4	-13	-11	-8	-6	-4	-1	6	5	-6	-94
Brent Crude \$/bbl	28.8	24.7	25.1	28.8	38.3	54.5	65.1	73.0	85.0	105.0	140.0
Fuel % total costs	14.5%	13.5%	12.9%	13.6%	16.3%	22.0%	25.3%	29.0%	31.5%	35.9%	42.8%

Source: IATA, ICAO. Note: \$105/bbl assumption for 2008 assumes ability to recover 50% of fuel cost increase through fares, tariffs and surcharges. \$140/bbl assumption does not.

On the other hand the rise in fuel prices may just be speculative froth, and after a few quarters of despair everything might return to normal. In the meantime the news can only be bad; the June quarter financial results are likely to be dire; there may well be another raft of bankruptcies. This may provide further impetus to industry consolidation - even though further mergers or acquisitions, outside the US anyway, may be unlikely. The major European network carriers all have strong fuel hedge positions that grant them a competitive advantage (and one that grows the higher fuel rises), but these hedges will eventually wind down. Ryanair meanwhile - almost no matter what the fuel price - remains the lowest cost producer in what is essentially a commodity market.

HEDGING POSITIONS		
	2008 anticipated fuel burn % hedged	@Crude equiv
Air France/KLM	78%	\$55
British Airways	70%	\$86
Lufthansa	85%	\$70
Ryanair	3%	\$70
American	29%	\$76
Continental	11%	\$88
Delta	36%	\$95
Northwest	44%	\$85
United	23%	\$96
Southwest	70%	\$51

Source: Company reports.  
Note: Ryanair 10% hedged for Q3 only.

By James Halstead

### Ryanair bets on growth through recession

Despite a warning that Ryanair may only break even during 2008/09 - thanks to rising fuel prices and an error of judgement by management over the need for hedging - the Irish LCC plans to keep growing through the aviation downturn. Is this a sensible strategy and, if so, will Ryanair be focused enough to see it through?

In the 12 month period ending March 31st 2008, Dublin-based Ryanair posted a 21.3% rise in revenue to €2.7bn, based on a 19.8% rise in passengers carried to 50.9m and a 13.8% increase in operating profit to €537m (see charts, below), even though fuel costs rose 14.1% in 2007/08, to €791m. Net profit fell 10.3% in the 2007/08 financial year, to €391m, thanks to a €91.6m write-down on the value of its stake in Aer Lingus, although excluding extraordinary items, underlying net profit rose 10.4% to €480.9m.

But at the same time as it released its 2007/08 results, Ryanair warned that if oil prices remain at an average of \$130/bbl then it would only break even in 2008/09 - and even that would only happen if it could raise fares (including baggage and check-in fees) by an average of 5% over the same period. If oil prices are higher, or if the fare increase can't be achieved, then Ryanair will make a loss in

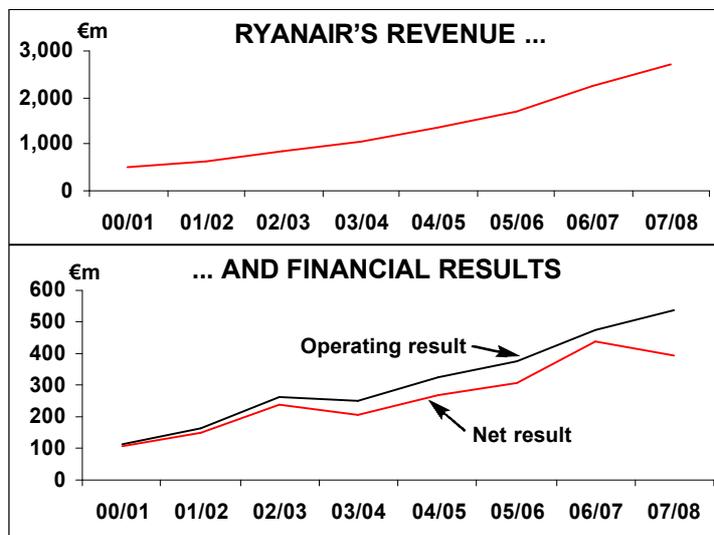
the 12 months to the end of March 2009 - although Michael O'Leary, chief executive at Ryanair, says that this "will be relatively little compared with our competitors".

While O'Leary sometimes overestimates the potential doom and gloom that his airline faces in a downturn (as he did in 2004), the warning came as a shock to some analysts - particularly as the underlying reasons for it were not all external to Ryanair.

At the moment Ryanair is confident that oil prices will come down this year, and O'Leary calls the current price of oil irrational, as there is no imbalance between supply and demand. Yet sometimes the oil price *is* irrational (and for sustained periods of time) and O'Leary's statements can't hide the fact that Ryanair made an error by not hedging its fuel needs sufficiently for the current financial year.

Whereas the Irish LCC hedged at least 90% of its 2007/08 fuel needs at \$65/bbl, it closed very few positions for the 2008/09 financial year, with - as at June - reports that it had hedged just 10% of its July-September 2009 fuel requirements, at \$70/bbl. Essentially, through late 2007 and early 2008 Ryanair's hedge specialists were reluctant to lock themselves into high-price contracts as the fuel price rose, and they "gambled" that prices would come down. But they haven't, and this leaves the LCC's bottom line dangerously exposed to the full effects of rising spot prices through 2008/09.

While Ryanair admits it made a mistake, O'Leary says that Ryanair will never introduce fuel surcharges, even if oil hits \$500/bbl; (interestingly, in June Gazprom - the state-backed Russian energy giant - said that prices could hit \$250/bbl in 2009). While \$500/bbl or even \$250/bbl appears highly unlikely in the short-term, Stephen Furlong of Davy Research calculates that every \$1 rise or fall in the price of a barrel of oil affects Ryanair's costs by €13m, while a 1% change in yield affects the bottom line by €25m. Another analyst says that if Ryanair had hedged its 2008/09 fuel needs at



### RYANAIR'S FLEET

	Fleet	Order	Options
737-800	164	135	132
<b>Total</b>	<b>164</b>	<b>135</b>	<b>132</b>

\$100/bbl, then the year's net profits would come in at €350m. As can be seen in the graph, below, Ryanair's earnings are now very sensitive to fuel prices, although in June ABN Amro forecast €222m of net profit at Ryanair in the 2008/09 financial year, based on its expected outcome of a 3% rise in yield and an average oil price of \$110/bbl in the 12 month period.

But what magnifies the error of Ryanair's lack of hedging is the fact that many of its rivals have been hedging very successfully. For example, as of June Air France/KLM reportedly has hedged 75% of 2009 needs at \$71/bbl, while easyJet has hedged 40% of its current financial year needs at \$75/bbl.

Ryanair's mistake is made even worse because the LCC has reportedly hedged 90% of its US dollar exposure in the 2008/09 financial year at \$1.40/€ - which is significantly higher than the current exchange rate. Clearly, Ryanair's hedging experts are having a bad run.

### Cost focus

From Ryanair's point of view, what is done is done, and the only logical response going forward is to intensify cost-cutting in all other areas of its operation. While the conventional wisdom is that a super-efficient LCC such as Ryanair must have already reduced costs as much as possible, that's something that Ryanair's management does not accept.

Indeed Ryanair launched a major cost saving programme at the start of the year, which aims to cut €400m off the cost base, equivalent to the anticipated €400m rise in fuel costs in the current financial year. Measures include:

- The closing of its Dublin call centre in May, with the loss of up to 40 jobs. Telephone booking now account for just 1% of all sales (with all other bookings coming from the internet) - although Ryanair will maintain call centres in Germany and Romania, which are up to 60% cheaper than the Dublin operations;
- Meeting with 60+ airport operators, although how much further Ryanair will be able to

reduce airport charges from the already low deals it has remains to be seen;

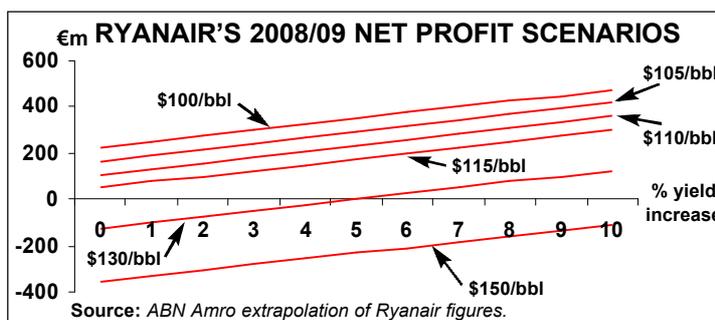
- A pay freeze for all 40 senior managers;
- The introduction of automated check-in facilities to more airports across Europe; and
- Renegotiation of deals with other suppliers (e.g. maintenance).

Though not part of this new cost-saving plan, in the short-term Ryanair is also continuing to sell some aircraft, as second-hand values for 737-800s remain strong. In fact the price it is getting for the model is more than the price of new aircraft on order, so the LCC is selling around one or two of its oldest aircraft each month as suitable opportunities arise.

But the renewed cost-cutting effort will not affect the outstanding order book, which stands at 135 737-800s, to be delivered over the period to 2012. That's despite the airline's plan to ground around 20 aircraft (12% of its current fleet, which will grow from 164 now to more than 190 as at the end of March 2009) over the 2008/09 winter season, 5-7 of which will be based at Dublin and 12-15 at London Stansted.

Ryanair says the aircraft are being grounded at those bases because they have the highest airport charges (Ryanair grounded seven aircraft in the winter of 2007/08, all of them based at Stansted), although this will result largely in frequencies being cut back on routes out of these airports, rather than cancelling routes themselves. The action will reduce costs, allow fares to rise on the remaining frequencies and thus reduce losses on the Stansted routes that dip traditionally into the red over the winter schedule

Indeed overall, despite these groundings, Ryanair forecasts a 17% increase in passengers carried in the current financial year, to around 60m. This increase is part of Ryanair's



strategy to grow through the aviation downturn, in order to "put more pressure on competitors", according to O'Leary.

In June Ryanair unveiled its winter 2008/09 timetable, which included 40 new routes out of 10 bases (Bergamo, Bristol, Brussels, Frankfurt Hahn, London Luton, Madrid, Bremen, Bournemouth, Glasgow and Marseille). This is the largest-ever expansion in a single season by Ryanair, and a clear sign that the LCC is serious about its target of 82m passengers a year by 2012.

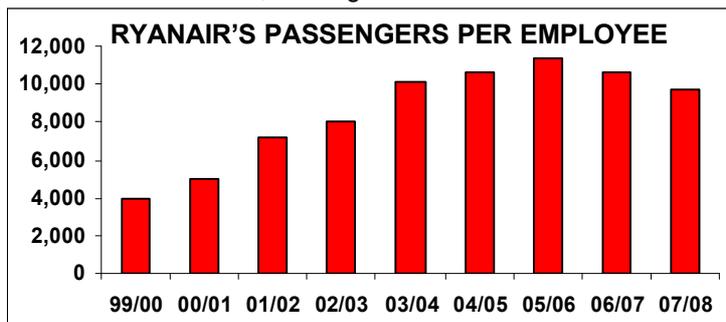
### Even more bases...

