

## British Airways' zero-growth choice

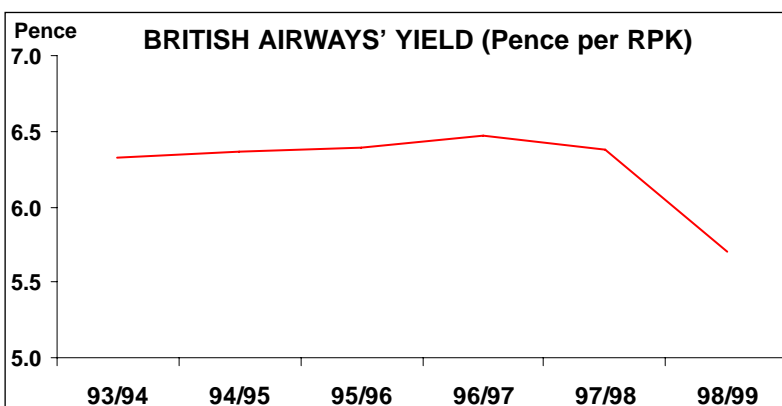
British Airways has accomplished the near-impossible. It announced a fall of 55% in net profits for financial year 1998/99 to £206m (\$330m) - the lowest for six years - yet it has not been castigated by stockmarket analysts. On the contrary, they and other commentators are either praising the originality of its new strategy, or at least are preoccupied with working out what it could mean.

There are two interrelated elements in British Airways' strategy - a potentially radical route rationalisation and a new concentration on yield enhancement to be achieved through non-growth.

The aim apparently is for British Airways to stop operating loss-making domestic services to London. The airline says that it is focusing on eliminating unprofitable market segments, mainly domestic to Europe passengers transferring at London Heathrow. Stage one of the airline's route-rationalisation process is to examine whether the present connecting services could be converted into direct services from UK regional points to the continent. If British Airways still cannot make the routes work they will either be closed or outsourced to a subsidiary or a franchisee.

Few details about the rationalisation have been provided, and indeed British Airways has refused to identify which routes are under threat. Perhaps the situation would be clearer if a distinction had been made between routes and flights - it may be that what British Airways is planning is the closing or conversion of certain flights within certain routes.

Assessing the impact of closing a route is not simple. Direct variable costs - fuel, en-route charges, landing fees, etc - will disappear upon closure - but flight crew costs and allocated overheads will not. Getting rid of the semi-variable and fixed costs, rather than re-distributing them to other routes, requires more general cost-cutting measures and redundancies, unless the whole airline is growing rapidly (which British Airways is not).  
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There is always an element of uncertainty about the repercussions of a route closure on the rest of the airline's network, although modern management information systems (MISs) usually give a pretty accurate picture of the connecting traffic and revenue that will be lost. However, what cannot be predicted is the effect of a new entrant filling the space vacated by the major airline.

### Impact on others

The mere fact that British Airways is developing this route rationalisation strategy poses a number of challenges for both the airline's competitors and its alliance partners.

While British Airways scarcely breaks even on its European and domestic network, its main European rivals fare even worse in their home markets. For example, Lufthansa loses unrevealed but substantial amounts maintaining its overwhelmingly dominant position in the German domestic market and fighting off competition from the likes of Deutsche BA.

If British Airways proves that it can squeeze out more profits by downsizing its short-haul services then Lufthansa and Air France will be forced to reconsider a basic tenet of their strategies and to focus on the costs of maintaining local short-haul dominance.

British Airways' moves to concentrate its efforts in the area where it is strongest - the intercontinental routes - also have important implications for its current and potential alliance partners within Europe.

For instance, should Iberia and Finnair now be looking at rationalising their unprofitable long-haul routes? This might involve converting some of the current direct flights into feeder flights to British Airways at London for North Atlantic services or even feeding the BA/Qantas hub at Bangkok for Southeast Asian services.

### Brilliance of the obvious

The other element of BA's strategy is a laser-like focus on business travellers in

order to push up yield, or in the immediate future to reverse the recent decline in yield. What British Airways is doing is startlingly original in the context of the European scheduled airline business - it is saying unashamedly that its strength lies in flying business travellers, that that's where it can make most money so that's where it is going to concentrate its resources.

Contrast British Airways' mission statement with a traditional airline's goal: for instance, Air France's strategy of growing at twice the market rate in order to regain market share (see *Aviation Strategy*, May 1999).

In order to achieve its yield targets British Airways is refitting its business class cabins with luxurious new sleeper-seats arranged in semi-circles rather than the traditional rows. British Airways is hoping to emulate the success of its Club brand when it was introduced to the market in the mid-1980s. Following that launch, British Airways' yield was reported to have leapt by as much as 20%. But competitive conditions in today's market are very different, with all the major European airlines having developed their own high-quality business classes and - probably even more importantly - having implemented alliance-wide FFPs.