To achieve this, the airline will double its fleet to around 360 aircraft over the next five years, with the launch of new bases in Spain, France, Italy, Germany, UK, Ireland and eastern Europe. But Ryanair says it will be flexible on expansion, as it will seek to take advantage of airports looking to offer the best deals to attract replacements for the airlines that Ryanair believes will go bankrupt during the current down cycle. Certainly with some airports now desperate to retain or attract LCC business in the downturn, Ryanair sources say that they are being offered some "rock-bottom" deals.

While Ryanair only opened its first continental European base in 2001 (at Brussels Charleroi airport), it currently operates from 24 bases in Europe to more than 130 destinations. But as the new aircraft arrive, the same question remains: just how easy will it be for Ryanair to find profitable routes to operate and cheap airports to station aircraft at. Among the areas being combed over by Ryanair analysts are:

#### • France

Ryanair's first (and so far only) base in France was launched at Marseille Provence in 2006, utilising the innovative low-cost terminal



MP2. Although 23 routes are operated out of Marseilles and the Irish LCC also serves 22 other French airports, Ryanair is substantially behind easyJet in France, which has an estimated 5-6% market share of passengers carried to/from the country, second only to Air France (with an estimated 60% share). Among the airports that are being considered for new bases by Ryanair are Paris Beauvais, Carcassonne, Biarritz, Grenoble and Nantes. Ryanair is being helped by the French government's willingness to encourage more aviation competition, and the LCC's first domestic route - between Beauvais and Marseille Provence's new LCC terminal - opened in May this year. Ryanair is also looking at the new low cost terminal at Bordeaux airport, which will open in 2010, and where a Ryanair presence would be a major challenge to easyJet, which already operates out of the airport.

#### • Italy

Ryanair currently operates to 24 airports in Italy, with bases at Milan (Orio al Serio), Pisa (Florence) and Rome. Most urgently Ryanair is analysing the launching of a base at Milan Malpensa, capitalising on Alitalia's controversial withdrawal from the airport. Plans for up to 12 aircraft and 60 routes (10 of which would be domestic) by 2012 have been drawn up, although - as ever - this depends on what deal can be struck with the airport operator (SEA), based not just on low charges, but whether it can also offer quicker turnaround times for LCC operations. In parallel, Ryanair would develop its existing base at Bergamo (which is located to the east of Milan), where its existing four aircraft could be expanded to 10 by 2012.

#### • Spain

Spain is also a key development market for Ryanair. It currently has five bases there - Madrid, Valencia, Alicante, Girona and Reus. At Girona (90km to the north of Barcelona) it is increasing aircraft from nine to 14 as it targets carrying 8m passengers a year at the airport by 2012. This summer Ryanair launched its fifth Spanish base in Reus, which is 80km to the south of Barcelona. The LCC is stationing two aircraft there, operating 12 routes (up from the current six) and with a target of more than 1m passengers a year. Ryanair's bases at both

Girona and Reus will pile more pressure on the LCCs operating at Barcelona's El Prat airport, which include Vueling and Clickair.

### • UK

Ryanair's 24th base was opened at Bournemouth in the UK in April this year, and the 25th was launched at Birmingham in June, with two 737s stationed there initially (which may increase to as many as 10) that will serve up to 30 new routes on top of the existing services to Dublin and Shannon. Ryanair has a target of 5m passengers a year by 2012 to/from an airport that O'Leary says has been "woefully underserved".

Another important country for Ryanair is Germany, in which the LCC has three bases: Frankfurt Hahn, Bremen and Dusseldorf (Weeze). Ryanair's first domestic route - between Frankfurt Hahn and Berlin Schonfeld - was launched in May, and this is targeting 0.2m passengers a year.

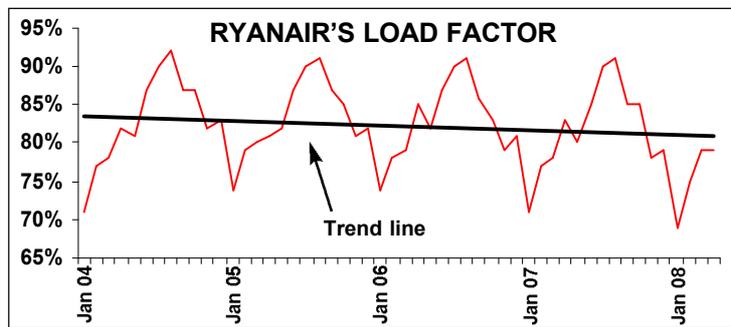
### A question of focus

Despite O'Leary's misplaced optimism on the price of oil, there's little doubt that Ryanair will be able to get through the aviation downturn relatively unscathed, even if it does dip into the red slightly in 2008/09.

Ryanair is very strong financially - as at the end of March 2008 it had long-term debt of €1.9bn, lower than cash and cash equivalents of €2.2bn, and O'Leary is right to say that: "The airlines who will survive this period of higher oil prices and industry downturn are those with new and cheaper fuel efficient aircraft, lower costs, substantial cash balances, low net debt and management who are ready to exploit downturns to drive costs lower and increase efficiency." Of course, those are all criteria that Ryanair has.

And further good news is that it looks entirely feasible that Ryanair will achieve the 5% increase in fares it is targeting in 2008/09: in January Ryanair raised its charges for checked-in baggage and airport check-ins, and further increases are likely.

Ryanair adds that the recession is encouraging passengers to look for lower fares, and that as of early June Ryanair's forward bookings were 2% higher than at the same time in



2007; in turn this means that the LCC has had to discount less, which will further help it achieve its planned 5% rise in achieved fares.

However, it's interesting to note that it was only in February this year that O'Leary said that: "There can only be one competitive response to any consumer uncertainty and that is for Ryanair to slash fares and yields, stimulate traffic, and encourage price sensitive consumers." Obviously that opinion has now changed, but even a 5% rise in average fares will still leave the Irish LCC considerably cheaper to fly with than all of its major rivals (excluding fellow LCC easyJet). John Mattimoe of Merrion Capital says that even a 5% rise in average fares would only return Ryanair's fares to the same level they were in 2000.

And of course Ryanair continues to look for ancillary revenue at every opportunity. In the 2007/08 financial year Ryanair's average fares (including baggage fees) fell by 1% to €43.7, although ancillary revenue rose 34.8% to €488m. Initiatives this year include the trialling of in-flight mobile communications, which allows passengers to use their mobiles and Blackberries on flights, as well as the launch of Ryanairvillas.com, which offers rental properties across Europe. In June Ryanair also launched a service to deliver flight information to mobile telephones for a fee of €3.

O'Leary says that while Ryanair may not make much profit this financial year, "it's definitely going to lay the basis for a much stronger position for Ryanair across Europe over the next three or four years".

While it's hard to disagree with that statement, the key challenge for the LCC over the next few years is not so much financial as that of maintaining managerial focus - i.e. the need to devote considerable resources to the necessary but time-consuming trawl for potential

new bases and routes in Europe in which to place its new aircraft profitably.

### Strategic value

Ryanair has been forced to write down the value of its 29.4% stake in Aer Lingus by €91.6m, which appears to be a rare misuse of its assets. However, the Aer Lingus stake does have strategic value: a further deterioration of the Irish flag-carrier's share price might well cause the remaining independent shareholders to reconsider the attractiveness of an accommodation with Ryanair and put pressure on the Aer Lingus board and Irish politicians. Aer Lingus's senior managers are being forced to operate with a significant minority hostile shareholder looking over their shoulders. And they are in the invidious situation of knowing that if they implement successful policies and boost the company's share price again, one-third of the benefit will flow directly to the airline's bitter rival.

Ryanair continues to pursue the merger issue, even though its bid for the Irish flag carrier was blocked by the EC in June 2007 on the grounds that it would be anti-competitive. Ryanair naturally appealed against the verdict, and last year Ryanair also tried to call an EGM at Aer Lingus in order to try and overturn the flag carrier's closing of the Shannon-London Heathrow route. The legal battle hasn't stopped there though. This March a European court blocked an attempt by Aer Lingus to stop "interference" by Ryanair in its affairs, and Aer Lingus has appealed against the judgement by the EC last year that it could not force Ryanair to sell its shares in Aer Lingus.

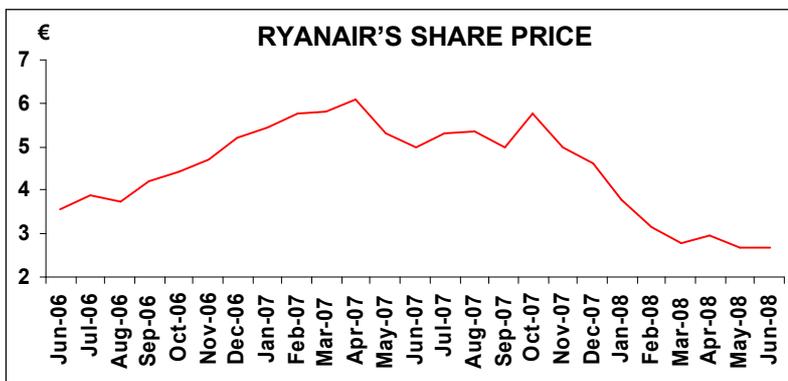
Ryanair is also engaged in many other legal battles, most particularly in battling with the EC over the airline's agreements with airports, the latest front of which was opened earlier this year when the EC said it was investigating the deal between Ryanair and Slovakia's Bratislava airport, which followed similar action launched late last year against a deal with France's Pau airport.

Ryanair is currently appealing against a European court judgement on Ryanair's agreement with Brussels Charleroi airport, and the opening of new investigations infuriates Ryanair, which continues to fight against aid to flag carriers (with a complaint against the EC's alleged "inaction" over state aid to Alitalia being lodged at the end of last year, which joins at least four other legal complaints by Ryanair against the EC and other airlines).

As ever, Ryanair is at the forefront of the battle to break up the power of BAA, and - unusually - earlier this year Ryanair teamed up with other airlines (easyJet, Virgin Atlantic and bmi) to protest jointly at the CAA's decision to allow BAA to increase charges at Heathrow and Gatwick by more than 20% in 2008/09. Ryanair is also battling the building of a second terminal at Dublin airport due to open in 2010, which the LCC claims is far too expensive.

O'Leary says "We're not paranoid but Brussels really do have it in for us." Maybe there is a grain of truth in this, but Ryanair needs to grow up and pick and choose its battles more carefully, rather than take on everyone and everything it doesn't agree with through expensive and distracting legal challenges.

But unless he is side-tracked by some of these numerous other items, O'Leary (who owns 4.5% of Ryanair and has been chief executive since 1994) should see guiding the airline's growth through the recession as his last major challenge at Ryanair. The airline's share price has been falling steadily since last year (see chart, left), and this is a real concern to investors. Although Ryanair spent €300m last year in buying back shares and may spend another €200m this year doing the same, the shares may only regain fundamental strength when the airline's management puts real focus onto its ambitious growth plan.



## US airlines respond to record fuel by cutting deeper

In the past month or so, US airlines have made an impressive collective effort to adjust to the tough new fuel environment. They have announced sharp domestic capacity and fleet reductions, effective in the autumn, and are even pulling back in some international markets. They are aggressively tapping ancillary revenue sources and are looking to step up liquidity-raising efforts. Will these measures help avert the financial crisis looming in 2009?

The pace of capacity cuts by US airlines accelerated in late May and early June, when the two largest carriers were ready to show the way. American and United announced that they would slash their fourth-quarter 2008 mainline domestic capacity by 11-12% and 14%, respectively, after previously planning only low-single digit reductions. The other large network carriers - Continental, Delta, Northwest and US Airways - then quickly followed suit with their own significant capacity pull-downs.

The airlines' moves were, of course, a response to the run-up in the price of oil from the \$100-per-barrel level to \$130 during April and May, followed by a climb to \$140 by mid-June. Oil prices have roughly doubled from the \$70 level seen last summer. The Air Transport Association (ATA) estimated in mid-June (based on \$140 oil) that US airlines will spend nearly \$61.2bn on fuel in 2008, \$20bn more than in 2007. A large carrier like United currently expects to spend \$3.5bn more on fuel this year.

Fuel now represents almost 40% of the airline industry's operating costs. US Airways estimated in mid-June that it was spending an average of \$299 in fuel costs alone to carry one mainline passenger on a round trip, up from \$151 in 2007 and \$70 in 2000.

ATA predicted in mid-June that US airlines would lose \$10bn in 2008, which would make this year the second-worst in industry history, almost matching 2002's \$11bn aggregate net loss. In a recent testimony to a Senate committee, ATA chief James May

talked about the US airlines being "on the brink of financial disaster".

The crisis is worsening, with the continued escalation of oil prices: \$142 as of June 27th, with a climb to the \$180-\$200 level by 2009 now considered a realistic scenario. Consequently, further significant capacity cuts and other remedial action are on the cards, particularly for 2009.

On the positive side, US legacies have entered this downturn better prepared than ever before. They carry significant amounts of cash and have extremely modest aircraft capex plans. New aircraft due for delivery this year were mostly financed last year when the US capital markets were still fully open for airlines.

The capacity cuts focus primarily on the domestic market, but weak international routes have been among the first to go (because longer routes burn more fuel) and several airlines have postponed the launch of new routes to China.

The fleet and capacity cuts serve two purposes. First, they reduce costs and cash burn. Many US airlines still have large numbers of older, less fuel-efficient narrowbody aircraft types in their fleets that simply must go at these oil prices. And even with fuel-efficient aircraft, many domestic and some international routes are no longer profitable at \$140 oil. Second, the airlines hope that the capacity cuts will create a better domestic pricing environment.

The domestic capacity cuts focus on September or October, because that is when airlines believe demand will weaken in response to the softening economy and rising ticket prices. Bookings for July-August are strong and the revenue environment remains reasonably healthy this summer.

The capacity and fleet reductions will mean many job losses, though the airlines are trying to minimise the impact on their long-suffering workers by introducing voluntary retirement and "early-out" programmes. According to one estimate, US airlines cut

nearly 22,000 jobs in January-May, and the total could exceed 60,000 in 2008, making this the second worst year for job losses since 2001, when there were more than 100,000 cuts.

### Deep capacity and fleet cuts

AMR's plan, announced on May 21st, calls for an 11-12% cut in mainline domestic capacity and a 10-11% reduction in regional flying in the fourth quarter. The group will be retiring at least 75 aircraft, including 40-45 from mainline operations (mostly MD-80s and some A300s) and 35-40 RJs (probably Embraer 135s). Regional unit American Eagle will retire its entire Saab fleet by year-end. Job losses are likely to be in the thousands.

More cuts could be on the way for 2009 through a possible acceleration of MD-80 and A300 retirements. However, American still expects to take delivery of 70 737-800s in 2009-2010. AMR executives have made the point that, even with the higher capex, acceleration of fleet renewal makes sense from a cash flow perspective at the current fuel prices.

On June 4th, a week after terminating its merger talks with US Airways, UAL outlined plans for even steeper capacity and fleet reductions. The airline is trimming its mainline domestic capacity by 14% in the fourth quarter (over 4Q07) and by 17% in 2009 (over 2007). United is retiring 100 mainline aircraft (22% of its fleet), including all of its 94 737s (provided terms can be worked out with lessors) and six of its 30 747s. Of the 100 retirements, 80 will go this year and the remaining 20 in 2009.

United expects to reduce its salaried and management employees by 1,400-1,600 by year-end. There will be significant frontline employee furloughs; so far, United has decided to lay off 950 pilots (nearly 15% of its total), though the airline hopes to minimize involuntary furloughs.

Interestingly, UAL is finally eliminating Ted - the last remaining airline-within-an-airline in the US, though it was only created in February 2004 while UAL was in Chapter 11. The Denver-based unit was nothing more than a separate leisure-oriented brand; it never got its

unit costs much below United's. Its fleet of 56 A320s will be reconfigured to include United first class seats, starting next spring.

Continental followed AMR's and UAL's example on June 5th, significantly adding to cuts it had outlined in April. Mainline domestic capacity will now decline by 11% in the fourth quarter and by 3-5% in 2009. The airline is accelerating the retirement of its 737-300s and 737-500s; some 67 of those, including all 737-300s, will have gone by the end of 2009. The aircraft will be sold or returned as leases expire.

The airline will continue to take delivery of next-generation 737s. It has an impressive order book that includes 32 737-800/900s scheduled for delivery this year and 18 737-800/900s and two 777s in 2009, plus another 100 aircraft on firm order and 100 on option for post-2009 delivery. However, with the 737-300/500 retirements now vastly exceeding 737-800/900 deliveries in the next 18 months, Continental's mainline fleet will shrink from the current 375 (as of June 30th) to 344 at the end of 2009.

Continental expects to eliminate 3,000 positions, or 6.7% of its workforce, including management, though most of them are likely to be voluntary. The furloughs will be announced in August, after the voluntary numbers are known. As a gesture, and in line with the company's tradition of cultivating good labour relations, chairman/CEO Larry Kellner and president Jeff Smisek have declined their salaries for the remainder of this year and any bonus payments for 2008.

Delta and Northwest, which hope to complete their merger by year-end, both announced further significant capacity and fleet reductions in mid-June. Including three previous rounds of modest cuts, Delta's consolidated domestic capacity will now fall by 13% in the second half of 2008. The airline is removing the equivalent of 15-20 mainline aircraft and 60-70 50-seat RJs from its fleet by year-end. The mainline retirements include MD-80s, 757 domestics and 767-300/300ERs. In addition, four domestic 767-400s will be converted for international operations.

In March Delta was the first US airline to offer its workers voluntary retirement and "early-out" packages. Twice as many people

(4,000) applied for buyouts than the original goal. Delta has accepted them all, meaning that it can achieve greater cost cuts and efficiencies, in addition to avoiding involuntary furloughs.

Northwest expects its system mainline capacity to decline by 8.5-9.5% in the fourth quarter. The airline is removing a combination of 14 757s and Airbus narrowbodies, reducing its DC-9 fleet from 94 to 61 this year and accelerating the retirement of three freighters. Northwest has not finalised employee cuts but is likely to look to voluntary early-outs.

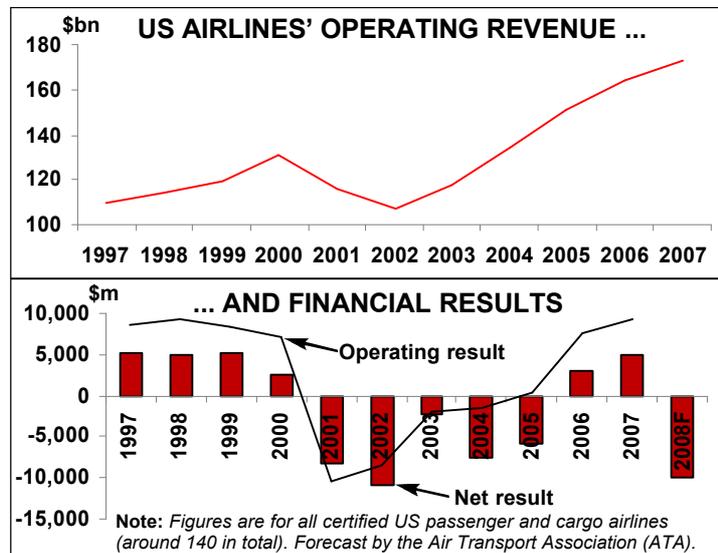
But the Delta/Northwest combination, if it materialises, should be well placed for international growth because of both parties' prudent investments in long haul aircraft. Delta is the launch customer for the 777LR, while Northwest is the US launch customer for the 787 (with 18 firm orders and 50 options, and the first delivery now in November 2009).

US Airways, which is somewhat of a legacy/LCC hybrid, is currently looking to trim its mainline domestic capacity by 6-8% in the fourth quarter and by 7-9% in 2009. The carrier also announced on June 12th that there would be 1,700 job reductions (5% of the workforce), starting with frontline staff attrition this summer and as many voluntary cuts as possible in the autumn.

On the fleet front, US Airways is returning to lessors 10 aircraft (six 737-300s this year and four A320s in first-half 2009) and cancelling leases on two A330-200s that it was due to receive next year. The airline has contractual impediments in its pilot deal that prevent it from downsizing as much as the other carriers this year. But there will be additional fleet cuts in 2009 and 2010. US Airways has full flexibility with its E190s and is also believed to be in talks with Airbus to defer next year's deliveries.

### LCCs scale back growth plans

The likelihood that the legacy carrier capacity cuts will lead to a healthier domestic revenue environment is significantly enhanced by the fact that the US LCCs too have joined in. The LCCs are not actually reducing capacity, but they have significant-



ly scaled down or even temporarily halted their growth plans.

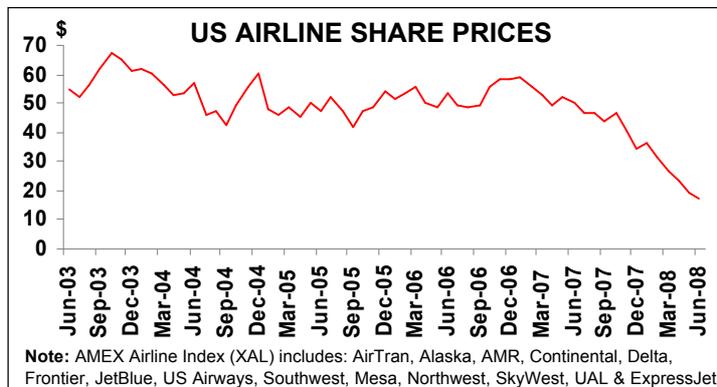
This is in sharp contrast to the post-9/11 period, when LCCs took advantage of the legacy sector's contraction and stepped up their growth plans. That resulted in the LCCs capturing significant market share and gaining pricing power - the reasons why their cooperation is now needed.

LCCs are acting differently now because they have been as devastated by the fuel price hikes as the legacies. They also have less flexible pricing models and little or no support from international operations. They need to conserve cash. However, at some point, the LCCs will have some unique growth opportunities.

Most significantly, Southwest has reduced its 2008 ASM growth to only 4% and currently envisages only 2-3% growth in 2009 (versus 7.5% originally planned). The airline has deferred some aircraft deliveries to 2013-2015 and is accelerating retirements. This year Southwest is taking 29 737-700s and retiring "at least" 14 older 737 models.

Southwest is a very profit-oriented airline and has a goal of achieving a 15% ROI each year (not being achieved currently). The management has made it clear that the airline is prepared to halt growth entirely in 2009 if the operating environment does not improve.

The other two large US LCCs, JetBlue and AirTran, have also significantly scaled back their growth plans. Both deferred air-



craft deliveries in the last week of May: JetBlue moved 21 A320s from 2009-2011 to 2014-2015, while AirTran moved 18 737-700s from 2009-2011 to 2013-2014.