### Waving goodbye to the backpackers?

As a corollary to boosting business class capacity and hopefully yields, BA has also stated that it wants to reduce the number of low yielding passengers it is carrying. Again BA's message is slightly confusing: the aim must be to get rid of empty seats first then the low yielding passengers (assuming that BA's yield management system is working effectively).

This aim seems eminently achievable as BA switches from 747s to 777s. Moreover, this fleet change is just part of a policy of simply not increasing supply. The 1998/99 preliminary financial report contains a stark statement that runs completely contrary to conventional airline thinking: "Overall mainline capacity will not grow over the next five years."

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### Asia: traffic much better, restructuring still imperative

Looking at the traffic graph below we see a familiar picture. Most of the Asian airlines have now resumed their traditional double-digit growth rates (the data refers to international RPKs in February this year). In reality, of course, this traffic rebound is only bringing passenger numbers back to 1998 levels.

Nevertheless, there are some encouraging signs. Much Asian capacity has been moved semi-permanently out of the market either through sales or parking. Consequently, load factors have been very strong - in February the average for AAPO airlines was 71.6%, 5.7 points up on a year ago.

However, these traffic volumes have been maintained at the expense of yield. Average yield for the AAPO airlines this year is expected to be 20% below that of the recent peak year 1996. According to an authoritative forecast from the Singapore office of Deutsche Bank, no increase in yield is expected up to 2002.

Consequently, the financial recovery in the region is muted. Following a net loss of US\$844m in 1998, the 19 AAPO airlines should produce a net profit of about \$300m in 1999, which Deutsche Bank estimates will gradually increase to \$1.2bn in 2002.

For Cathay Pacific and Singapore Airlines a BA-style yield enhancement strategy is just not feasible at the moment because so many Asian companies have made permanent decisions to reduce the amount of business travel and put their executives into economy class.

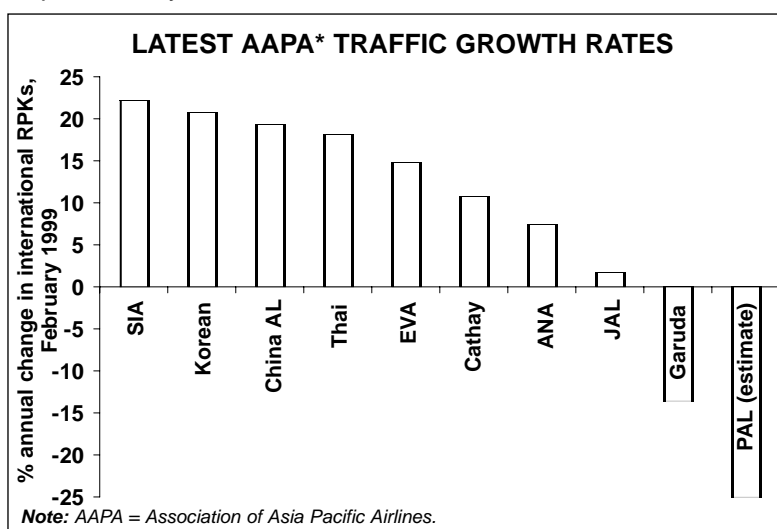
In fact SIA's strategy is now the opposite of BA's. It is relying on growth in order to return to its former level of profitability (its results for 1998/99, a net profit of US\$609m - albeit boosted by aircraft sales - were very respectable). It is explicitly planning to grow through acquisition and is looking for new investment targets beyond Ansett.

Cathay's situation is more problematic. Last year it made its first loss (US\$70m) since 1963 and now appears to be in a

strategic vacuum, in danger of becoming a junior oneworld member like Canadian. Its international advertising now concentrates on promoting its economy class, but it is not at all clear whether economy class yields can support Cathay's high operating costs.

Recovery would be faster if the region's two airline financial disasters were allowed to disappear and the Asian industry consolidated, but the future of Garuda and PAL is unlikely to be that simple. Garuda has now put together some form of turnaround plan in conjunction with Lufthansa Consulting. But the plan does not seem to have any element of downsizing; on the contrary the airline's CEO, Abdulgani, has stated categorically that he intends to keep the current route structure intact. So that plan looks doomed.

The PAL saga may be coming to a close. The Philippine Securities and Exchange Commission (SEC) and the airline's creditors have refused the chairman and majority owner, Lucio Tan, any further extensions to a June 4th deadline by which he has to raise some US\$200m in new equity. Unless new funds appear, as rumoured, from a mysterious Middle East consortium, the banks and credit agencies will finally call it a day. Expect a flurry of aircraft seizures.