Following numerous small downward revisions, JetBlue currently expects to grow its ASMs by only 3-5% in 2008, compared with 12% last year. The fourth quarter will see a 2.8% capacity reduction. The airline is looking to sell more aircraft, down-gauge from A320s to E190s and reduce average daily aircraft utilisation by half an hour (from its current industry-leading 13 hours). JetBlue has also put a freeze on new employee hiring.

Having sold 18 aircraft since 2006, in late April JetBlue had agreements in place to sell another nine in 2008. There may be more aircraft sales in 2009 and 2010 to help further moderate growth and enhance liquidity. CEO Dave Barger has promised that future growth will be "responsible".

AirTran, hitherto the fastest-growing of the large US carriers, has now totally suspended its growth plans, effective September and continuing "at least through 2009". After 19% ASM growth in 2007 and still 9-10% growth through this summer, the airline will reduce capacity by 5% in the last four months of this year. Next year's capacity is currently expected to be flat to 5% lower.

AirTran has been gradually deferring orders and selling aircraft for over a year. The 18-aircraft deferral in May, six 737-700 sales in April-May and a June agreement to sell or lease out another five aircraft in 2008 have facilitated the new capacity plan, as well as providing a welcome boost to liquidity.

The smaller LCCs are also in downsizing mode. Denver-based Frontier is restructur-

ing in Chapter 11 bankruptcy. Florida-based Spirit has reportedly warned its pilots and flight attendants that nearly half of them may be furloughed this autumn. Even the latest newcomer, Virgin America, has trimmed its fourth-quarter capacity plan by 10%, though year-over-year growth would still be 88% and there will be no impact on fleet growth or staff numbers.

The common theme for the LCCs is that they have significant fleet flexibility. Because of continued strong global demand for the 737NGs and the A320, the airlines can fairly easily sell, lease out or defer more aircraft if necessary. Likewise, they have the ability to "dial growth back up" (as JetBlue expressed it) when business conditions improve.

### Tapping ancillary revenues

Given the difficulty in raising domestic fares, US airlines have been under enormous pressure to find new revenue sources. Recent months have seen a proliferation of new fees for items that were previously included in ticket prices, such as a \$25 fee for a second checked bag, as well as increases in existing fees.

These strategies moved into a higher gear in late May, when American announced a \$15 fee for the first checked bag, effective June 15th. So far, at least United and US Airways have matched it. US Airways has also started charging for non-alcoholic drinks (including bottled water and coffee, all \$2). Several airlines have starting charging fees of up to \$50 for booking frequent-flyer award tickets.

Of course, many passengers are exempted from the baggage fees (typically the premium classes, premier-status frequent-flyers and international customers). Nevertheless, the mainstream traveller is now much more affected. The new fees represent a major shift by the US network carriers towards the Ryanair-style "pay for what you use" model.

These measures have impressive revenue-generating potential. US Airways estimates that its non-alcoholic drink and frequent-flyer mile redemption fees could bring in \$300-400m annually. American expects fee hikes for various services to bring in

"several hundred million dollars" in incremental annual revenue. United expects its baggage fees to generate \$275m and believes that ancillary sources could contribute \$1bn-plus in added annual revenue within a few years.

But some of those efforts could backfire because the leading LCCs may not join in. Even though the LCCs are trying hard to boost ancillary revenues, they are hesitant to add fees that could be seen as "nickel-and-diming" customers. Southwest has said that it will not be introducing such fees. JetBlue has added a second checked bag fee to "offset some of the extra fuel" but has said that the move affects less than 25% of its passengers and that nickel-and-diming is not consistent with its brand or policy.

### Liquidity-raising needs

The good news is that all of the sizable US carriers probably have enough cash to weather the storm at least through 2008. But, as oil prices have continued to rise, 2009 has looked increasingly problematic in terms of cash balances. Pressure has really built up to raise additional liquidity; after all, aircraft values are still holding up, financing is still available, and so on.

Continental has been on a cash-raising spree. Over the past two months, the airline has sold its remaining stake in Copa for \$136m, completed a \$163m public equity offering (in June, in the wake of announcing the UAL co-operation deal), collected \$235m from a forward-mileage sale and raised \$178m from a deal to extend a co-branding relationship. In addition, Continental is planning to refinance some debt and is looking to borrow against aircraft.

As a result, and also because of the capacity and fleet cuts, Continental's survival prospects have improved materially. Its 2008 and 2009 losses will be smaller. In one analyst's estimate, its year-end 2009 cash position has improved from a "perilous" \$889m to a "satisfactory" \$2.1bn.

At UAL and AMR, liquidity-raising has temporarily taken a back seat as the managements have focused on downsizing and trying to repair the broken revenue and cost

equation. But both will need to do some cash-raising to make it through 2009.

The two largest carriers both have assets that they could sell - in AMR's case, regional unit American Eagle, and in UAL's case, an MRO business. Both have valuable Heathrow slots. But the turbulent credit markets have meant that there is less interest from potential investors, at least for the US-based businesses. Rather, the airlines are likely to focus on borrowing against their unencumbered assets, which total \$5bn at AMR and \$3bn at UAL, and doing forward-mileage sales.

JP Morgan analyst Jamie Baker suggested in a recent research note that forward-mileage sales (like the one Continental completed) were "one of the easiest liquidity levers most airlines can pull" and therefore likely to occur early on in the capital-raising cycle.

Baker estimated in early June that the capacity and fleet cuts announced by UAL bolstered the company's year-end 2009 cash reserves by nearly \$1.5bn. Including anticipated net aircraft proceeds of \$400m, UAL would have just over \$1bn in cash at the end of next year, which would still be insufficient, so UAL would obviously do much more cash-raising over the next 18 months.

US Airways is potentially the biggest Chapter 11 risk because of its lack of monetizable assets. The possibilities mentioned by analysts include sale-leasebacks on E190s, Washington National slot sales, a forward-mileage sale and a sale to United.

Delta and Northwest are not expected to do much cash-raising in the near-term; they will be in a better position to do that after the merger.

Merrill Lynch analyst Michael Linenberg estimated on June 19th (when most airlines had announced their cuts) that US industry domestic capacity (30 largest airlines) would decline by 7.3% in the fourth quarter and by 2.2% in 2008. International capacity would grow by 5.2% this year.

The 7.3% decline would be well short of the 20% reduction that some analysts have considered necessary to facilitate healthy profits at these fuel prices. But it is early days yet; most airlines have indicated that they will cut deeper if necessary.

By Heini Nuutinen  
hnuutinen@nyct.net

## JAL: Can it continue its recovery?

Japan Airlines (JAL), Asia's largest carrier, has staged a financial turnaround thanks to successful cost-cutting and restructuring over the past year. But can JAL maintain recovery momentum in the new fuel environment? Will its balance sheet be strong enough for post-2010 growth?

JAL embarked on a major new restructuring effort in February 2007 as part of its 2007-2010 "medium-term revival plan". The plan, which was examined in the May 2007 issue of *Aviation Strategy*, aimed to restore profitability and position JAL for post-2010 growth through measures such as staff and wage cuts, fleet downsizing, a shift to high-profit routes and the shedding of non-core businesses.

At that time JAL's president Haruka Nishimatsu rather dramatically called 2007 the carrier's "last chance for self-resuscitation". JAL had posted losses or weak results for many years - a reflection of high labour costs, a less efficient fleet than its rivals, uncompetitive route structure, a bureaucratic corporate structure, militant unions and poor morale. JAL had also suffered a series of safety lapses in 2005 and had lost domestic market share, particularly premium passengers, to ANA and other competitors. JAL had not paid dividends since 2004. And its share price had collapsed in the spring of 2006, falling from the Y300-325 level to below Y200 (and subsequently never rising above Y275).

All of that had made JAL's investors very unhappy. The key shareholders had forced out the previous president/CEO in early 2006, and a similar fate awaited Nishimatsu if he did not improve JAL's results and restore dividends. The shareholders were also poised to demand radical changes, such as hiring an outsider as chief executive and bringing in a more entrepreneurial board of directors. Also, the financial community was baulking at providing additional capital that JAL needed to bolster its weak cash position.

The February 2007 plan had a mixed reception, with many analysts and bankers

remaining sceptical that the plan was achievable and that it went deep enough. Nevertheless, the banks provided new funding to the tune of Y60bn (US\$559m), which enabled JAL to launch the restructuring.

But, one year into the four-year restructuring effort, JAL has clearly turned the corner. After two loss-making years, the airline swung into profit in its latest fiscal year ended March 31st. Operating income almost quadrupled to Y90bn or US\$838m (4% of revenues), and the Y16.9bn (US\$157m) net profit contrasted with a similar Y16.3bn net loss in the previous year.

The profits significantly exceeded the targets set by the February 2007 plan. They were achieved despite a 55% hike in fuel prices, a 3% fall in revenues (due to asset sales) and Y18bn (US\$167m) of special losses and provisions to cover US and EU antitrust fines.

JAL benefited from robust growth in international business traffic. The airline more than offset the hike in fuel prices through fuel surcharges, hedging, reduced fuel consumption and foreign exchange gains. Non-fuel cost cuts also exceeded expectations. Staff numbers fell by 2,297 - more than triple the original target of 697. Annual labour costs were reduced by Y52bn (US\$484m), compared to the target of Y50bn. JAL also boosted its cash position by selling a record volume of non-core assets.

The fiscal year wrapped up nicely when JAL secured a long-awaited capital increase in March. The company issued Y153.5bn (US\$1.4bn) in preferred stock to financial institutions and business partners. There will be no near-term dilutive impact because the new shares cannot be converted into common stock for three years. The funds provided a useful boost to cash reserves and will enable JAL to reduce debt and meet capital expenditures associated with the revival plan.

Of course, just as the picture was brightening for JAL at long last, the external environment took a dramatic turn for the worse.

Like its peers, JAL faces tough new challenges as a result of this year's unprecedented run-up in fuel prices, coupled with a possible slowdown of the global economy.

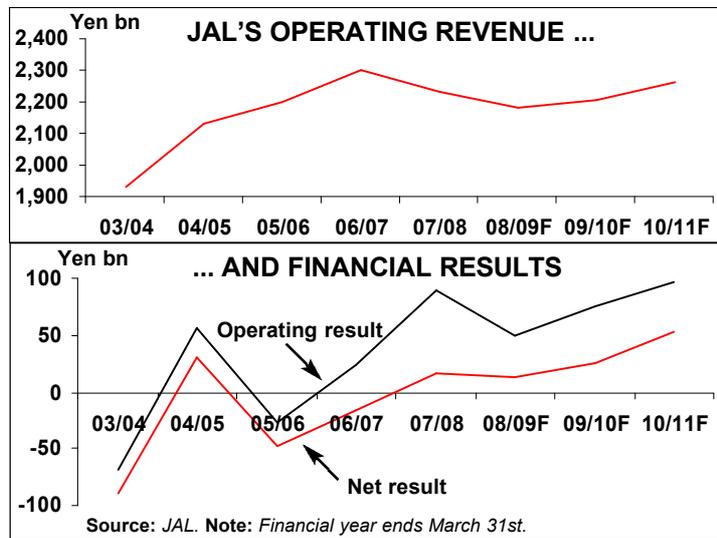
Consequently, JAL had to go back to the drawing board. First, in February the airline announced a new three-year revival plan that "deepens and broadens" the previous plan and incorporates some new strategies. Second, in early May JAL announced additional measures, including new ways to reduce fuel consumption, a 5% across-the-board wage/benefit cut from October and a long-awaited deal to sell its credit card business (JAL Card Inc.).

The timing of the new plan is critical for JAL, because there will be major growth opportunities - as well as increased competition from LCCs - when expansion projects are completed at Tokyo's Haneda and Narita airports in 2010. In particular, the opening of a fourth runway at Haneda in October 2010 will be a watershed event, because it will mean a dramatic 40% increase in slots at the congested hub (which is much closer than Narita to downtown Tokyo) and because some 7% of the 407,000 annual slots will be allocated for international flights. To capitalise on those opportunities, JAL must restore decent profitability and repair its balance sheet.

JAL also needs to get in shape because deregulatory pressures are growing in Japan. In late May the government's top economic policy advisory council called for Japan to negotiate open skies agreements with the US and the EU and proposed allowing a greater number of international flights at Haneda. Japan has so far only signed limited open skies ASAs, excluding Narita and Haneda, with a number of Asian countries. That said, even with the new slots coming on line in 2010, there will continue to be capacity limitations at Tokyo, and many believe that the government's priority is to see a stronger JAL before making further significant deregulation moves.

### The new revival plan

The new three-year plan for the 2008/09, 2009/10 and 2010/11 fiscal years, first of all,



continues the core strategies of the previous plan: fleet renewal and aircraft downsizing, a shift to high profit routes and expanding the use of lower cost subsidiaries. Second, the new plan will expand "premium strategies" aimed at wooing business and top-tier travellers. Third, as the key new feature, JAL intends to tackle labour and other costs more decisively through a "group-wide cost reform".

On the labour front, JAL is looking to reform the basic structure of wages and allowances, "radically overhaul" work processes and manpower allocation, and achieve the aim of raising labour productivity by 10% a year ahead of schedule.

As with the previous plan, the new plan assumes no overall revenue growth in the three-year period - the result of modest growth in passenger and cargo revenues and a decline in "other" revenues. JAL hopes to restart growing from 2010, after it has completed the restructuring and when additional airport capacity will be available.

However, the new plan contains more optimistic profit projections. JAL has raised its FY2010/11 operating income target from Y88bn to Y96bn and its net profit target from Y37bn to Y53bn. But the 2010/11 operating margin would still be only 4.2% (compared to 3.8% previously), which seems very modest compared to the 10% operating margins that global carriers elsewhere strive for.

There appear to be two reasons why JAL is raising its profit targets at a time like this.

First, given last year's stronger-than-expected profits, the forecasts are from a higher base. Second, JAL believes that it can fully offset this year's fuel price hike with countermeasures - the reason it has not revised the forecasts made in February, which assume the price of Singapore Kerosene averaging US\$110 this year (which looks increasingly unrealistic).

JAL expects its operating income to fall significantly this year, from Y90bn to Y50bn, while net profit is projected to decline by 23% to Y13bn. But those results would still be higher than the February 2007 plan projections. Revenues are forecast to decline by 2% to Y2,184bn this year mainly because of asset sales.

JAL estimated on May 9th that its fuel costs would be about Y40bn higher in 2008/09 than the February 2008 plan estimate, or Y80bn higher than last year's. However, the airline believes that it would be able to offset fully an Y80bn hike, with fuel surcharges and fare increases recouping about Y61bn, new "premium" strategies Y10bn, network restructuring Y5bn and other cost cutting measures Y4bn.

Because of its high business traffic content, JAL probably finds it easier than most other airlines to pass on higher fuel costs to customers. JAL has had fuel surcharges on international tickets since February 2005, and raising them has become a quarterly event (for which the airline needs government approval), with seemingly little impact on demand. The fuel surcharge on Japan-US and Japan-Europe routes went up by 18% to Y20,000 (US\$180) on April 1 and will go up by 40% to Y28,000 (US\$253) on July 1.

JAL also continues to benefit from hedging gains. About 66% of its 2008/09 fuel needs are hedged, though the airline has not

disclosed the price level. JAL is seeking to reduce fuel consumption, among other things, through more frequent engine cleanings and a switch to less fuel-consuming routes. Of course, the aggressive fleet renewal programme will bring about a further meaningful reduction in fuel usage.

### Labour cost reductions

The plan is to reduce the workforce by 4,300 or 8% (from 53,100 to 48,800) in the two years to March 2009 (a year ahead of the original schedule). The cuts are being achieved through natural attrition and an early retirement programme.

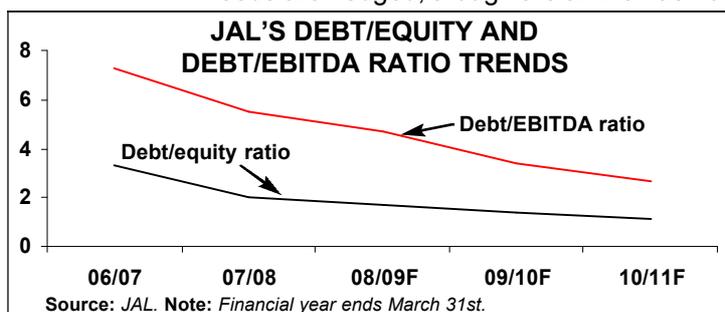
The official target is to reduce labour costs by Y50bn (US\$466m) annually. Of the Y52bn savings achieved last year, Y15bn came from annual bonus reductions, Y20bn from retirement benefit reductions and Y17bn from the early retirement plan and productivity improvements.

The original plan envisaged no new wage cuts, though through 2007/08 JAL continued a temporary 10% across-the-board basic wage reduction introduced in April 2006. However, with those savings now eliminated, in May JAL announced a new plan to cut salaries and benefits for most employees by 5% from October. That move, which is currently being discussed with the unions, would reduce annual labour costs by Y10bn.

### Fleet downsizing and renewal

JAL's fleet plan calls for the phasing out of larger, older aircraft and bringing in more small and medium-sized aircraft. This means expanding 737-800 and 777 usage and adding 787s and E-170s, while reducing or removing 747s, A300s and MD-80s (some of the 747-400s will be converted to freighters). The strategy, which is possible because of the increase in Haneda slots in 2010, is intended to cut operating costs by 10%.

The current plan - before the impact of the 787 delivery delays - is to bring in 85 new aircraft and retire 64 aircraft in the four-year period ending 2010/11. Last year, JAL brought in 18 aircraft and retired 17, and this year will see 19 additions (737-800s, 767-



300ERs and 777-300ERs) and 21 retirements (747 classic-types, 767-300s and MD-80s). The group's fleet will grow from 272 to 291 aircraft in the four-year period, but all of the growth will be in 2009-2010.

The biggest impact will be on international routes, which will see the ratio of fuel-efficient aircraft increase from the current 25% to 50% in 2010/11. The percentage of large-size aircraft (747s and 777s) will fall from 52% to 38% of the international passenger fleet total.

As of April, JAL had 87 jet aircraft on firm order, including 28 737-800s, five 767-300ERs, nine 777-300ERs, 35 787s (plus 20 options) and 10 E170s (plus five options). The 737-800, which was introduced in March 2007, is used on domestic routes out of Haneda and on short and medium-haul international routes. The 78-seat E-170, the first larger RJ type in the Group fleet, is scheduled to enter service with J-AIR in February 2009.

JAL now expects to receive its first 787s in the fourth quarter of 2009. The delays will clearly have significant negative impact, first, because JAL's financial recovery strategy is heavily dependent on getting fuel-efficient aircraft in quickly. Second, like ANA, JAL now faces even greater delays for the shorter-range 787-3, because Boeing has pushed that model back behind the 787-9 (for 2012 or later) without even setting first delivery dates. The Japanese airlines need the 787-3 for domestic operations because the wingspan of the regular 787-8 is too wide for many of the country's airports.

In a May 9th presentation, JAL said that it would mainly respond by delaying 767 retirements, that the 747 classic retirements would proceed as planned and that it would consider acquiring substitute aircraft. JAL will obviously be able to collect significant compensation from Boeing.

### Network restructuring and product upgrades

Network restructuring includes focusing on high-profit and high-growth routes, right-sizing aircraft in different markets and expanding the lower-cost subsidiaries. To maintain market share, JAL is speeding up

implementation of premium product strategies. The airline is seeking to strengthen Narita as a global hub, while building Asian international service out of Haneda.

JAL has reaped great benefits from its decision, made two years ago, to switch from 747s to 777s on its European routes - a process that is now complete. For example, switching from 747s to 777-200ERs on the Narita-Amsterdam route improved profitability by ¥1.6bn (US\$15m) annually. This summer JAL will extend the strategy to the US-Japan market, switching from 747s to 777-300ERs on the New York and San Francisco routes.

On the long-haul front, JAL has continued to boost frequencies in high-demand business markets such as New York and Paris, as well as in growth markets such as Moscow. The airline has also expanded codesharing with European carriers, including BA and Air France.

In Asia, JAL continues to strengthen its position in markets that have high growth potential - especially China, India, Vietnam and Korea - with new routes, frequency increases and expanded codesharing with the region's carriers. Some weaker routes have been suspended. A key part of the strategy is to continue to down-gauge from 767-300s to 737-800s, especially on China and Korea routes.

Much of the future Tokyo-Asia growth will be out of Haneda. After inaugurating Haneda-Shanghai in 2007, this year JAL is adding Haneda-Beijing service for the Olympics and expanding charter operations. Narita will continue to see increased flights, particularly on business-oriented routes to China.

JAL is looking to strengthen Asia operations through a greater use of its subsidiaries JALways (JAZ) and JAL Express (JEX), which offer the same level of service as JAL but have 10% lower overheads. JAZ, which operates 747-400s and 767s using non-Japanese crews, will get more Asia resort and business routes. JEX, which currently operates only domestically, will from 2009 also fly 737-800s on business routes primarily to China. (In the meantime, Japan Asia Airways - JAA - will soon be integrated into JAL to eliminate duplication, because China-Taiwan relations have thawed sufficiently for JAL to operate its own flights to Taiwan.)

Domestically, JAL is building a "business structure that generates stable income" in preparation for 2010. This has meant elimination of 11 routes over the past year. The airline will continue to review weaker routes, expand in select markets, complete the retirement of MD-81s by 2010, continue to down-gauge with 737-800s and E-170s and give a more prominent role for JAL Express and regional subsidiary J-AIR.

Product enhancements are a key part of the aircraft down-gauging strategy, helping to retain premium and frequent flyer passengers and maximise revenues. JAL is extending the main initiatives launched in 2007 - domestic first class, international "premium economy" service and new seats in international first and business classes - to more markets this year. International "premium economy", which is currently offered on the London, Paris and Frankfurt routes and has received a good response, will be extended to New York and San Francisco this summer and later to other European routes. After becoming the first airline in Japan to offer three classes domestically in December (on the Haneda-Osaka route), this year JAL is extending the first class product to at least two more domestic trunk routes.

The positive effects of JAL's membership of the oneworld alliance (April 2007) are likely to be felt in the long term and will include intangible benefits such as bolstering JAL's image. JAL has reported a useful Y5bn (US\$47m) benefit in the initial year, exceeding the Y3bn forecast.

The shift to high-profit routes, fare increases and strong business demand boosted JAL's international passenger yield by 7.8% last year. As the full effects of the premium strategies kick in, JAL predicts a sharp increase in business class passengers and a steady rise in yields in the next two years.