## Antitrust convolutions between Dallas and Fort Worth

The US Department of Justice (DoJ) is questioning the legality of a standard strategy in the airline business by prosecuting American Airlines for monopolistic and predatory practices in competing with three new entrants at its main hub at Dallas Fort Worth (DFW). This raises two questions.

The obvious one: how will American defend itself against the accusation? And a more tangential question: how come the presence of Southwest, the world's most efficient low-cost carrier, also based at Dallas, doesn't preclude the entry of new airlines there in the first place?

The DoJ's case concerns WestPac, which went into bankruptcy; Sun Jet, which has gone through Chapter 11; and Vanguard, which teeters on the edge. The DOJ contends that American repeatedly sought to drive out the smaller operators by saturating their routes with additional flights and low fares, only to then reduce service and re-impose higher fares once the new airlines were gone. The DoJ has apparently studied the DFW situation in detail over two years before deciding to take American to court. So this action is being interpreted as an attempt to define what is fair competition and what is predatory practice in the US airline business.

From American's perspective, its reaction to the competitive threat posed by the newcomers was rational and normal business practice - it matched fares and increased capacity. Other US Majors - Northwest, United and Delta - are also under investigation by the DoJ and so have a particular interest in the outcome of this case,

### American's defence

American, as usual, is being robust in its defence and is refusing to reach a compromise agreement with the DoJ. It doesn't appear to be contesting the facts of the suit

but is arguing that the DoJ's interpretation of anti-competitive behaviour is simply wrong and that passengers will benefit from its rigorous defence of its hub.

Specifically, American responds to the accusation as follows:

- Is American trying to drive small carriers out of DFW? "It's not American's job to make life easy for the competition. It is a natural response by any airline to want to protect its significant investments at a hub. That being said, there is nothing American or any other airline can do to prevent another carrier from serving an airport - especially one like DFW - where there is no shortage of gates, terminal space and facilities."
- Didn't American succeed in driving out many low-cost competitors? "The failures of SunJet and WestPac were due to the inability of their management to control costs and implement a good business plan. They both left DFW only when they failed as companies."
- Is American pricing below its costs? "American always tries to recover its costs, and in every instance cited by the [DoJ], American's prices were above its variable costs, which means that its prices could not be predatory as a matter of law. As the name suggests, variable costs are those costs that vary with changes in a company's output."
- Why does American add flights when it lowers fares? "Frequency of flights and availability of seats are key components of the service American offers. American adds flights and seats in an effort to offer better service than its competitors ... As fares go down, demand goes up. In the instances cited by the [DoJ], American added flights because when it matched its competitors' fares, demand went up and people wanted to fly on American's planes. The government seems to think American should tell its passengers to fly on its competitors because it is out of seats."

Not startlingly original but nevertheless quite persuasive arguments, and forcibly put. But where American may be vulnerable is on the definition of costs. Its variable costs presumably only cover items like fuel, passenger and ground handling charges, commissions and landing fees, but antitrust investigators may propose a different definition: the opportunity costs of not employing capacity in American's most profitable alternative market. Then American and the other Majors would be in trouble.

### Wright and wrong

We found the answer to the second question about Southwest on a very useful internet site - Planebanter.com - and it proves that the US deregulated market can be every bit as convoluted as the liberalising European one.

Southwest is based at the older of the two Dallas airports - Love Field (DAL) - which was supposed to have been closed down to commercial traffic when DFW was built in the 1960s. But after Southwest was established in 1971 its management under Herb Kelleher fought a series of momentous battles to enable it to operate from DAL (and create a defensible niche for itself).

Then when the Airline Deregulation Act was passed in 1979 a Dallas congressman, Jim Wright, succeeded in appending an amendment that restricted flights from DAL to Texas and the contiguous five states (this was recently modified to include three more

states) in order to afford some protection to DFW.

What this means is that even today Southwest is legally prevented from offering service from its home base to points outside the Wright Amendment area, to Washington DC or to Los Angeles for example (although it does serve these cities from other points in its network).

American is then left as the dominant carrier on all long-haul, relatively high-yield routes out of Dallas - a dominance that has been challenged by the new entrants. They launched their new services only from cities outside the Wright Amendment region - from Colorado in WestPac's case, from Long Beach in Sun Jet's case and from Kansas City in Vanguard's case.

So instead of getting embroiled in a pre-dation suit, which the lawyers (and economists) will no doubt drag out for a very long time, why not simply repeal the Wright Amendment, exposing all markets out of Dallas to the influence of Southwest?