The domestic environment is more challenging, with intensifying competition from new airlines and Japan Rail and sluggish demand trends (except in the Tokyo metropolitan area). Nevertheless, JAL expects the restructuring, product enhancements and corporate sales efforts to result in steady yield growth.

The cargo division has seen overall declines in capacity and revenues, partly

because fuel prices prompted JAL to retire five 747-200 freighters earlier than planned. The Pacific has been hit hard, but at the other extreme China demand is booming. JAL is in the process of reviewing its cargo business, with the aim of returning it to profitability. The current strategy is increasingly to deploy the 767F on China and Southeast Asia routes, while renewing the long-haul fleet and adjusting supply on the Pacific. The remaining six classic 747Fs will be retired this year and partially replaced with 747-400BCFs. Post-2010, JAL hopes to boost cargo demand with 24-hour operations at Haneda.

### Improving balance sheet

JAL sold assets worth over Y80bn (US\$745m) last year - slightly more than in 2006/07. It was all part of the strategy to concentrate resources on the core air transport business, but importantly the asset sales, together with the Y154bn stock offering proceeds and improved earnings from operations, have helped strengthen JAL's relatively weak balance sheet.

Over the past year, JAL's cash position improved from Y199bn to Y355bn (March 31st), or from 8.6% to 16% of annual revenues - still some way off the 20%-plus considered adequate for global airlines these days.

JAL's interest-bearing debt declined by 10.4% last year, from Y1,026bn to Y920bn, and another 12.5% reduction to Y805bn is forecast for the current year. This would mean the D/E ratio falling from 3.3 to 1.7 in the two-year period. The latest revival plan has more aggressive targets than the previous one, aiming to reduce interest-bearing debt to Y598bn and the D/E ratio to 1.1 by 2010/11.

Reducing debt and improving cash flow are prerequisites for the plans to resume growth from 2010. But JAL also needs to tap into the March equity offering proceeds and raise additional funds to meet its cash outflows - capex averaging Y137bn and debt repayments Y110bn annually - in the next three years. The sale of JAL Card, effective July 1, will bring in Y42bn. There are also tentative plans to list shares in JAL Hotels Co. in the next year or two, but otherwise asset sales will play a much lesser role from now on.

# Freighter values and lease rates

## FREIGHTER VALUES (US\$m)

	New	5 years old	10 years old	20 years old
A300-600SF(Conv)			39.4	20.1
A300-600RF		57.4	44.1	
737-300QC			15.20	
747-200F (Conv)				9.5
747-400M		101.1	82.9	
747-400F	149.7	126.7	103.8	
747-400 BCF		122	97.7	
747-800F	178.5			
757-200PF			31.3	17.7
767-300F		63.60	50.1	
777-200LRF	147			
MD-11C			43	
MD-11F			53.2	

## FREIGHTER LEASE RATES (US\$000s per month)

	New	5 years old	10 years old	20 years old
A300-600SF(Conv)			365	284
A300-600RF		477	404	
737-300QC			201	
747-200F (Conv)				277
747-400M		772	703	
747-400F	1,382	1,206	1025	
747-400 BCF		1,097	958	
747-800F	1,878			
757-200PF			289	233
767-300F		539	499	
777-200LRF	1,224			
MD-11C			460	
MD-11F			603	

Note: As assessed at end-April 2008. Mid-range values for all types.  
Source: AVAC

## AIRCRAFT AND ASSET VALUATIONS

Contact Paul Leighton at AVAC (Aircraft Value Analysis Company)

- Website: [www.aircraftvalues.net](http://www.aircraftvalues.net)
- Email: [pleighton@aircraftvalues.net](mailto:pleighton@aircraftvalues.net)
- Tel: +44 (0) 20 7477 6563 • Fax: +44 (0) 20 7477 6564

# 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 employees
<b>Air France/ KLM Group</b>	<b>Year 2006/07</b>	<b>30,773</b>	<b>29,129</b>	<b>1,644</b>	<b>1183</b>	<b>5.3%</b>	<b>3.8%</b>	<b>245,066</b>	<b>199,510</b>	<b>81.4%</b>	<b>73,484</b>	<b>103,050</b>
	Apr-Jun 07	8,011	7,486	724	566	9.0%	7.1%	63,376	51,567	81.4%	19,325	103,978
	Jul-Sep 07	9,183	7,855	1,328	1041	14.5%	11.3%	67,375	57,009	84.6%	20,448	
	Oct-Dec 07	8,678	8,202	476	207	5.5%	2.4%	62,615	49,591	79.2%	17,868	
	Jan-Mar 08	8,543	8,612	-69	-810	-0.8%	-9.5%	62,948	49,060	77.9%	17,154	
	<b>Year 2007/08</b>	<b>34,173</b>	<b>32,182</b>	<b>1,991</b>	<b>1,087</b>	<b>5.8%</b>	<b>3.2%</b>	<b>256,314</b>	<b>207,227</b>	<b>80.8%</b>	<b>74,795</b>	<b>104,659</b>
<b>BA</b>	Apr-Jun 06	4,208	3,825	383	280	9.1%	6.7%	38,222	29,909	78.3%	9,569	45,100
	Jul-Sep 06	4,331	4,080	251	315	5.8%	7.3%	38,727	30,872	79.7%	9,935	45,058
	Oct-Dec 06	4,051	3,798	253	210	6.2%	5.2%	36,563	27,073	74.0%	7,878	42,197
	Jan-Mar 07	3,792	3,731	61	-140	1.6%	-3.7%	36,405	26,003	71.4%	7,269	42,073
	<b>Year 2006/07</b>	<b>16,149</b>	<b>15,004</b>	<b>1,145</b>	<b>578</b>	<b>7.1%</b>	<b>3.6%</b>	<b>148,321</b>	<b>112,851</b>	<b>76.1%</b>	<b>33,068</b>	<b>43,501</b>
	Apr-Jun 07	4,395	3,868	527	539	12.0%	12.3%	37,514	28,836	76.9%	8,648	
	Jul-Sep 07	4,729	4,118	611	458	12.9%	9.7%	38,191	30,500	79.9%	9,206	42,024
	Oct-Dec 07	4,142	3,774	368	247	8.9%	6.0%	37,122	27,531	74.2%	7,913	
	Jan-Mar 08	4,049	3,824	225	133	5.6%	3.3%	36,745	26,149	71.2%	7,394	
	<b>Year 2007/08</b>	<b>17,315</b>	<b>15,584</b>	<b>1,731</b>	<b>1,377</b>	<b>10.0%</b>	<b>8.0%</b>	<b>149,572</b>	<b>113,016</b>	<b>75.6%</b>	<b>33,161</b>	<b>41,745</b>
<b>Iberia</b>	Apr-Jun 06	1,816	1,753	63	44	3.5%	2.4%	16,809	13,420	79.8%	7,461	24,109
	Jul-Sep 06	1,825	1,700	125	96	6.8%	5.3%	16,846	14,065	83.5%	7,354	22,721
	Oct-Dec 06	1,811	1,750	61	-12	3.4%	-0.7%	16,458	13,132	79.8%	6,682	
	<b>Year 2006</b>	<b>6,545</b>	<b>6,391</b>	<b>154</b>	<b>72</b>	<b>2.4%</b>	<b>1.1%</b>	<b>65,802</b>	<b>52,493</b>	<b>79.8%</b>	<b>27,799</b>	<b>23,901</b>
	Jan-Mar 07	1,745	1,734	16	16	0.9%	0.9%	16,104	12,798	79.5%	6,318	22,661
	Apr-Jun 07	1,829	1,752	75	83	4.1%	4.5%	16,458	13,307	80.9%	6,863	22,324
	Jul-Sep 07	2,080	1,882	198	211	9.5%	10.1%	17,119	14,653	85.6%	7,216	22,803
	Oct-Dec 07	1,963	1,681	279	140	14.2%	7.1%	16,773	13,471	80.3%	6,463	22,168
	<b>Year 2007</b>	<b>7,617</b>	<b>7,049</b>	<b>568</b>	<b>450</b>	<b>7.5%</b>	<b>5.9%</b>	<b>66,454</b>	<b>54,229</b>	<b>81.6%</b>	<b>26,860</b>	<b>22,515</b>
	Jan-Mar 08	1,948	1,990	-42	-661	-2.2%	-33.9%	16,360	12,990	79.4%		21,574
<b>Lufthansa</b>	Apr-Jun 06	6,529	6,203	326	142	5.0%	2.2%	37,797	28,603	75.7%	14,106	
	Jul-Sep 06	6,765	6,188	577	461	8.5%	6.8%	39,225	30,627	78.1%	14,781	
	Oct-Dec 06	6,316	6,062	254	529	4.0%	8.4%	36,204	27,056	74.7%	13,103	
	<b>Year 2006</b>	<b>24,979</b>	<b>23,913</b>	<b>1,066</b>	<b>1,014</b>	<b>4.3%</b>	<b>4.1%</b>	<b>146,720</b>	<b>110,330</b>	<b>75.2%</b>	<b>53,432</b>	<b>93,541</b>
	Jan-Mar 07	6,258	6,184	74	593	1.2%	9.5%	35,028	26,109	74.5%	12,329	95,696
	Apr-Jun 07	7,267	6,506	761	663	10.5%	9.1%	39,573	30,544	77.2%	14,629	97,067
	Jul-Sep 07 *	8,960	8,004	956	843	10.7%	9.4%	48,662	39,112	80.4%	18,836	
	Oct-Dec 07*	8,197	8,103	94	165	1.1%	2.0%	45,845	35,128	76.6%	17,106	
	<b>Year 2007</b>	<b>30,682</b>	<b>28,797</b>	<b>1,885</b>	<b>2,264</b>	<b>6.1%</b>	<b>7.4%</b>	<b>169,108</b>	<b>130,893</b>	<b>77.4%</b>	<b>62,900</b>	<b>100,779</b>
	Jan-Mar 08*	8,368	8,086	282	85	3.4%	1.0%	45,131	34,828	77.2%	15,992	106,307
<b>SAS</b>	Apr-Jun 06	2,439	2,319	120	75	4.9%	3.1%	14,279	10,551	73.9%	10,436	32,622
	Jul-Sep 06	2,476	2,318	158	83	6.4%	3.4%	14,468	11,059	76.4%	10,319	32,772
	Oct-Dec 06	2,215	2,121	94	679	4.2%	30.7%	13,672	9,343	68.3%	9,705	25,534
	<b>Year 2006</b>	<b>5,270</b>	<b>5,010</b>	<b>260</b>	<b>169</b>	<b>4.9%</b>	<b>3.2%</b>	<b>54,907</b>	<b>39,247</b>	<b>71.5%</b>	<b>39,059</b>	<b>31,965</b>
	Jan-Mar 07	1,978	2,025	-47	-7	-2.4%	-0.4%	12,844	8,543	66.5%	9,088	26,136
	Apr-Jun 07	2,383	2,247	136	89	5.7%	3.7%	15,091	10,915	72.3%	11,045	26,916
	Jul-Sep 07	2,612	2,518	94	109	3.6%	4.2%	15,352	11,890	77.4%	11,031	27,447
	Oct-Dec 07	2,041	2,039	2	-96	0.1%	-4.7%	14,263	9,701	68.0%	9,923	25,651
	<b>Year 2007</b>	<b>5,969</b>	<b>5,676</b>	<b>293</b>	<b>259</b>	<b>4.9%</b>	<b>4.3%</b>	<b>57,551</b>	<b>41,048</b>	<b>71.3%</b>	<b>41,087</b>	<b>26,538</b>
	Jan-Mar 08	2,046	2,185	-139	-181	-6.8%	-8.8%	10,669	7,235	67.8%	7,277	25,477
<b>Ryanair</b>	Apr-Jun 06	711	539	172	146	24.2%	20.5%				10,700	
	Jul-Sep 06	864	553	313	268	36.2%	31.0%				11,481	3,881
	Oct-Dec 06	651	575	76	63	11.7%	9.7%			82.0%	10,300	4,209
	Jan-Mar 07	661	611	48	41	7.3%	6.2%				10,019	
	<b>Year 2006/07</b>	<b>2,887</b>	<b>2,278</b>	<b>609</b>	<b>518</b>	<b>21.1%</b>	<b>17.9%</b>	<b>48,924</b>	<b>40,118</b>	<b>82.0%</b>	<b>42,500</b>	
	Apr-Jun 07	934	722	212	187	22.7%	20.0%			82.0%	12,600	
	Jul-Sep 07	1,229	795	434	384	35.3%	31.2%			86.0%	13,952	
	Oct-Dec 07	824	760	64	68	7.7%	8.3%					
	Jan-Mar 08	859	808	51	-85	6.0%	-9.9%					
	<b>Year 2007/08</b>	<b>3,846</b>	<b>3,085</b>	<b>761</b>	<b>554</b>	<b>19.8%</b>	<b>14.4%</b>			<b>82.0%</b>	<b>50,900</b>	
<b>easyJet</b>	Oct 04-Mar 05	1,039	1,116	-77	-41	-7.4%	-3.9%	14,526	12,150	83.8%	13,500	
	<b>Year 2004/05</b>	<b>2,478</b>	<b>2,356</b>	<b>122</b>	<b>109</b>	<b>4.9%</b>	<b>4.4%</b>	<b>32,141</b>	<b>27,448</b>	<b>85.2%</b>	<b>29,600</b>	<b>4,152</b>
	Oct 05-Mar 06	1,095	1,177	-82	-50	-7.5%	-4.6%	16,672	13,642	81.8%	14,900	
	<b>Year 2005/06</b>	<b>2,917</b>	<b>2,705</b>	<b>212</b>	<b>170</b>	<b>7.3%</b>	<b>5.8%</b>	<b>37,088</b>	<b>31,621</b>	<b>84.8%</b>	<b>33,000</b>	<b>4,859</b>
	Oct 06-Mar 07	1,411	1,333	-47	-25	-3.3%	-1.8%	19,108	15,790	81.2%	16,400	
	<b>Year 2006/07</b>	<b>3,679</b>	<b>3,069</b>	<b>610</b>	<b>311</b>	<b>16.6%</b>	<b>8.5%</b>	<b>43,501</b>	<b>36,976</b>	<b>83.7%</b>	<b>37,200</b>	
Oct 07-Mar 08	1,795	1,772	22	-87	1.2%	-4.8%	23,442	19,300	82.3%	18,900		

Note: \*Lufthansa group including SWISS. 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 2006	3,334	3,422	-87	-53	-2.6%	-1.6%	43,306	33,012	76.2%	24,025	12,933
	Jan-Mar 07	759	778	-18	-10	-2.4%	-1.3%	10,652	7,552	71.0%	5,471	13,236
	Apr-Jun 07	904	827	78	46	8.6%	5.1%	10,448	8,196	78.5%	5,329	9,748
	Jul-Sep 07	995	852	143	86	14.4%	8.6%	10,225	8,154	79.7%	4,878	9,753
	Oct-Dec 07	747	730	17	7	2.3%	0.9%	9,688	7,239	74.7%	4,191	9,672
	Year 2007	3,506	3,294	212	125	6.0%	3.6%	45,359	34,389	75.8%	25,110	13,485
	Jan-Mar 08*	840	889	-50	-36	-5.9%	-4.3%	9,791	7,284	74.4%	4,080	9,881
American	Year 2006	22,563	21,503	1,060	231	4.7%	1.0%	280,052	224,423	80.1%	98,139	86,600
	Jan-Mar 07	5,427	5,179	248	81	4.6%	1.5%	72,362	56,063	77.5%	23,299	85,100
	Apr-Jun 07	5,879	5,412	467	317	7.9%	5.4%	68,632	57,402	83.6%	25,301	85,500
	Jul-Sep 07	5,946	5,627	319	175	5.4%	2.9%	69,636	58,401	83.9%	25,448	85,800
	Oct-Dec 07	5,683	5,752	-69	-69	-1.2%	-1.2%	73,408	58,416	79.5%	24,080	85,800
	Year 2007	22,935	21,970	965	504	4.2%	2.2%	273,307	222,719	81.5%	98,160	85,800
	Jan-Mar 08	5,697	5,884	-187	-328	-3.3%	-5.8%	66,065	52,283	79.1%	23,048	85,500
Continental	Year 2006	13,128	12,660	468	343	3.6%	2.6%	178,500	144,060	80.7%	67,119	44,000
	Jan-Mar 07	3,179	3,115	64	22	2.0%	0.7%	43,853	34,519	78.7%	16,176	
	Apr-Jun 07	3,710	3,447	263	228	7.1%	6.1%	47,622	39,626	83.2%	18,120	45,000
	Jul-Sep 07	3,820	3,540	280	241	7.3%	6.3%	48,836	40,912	83.8%	17,901	
	Oct-Dec 07	3,523	3,443	80	71	2.3%	2.0%	45,947	36,483	79.4%	16,732	
	Year 2007	14,232	13,545	687	459	4.8%	3.2%	165,951	135,655	81.7%	50,960	45,000
	Jan-Mar 08	3,570	3,636	-66	-80	-1.8%	-2.2%	45,665	35,855	78.5%	16,440	
Delta	Year 2006	17,171	17,113	58	-6,203	0.3%	-36.1%	238,168	186,892	78.5%	106,649	51,300
	Jan-Mar 07	4,144	3,989	155	-130	3.7%	-3.1%	56,774	43,794	77.1%	25,325	52,260
	Apr-Jun 07	5,003	4,513	490	1,592	nm	nm	61,358	50,818	82.8%	28,305	55,542
	Jul-Sep 07	5,227	4,774	453	220	8.7%	4.2%	65,889	54,774	83.1%	28,987	55,022
	Oct-Dec 07	4,683	4,685	-2	-70	0.0%	-1.5%	60,210	47,052	78.1%	26,499	55,044
	Year 2007***	19,154	18,058	1,096	1,612	5.7%	8.4%	244,187	196,403	80.4%	109,180	54,467
	Jan-Mar 08	4,766	11,027	-6,261	-6,390	-131.4%	-134.1%	58,083	45,390	78.1%	25,586	55,382
Northwest	Year 2006	12,568	11,828	740	-2,835	5.9%	-22.6%	149,575	125,596	84.0%	67,600	30,484
	Jan-Mar 07	2,873	2,672	201	-292	7.0%	-10.2%	36,845	29,964	81.3%	15,600	30,008
	Apr-Jun 07**	3,181	2,824	357	2,149	nm	nm	38,070	32,495	85.9%	17,400	29,589
	Jul-Sep 07	3,378	2,919	459	244	13.6%	7.2%	38,445	33,222	86.4%	17,300	29,579
	Oct-Dec 07	3,096	3,009	87	-8	2.8%	-0.3%	36,836	30,361	82.4%	16,100	30,306
	Year 2007****	12,528	11,424	1,104	2,093	8.8%	16.7%	138,603	117,335	84.7%	53,680	29,871
	Jan-Mar 08	3,127	7,180	-4,053	-4,139	-129.6%	-132.4%	37,592	30,921	82.3%	15,874	30,053
Southwest	Year 2006	9,086	8,152	934	499	10.3%	5.5%	149,123	108,936	73.1%	96,277	32,664
	Jan-Mar 07	2,198	2,114	84	93	3.8%	4.2%	38,105	25,924	68.0%	19,960	33,195
	Apr-Jun 07	2,583	2,255	328	278	12.7%	10.8%	40,204	30,606	76.1%	23,442	33,261
	Jul-Sep 07	2,588	2,337	251	162	9.7%	6.3%	41,385	31,680	76.5%	23,533	33,787
	Oct-Dec 07	2,492	2,366	126	111	5.1%	4.5%	40,649	28,171	69.3%	24,876	34,378
	Year 2007	9,861	9,070	791	645	8.0%	6.5%	160,314	116,361	72.6%	88,710	33,655
	Jan-Mar 08	2,530	2,442	88	34	3.5%	1.3%	40,454	28,311	69.8%	21,505	33,895
United	Year 2006	19,340	18,893	447	22,876	2.3%	118.3%	255,613	208,769	81.7%	69,325	53,000
	Jan-Mar 07	4,373	4,465	-92	-152	-2.1%	-3.5%	61,900	49,415	79.8%	16,350	51,500
	Apr-Jun 07	5,213	4,676	537	274	10.3%	5.3%	64,451	55,049	85.4%	18,190	51,400
	Jul-Sep 07	5,527	4,871	656	334	11.9%	6.0%	65,547	55,089	84.0%	17,804	51,800
	Oct-Dec 07	5,030	5,094	-64	-53	-1.3%	-1.1%	62,679	49,732	79.3%	16,042	51,700
	Year 2007	20,143	19,106	1,037	403	5.1%	2.0%	228,200	188,857	82.8%	68,630	55,000
	Jan-Mar 08	4,711	5,152	-441	-537	-9.4%	-11.4%	61,812	47,854	77.4%	15,250	52,500
US Airways Grp.	Year 2006	11,557	10,999	558	304	4.8%	2.6%	123,889	97,667	78.8%	57,345	32,459
	Jan-Mar 07	2,732	2,616	116	66	4.2%	2.4%	35,411	27,039	76.4%	19,935	36,000
	Apr-Jun 07	3,155	2,866	289	263	9.2%	8.3%	37,144	30,631	82.5%	22,232	35,485
	Jul-Sep 07	3,036	2,834	202	177	6.7%	5.8%	31,653	26,385	83.4%	14,965	34,321
	Oct-Dec 07	2,776	2,850	-74	-79	-2.7%	-2.8%	34,859	26,812	76.9%	19,828	
	Year 2007	11,700	11,167	533	427	4.6%	3.6%	127,344	102,248	80.3%	66,060	
	Jan-Mar 08	2,840	3,036	-196	-236	-6.9%	-8.3%	35,298	27,316	77.4%	19,731	34,684
JetBlue	Year 2006	2,363	2,236	127	-1	5.4%	0.0%	46,016	37,522	81.6%	18,565	9,265
	Jan-Mar 07	608	621	-13	-22	-2.1%	-3.6%	11,861	9,562	80.6%	5,091	9,260
	Apr-Jun 07	730	657	73	21	10.0%	2.9%	12,981	10,840	83.5%	5,587	9,421
	Jul-Sep 07	765	686	79	23	10.3%	3.0%	13,446	11,020	82.0%	5,528	9,301
	Oct-Dec 07	739	709	30	-4	4.1%	-0.5%	13,056	9,995	76.6%	5,181	9,909
	Year 2007	2,842	2,673	169	18	5.9%	0.6%	51,334	41,411	80.7%	21,390	9,473
	Jan-Mar 08	816	799	17	-8	2.1%	-1.0%	13,510	10,562	78.2%	5,518	10,165