The answer, it would appear, lies in city politics, specifically rivalry between Fort Worth and Dallas, which has been exploited by American. Without the Wright Amendment, Fort Worth politicians argue that services, jobs, etc would drift from DFW in their constituency to DAL within Dallas City boundaries. Because of the difference in the size of the two airports (60.5m passengers at DFW, 6.7m at DAL) this development seems unlikely, but American does all it can to promote this view and so keep local competition from Southwest under control.

## Capacity up at Lufthansa - but yields suffer

The first quarter of 1999 saw what could be the start of a worrying trend at Lufthansa - capacity and traffic increases, but at the expense of yields.

ASKs rose 7.2% in 1Q99 compared with 1Q98 and RPKs increased by 10.5%, resulting in a 2.1 point increase in load factor to 70.5%. But the price for this was heavy -

yields fell 7% in deutschmark terms quarter-on-quarter.

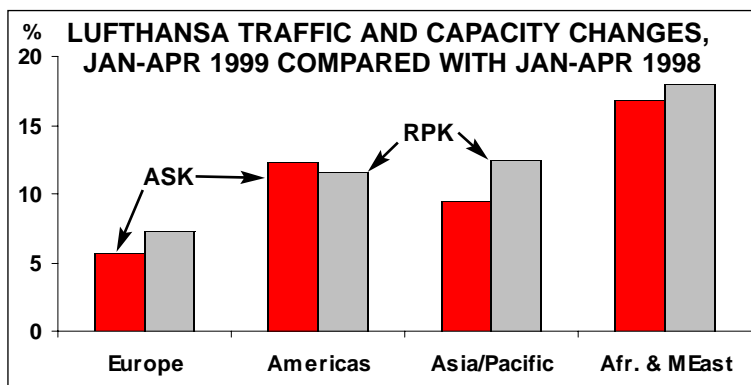
So although Lufthansa did manage to increase turnover by 5% in 1Q99 and posted an operating profit of \$91m, net profits in the first quarter of 1999 were just \$64m, compared with \$223m in January-March 1998.

LUFTHANSA'S 1Q99 FINANCIAL RESULTS		
\$m	1Q99	Change on 1Q98
<b>Operating revenues</b>		
Traffic	2,015	3.4%
Cargo	514	0.9%
Other	772	12.4%
<b>Total</b>	<b>3,301</b>	<b>5.0%</b>
<b>Operating costs</b>		
Staff	780	7.2%
Fuel	182	-19.1%
Fees & charges	535	6.6%
Depreciation	251	18.1%
Other	1,462	9.2%
<b>Total</b>	<b>3,210</b>	<b>6.8%</b>
<b>Operating profit</b>	<b>91</b>	<b>-34.3%</b>
Other income/interest	-55	-20.0%
Extraordinary result	98	-54.6%
<b>Pre-tax result</b>	<b>134</b>	<b>-15.2%</b>
Tax	-70	-42.8%
<b>Net result</b>	<b>64</b>	<b>-65.7%</b>
<b>ASKs (m)</b>	<b>25,445</b>	<b>7.2%</b>
<b>RPKs (m)</b>	<b>17,942</b>	<b>10.5%</b>
<b>Load factor</b>	<b>70.5%</b>	<b>+2.1pts</b>

### Playing the capacity game

Lufthansa's load factor rise and yield decline is a result of an ambitious capacity increase plan for 1999. As can be seen in the chart below, Lufthansa has been aggressive in launching extra capacity into its long-haul routes - in particular to Asia/Pacific and to the Americas.

Lufthansa's move is being mirrored to a greater or lesser extent by other European airlines on long-haul routes, and confirms a real danger of overcapacity in certain markets (see *Aviation Strategy*, April 1999 for a



full analysis of the overcapacity problem).

The problem is that each individual airline has its own "unique" case for increasing capacity - even though airlines know that as a whole industry capacity increases can be ruinous. In Lufthansa's case there is the stated goal of adding destinations and frequencies in 1999 after years of "only" growing at about half the rate of British Airways.

Yet Lufthansa is vocal in its calls for restraint from other airlines - CFO Karl-Ludwig Kley says that: "Competition has sharpened where some rival carriers - in crass contradiction to their solemn announcements - are obviously continuing their expansionist policy undiminished." This may seem like a case of double standards to many observers, but Lufthansa is determined to keep increasing capacity on long-haul in an effort to catch up with British Airways.

On Asian routes Lufthansa expects traffic to fully recover by the end of 1999, although here again yields will keep on falling.