Notes: 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 31/12. \*Mainline stats for ASKs, RPKs, pax. & employees, \*\* = April to May Predecessor Company, June Successor Company, \*\*\* = Net Result includes net reorganisation items of \$1,215m, \*\*\*\* = Unaudited results Successor Company. Net Result includes net reorganisation items of \$1,551m

# 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 2003/04	11,529	11,204	325	234	2.8%	2.0%	87,772	55,807	63.6%	44,800	28,870
	Year 2004/05	12,024	11,301	723	251	6.0%	2.1%	85,838	55,807	65.0%	48,860	29,098
	Year 2005/06	12,040	11,259	781	235	6.5%	2.0%	86,933	58,949	67.8%	49,920	30,322
	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	
Cathay Pacific YE 31/12	Year 2004	5,024	4,350	674	581	13.4%	11.6%	74,062	57,283	77.3%	13,664	15,054
	Jan-Jun 05	3,074	2,799	275	225	8.9%	7.3%	39,535	30,877	78.1%	7,333	15,400
	Year 2005	6,548	6,015	533	424	8.1%	6.5%	82,766	65,110	78.7%	15,440	15,447
	Jan-Jun 06	3,473	3,201	272	225	7.8%	6.5%	43,814	34,657	79.1%	8,144	
	Year 2006	7,824	7,274	550	526	7.0%	6.7%	89,117	71,171	79.9%	16,730	
	Jan-Jun 07	4,440	4,031	409	341	9.2%	7.7%	49,836	38,938	79.6%	8,474	19,207
	Year 2007	9,661	8,670	991	900	10.3%	9.3%	102,462	81,101	79.8%	23,250	19,840
JAL YE 31/03	Year 2003/04	18,398	19,042	-644	-844	-3.5%	-4.6%	145,900	93,847	64.3%	58,241	21,197
	Year 2004/05	19,905	19,381	524	281	2.6%	1.4%	151,902	102,354	67.4%	59,448	53,962
	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	
Korean Air YE 31/12	Year 2003	5,172	4,911	261	-202	5.0%	-3.9%	59,074	40,507	68.6%	21,811	15,352
	Year 2004	6,332	5,994	338	414	5.3%	6.5%	64,533	45,879	71.1%	21,280	14,994
	Year 2005	7,439	7,016	423	198	5.7%	2.7%	66,658	49,046	71.4%	21,710	17,573
	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	
Malaysian YE 31/03 Apr-Dec 05 YE 31/12 YE 31/12	Year 2003/04	3,061	3,012	49	86	1.6%	2.8%	55,692	37,659	67.6%		20,789
	Year 2004/05	3,141	3,555	-414	-421	-13.2%	-13.4%	64,115	44,226	69.0%		22,513
	2005	2,428	2,760	-332	-331	-13.7%	-13.6%	49,786	35,597	71.5%		22,835
	2006	3,696	3,751	-55	-37	-1.5%	-1.0%	58,924	41,129	69.8%	15,466	19,596
	2007	4,464	4,208	256	248	5.7%	5.6%	56,104	40,096	71.5%	13,962	
Qantas YE 30/06	Year 2003/04	7,838	7,079	759	448	9.7%	5.7%	104,200	81,276	78.0%	30,076	33,862
	Jul-Dec 04	5,017	4,493	524	358	10.4%	7.1%	57,402	43,907	76.5%	16,548	35,310
	Year 2004/05	9,524	8,679	845	575	8.9%	6.0%	114,003	86,986	76.3%	32,660	35,520
	Jul-Dec 05	4,999	4,626	373	258	7.5%	5.2%	59,074	45,794	77.5%	17,260	35,158
	Year 2005/06	10,186	8,711	1,475	542	14.5%	5.3%	118,070	90,899	77.0%	34,080	34,832
	Jul-Dec 06	6,099	5,588	511	283	8.4%	4.6%	61,272	49,160	80.2%	18,538	33,725
	Year 2006/07	11,975	11,106	869	568	7.3%	4.7%	112,119	97,622	80.0%	36,450	34,267
Jul-Dec 07	7,061	6,323	738	537	10.5%	7.6%	63,627	52,261	82.1%	19,783	33,342	
Singapore YE 31/03	Year 2003/04	5,732	5,332	400	525	7.0%	9.2%	88,253	64,685	73.3%	13,278	14,010
	Year 2004/05	7,276	6,455	821	841	11.3%	11.6%	104,662	77,594	74.1%	15,944	13,572
	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
Air China YE 31/12	Year 2004	4,050	3,508	542	288	13.4%	7.1%	64,894	46,644	71.9%	24,500	29,133
	Year 2005	4,681	4,232	449	294	9.6%	6.3%	70,670	52,453	74.2%	27,690	18,447
	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	
China Southern YE 31/12	Year 2004	2,897	2,787	110	19	3.8%	0.7%	53,769	37,196	69.2%	28,210	18,221
	Year 2005	4,682	4,842	-160	-226	-3.4%	-4.8%	88,361	61,923	70.1%	44,120	34,417
	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	
China Eastern YE 31/12	Year 2004	2,584	2,524	60	39	2.3%	1.5%	41,599	27,581	66.3%	17,710	20,817
	Year 2005	3,356	3,372	-16	-57	-0.5%	-1.7%	52,428	36,381	69.4%	24,290	29,746
	Year 2006	3,825	4,201	-376	-416	-9.8%	-10.9%	70,428	50,243	71.3%	35,020	35,000
	Year 2007	5,608	5,603	5	32	0.1%	0.6%	77,713	57,180	73.6%	39,160	
Air Asia YE 30/06	Year 2004/05	152	122	30	25	19.7%	16.4%	6,525	4,881	74.8%	4,410	2,016
	Year 2005/06	230	172	57	34	25.0%	14.8%	8,646	6,702	77.5%	5,720	2,224
	Year 2006/07	453	325	128	141	28.3%	31.1%	12,391	9,863	79.6%	8,738	2,924
	Jul-Sep 07	134	91	42	52	31.6%	39.0%	3,645	2,707	74.3%	2,440	
	Oct-Dec 07	189	122	67	73	35.4%	38.9%	4,274	3,223	75.4%	2,758	
	Jan-Mar 08	166	126	40	50	24.1%	30.1%	4,364	2,970	68.1%	2,612	

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 Int'l		
	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 %
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
Apr-08	30.6	20.6	67.4	20.3	16.0	78.6	15.4	12.5	81.1	51.6	40.9	79.0	78.8	59.6	75.6
Ann. change	5.5%	1.1%	-2.9	2.1%	-2.7%	-3.9	2.8%	2.3%	-0.4	4.0%	0.6%	-2.7	4.8%	1.2%	-2.7
Jan-Apr 08	113.8	73.2	64.3	73.7	56.4	76.5	62.5	50.6	80.9	203.4	160.5	78.9	334.3	245.7	73.5
Ann. change	4.7%	4.1%	-0.4	3.4%	1.2%	-1.6	2.9%	1.5%	-1.1	5.0%	2.4%	-2.0	5.2%	3.2%	-1.4

Source: AEA

### EIGHT LARGEST US PASSENGER AIRLINES' SCHEDULED TRAFFIC

	Domestic			Atlantic			Pacific			Latin America			Total Int'l		
	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 %
2005	225.1	172.2	77.8	41.9	33.2	82.1	27.4	22.3	82.7	24.2	17.2	72.7	93.5	72.7	79.8
2006 Q1	219.2	169.3	77.2	39.6	29.7	75.0	26.1	21.7	83.2	28.2	21.1	74.8	93.9	72.5	77.2
Q2	228.1	188.3	82.6	49.7	42.1	84.7	28.2	23.9	84.7	26.3	20.4	77.6	104.2	86.4	82.9
Q3	232.2	187.9	80.9	54.0	45.3	83.9	28.7	24.4	85.0	26.3	20.4	77.6	109.0	90.1	82.7
Q4	223.2	174.3	78.1	46.0	36.1	78.5	27.8	22.8	81.9	25.8	19.2	74.2	99.6	78.1	78.4
2006	902.7	719.7	79.7	189.2	153.2	81.0	110.8	92.8	83.7	106.6	81.1	75.7	406.7	327.1	80.4
2007 Q1	217.4	169.6	77.5	42.9	32.5	75.5	27.0	22.5	83.4	29.5	22.7	76.8	99.4	77.7	78.2
Q2	226.6	189.9	83.8	53.7	44.9	83.6	28.1	23.5	83.8	27.1	20.8	76.8	108.9	89.2	81.9
Q3	229.9	191.8	83.4	59.6	49.9	83.8	28.9	24.7	85.2	26.2	21.1	80.8	114.7	95.7	83.4
Q4	221.3	172.8	78.1	51.3	40.9	79.7	28.3	22.8	80.7	26.1	20.2	77.4	105.7	83.9	79.4
2007	896.9	724.2	80.7	207.6	168.2	81.0	112.3	93.5	83.3	109.0	84.9	77.9	428.7	346.5	80.8

Note: Legacy airlines plus Alaska and Southwest.

### JET ORDERS

	Date	Buyer	Order	Delivery	Other information/engines
Boeing	29 May	Blue Air	3 x 737-900ERs		
	6 May	Oman Air	6 x 737-800s		
Airbus	28 May	MTAD	14 x A330-200s		
	2 May	Air France	12 x A320s, 6 x A321s		
	2 May	Lufthansa	2 x A330-300s		

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

Source: Manufacturers

## Aviation Economics

The Principals and Associates of *Aviation Economics* 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
- Turnaround strategies
- State aid applications
- Antitrust investigations
- Merger/takeover proposals
- Competitor analyses
- Credit analysis
- Corporate strategy reviews
- Market forecasts
- Privatisation projects
- IPO prospectuses
- Cash flow forecasts
- Asset valuations
- E&M processes
- Distribution policy

For further information please contact:

**Tim Coombs or Keith McMullan**

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

e-mail:kgm@aviationeconomics.com

### SUBSCRIPTION FORM

Please enter my Aviation Strategy subscription for:

- 1 year (10 issues-Jan/Feb, Jul/Aug combined)  
@ £420 / €625 / US\$650,  
starting with the \_\_\_\_\_ issue

#### Delivery address

Name \_\_\_\_\_

Position \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Country \_\_\_\_\_ Postcode \_\_\_\_\_

Tel \_\_\_\_\_ Fax \_\_\_\_\_

e-mail \_\_\_\_\_

#### DATA PROTECTION ACT

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

I enclose a Sterling, Euro or US Dollar cheque, made payable to:  
**Aviation Economics**

Please invoice me

Please charge my AMEX/Mastercard/Visa credit card the sum of £420

Card number \_\_\_\_\_

Name on card \_\_\_\_\_ Expiry date \_\_\_\_\_

I am sending a direct bank transfer of £420 net of all charges to Aviation Economics' account: HSBC Bank  
Sort code: 40 04 37 Account no: 91256904

Invoice address (if different from delivery address)

Name \_\_\_\_\_

Position \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Country \_\_\_\_\_ Postcode \_\_\_\_\_

#### PLEASE RETURN THIS FORM TO:

Aviation Economics  
James House, 1st Floor  
22/24 Corsham Street  
London N1 6DR  
Fax: +44 (0)20 7490 5218