### Prospects for the full year

If yields maintain their downward direction, then 1999 is unlikely to be a good year for the German airline. And given Lufthansa's stated expansion strategy, it will be difficult to maintain yields - particularly if the competitive reaction from other European airlines in terms of capacity continues to be upwards.

Lufthansa in recent years has gained a major strategic lead over British Airways through the advanced development of the Star alliance, which has enabled it to steal business traffic away from BA and its partners. Now British Airways is trying to change the rules of the game with its zero-growth yield enhancement strategy. Lufthansa definitely will not change its immediate plans, but it will probably be forced to put more emphasis on its cost-cutting programme and the outsourcing of domestic operations to CityLine.

The other element of Lufthansa's strategy is to diversify - again in contrast to BA, which is a core business focuser. This is like a real-life experiment in different business models.

### Stability ahead for manufacturers' market shares?

The US-based Teal Group has just released its latest forecast for the 100+ seat jet market (excluding the former Soviet jetliners, which are the only jet competitors to Airbus and Boeing but which hold less than 1% of the market). Despite the ongoing battle between Airbus and Boeing (see pages 14-17 this issue and *Aviation Strategy*, May 1999), Teal believes that their respective market shares will remain stable in the medium-term.

Teal's forecast to the year 2008 (see tables, below and right) can be summarised as follows:

- It forecasts production of 5,859 jet aircraft worth \$398bn over the next 10 years. This total includes 3,843 narrowbodies worth \$153bn and 2,016 widebodies worth \$245bn. (All figures used by Teal are in 1999 dollars.)
- The market's inherent cyclical nature has been exacerbated by a vicious market share war between Boeing and Airbus. This will lead to a massive drop in narrowbody deliveries. Meanwhile, the Asia crisis will hurt widebody demand. Total deliveries will decline

sharply, from 873 aircraft worth \$53.3bn in 1999 to a forecast 388 aircraft worth \$28bn in 2002.

- This market share war is slashing profitability at Airbus and Boeing. It has been particularly traumatic to Boeing, which has been hemorrhaging cash through the present "up" cycle. The battle could also force fundamental changes at Airbus.

- Despite these traumas, remarkably little will change in terms of respective market share. Airbus's share will advance only slightly, averaging 36.7% through the forecast period.

- Still, this is an impressive achievement for the Airbus consortium, which held less than one-fifth of the market before 1993. Airbus seems to be winning the battle for McDonnell Douglas's market share.

- There will be no all-new jet programmes introduced in the next ten years. Boeing is likely to cancel the 717, and the A3XX will not arrive during Teal's forecast period. The A318 and A340-500 and -600 variants, however, will prove reasonably successful.

#### TEAL GROUP JET AIRCRAFT DELIVERY FORECAST

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Airbus A300	5	7	8	8	8	6	6	6	4	4	62
Airbus A310	1	1	1	-	-	-	-	-	-	-	3
Airbus A319/320/321	235	228	184	104	87	105	198	209	190	165	1,705
Airbus A330	44	36	26	22	22	29	36	37	26	24	302
Airbus A340	23	25	16	12	14	16	16	16	12	12	162
Airbus A340-500/600	-	1	3	18	22	23	28	30	25	26	176
<b>Total Airbus</b>	<b>308</b>	<b>298</b>	<b>238</b>	<b>164</b>	<b>153</b>	<b>179</b>	<b>284</b>	<b>298</b>	<b>257</b>	<b>231</b>	<b>2,410</b>
Boeing 717	6	-	-	-	-	-	-	-	-	-	6
Boeing 737-300/400/500	44	2	-	-	-	-	-	-	-	-	46
Boeing 737-600/700/800/900	260	206	148	96	85	101	179	202	180	144	1,601
Boeing 747-400	45	22	20	22	24	19	8	-	-	-	160
Boeing 747-400X	-	-	-	-	1	2	24	48	42	40	157
Boeing 757	55	39	30	30	31	43	54	60	56	48	446
Boeing 767	34	44	36	32	35	41	44	42	46	38	392
Boeing 777	77	63	44	44	48	60	68	70	64	50	588
Boeing MD-11	8	6	-	-	-	-	-	-	-	-	14
Boeing MD-80	18	3	-	-	-	-	-	-	-	-	21
Boeing MD-90	18	-	-	-	-	-	-	-	-	-	18
<b>Total Boeing</b>	<b>565</b>	<b>385</b>	<b>278</b>	<b>224</b>	<b>224</b>	<b>266</b>	<b>377</b>	<b>422</b>	<b>388</b>	<b>320</b>	<b>3,449</b>
<b>TOTAL UNITS</b>	<b>873</b>	<b>683</b>	<b>516</b>	<b>388</b>	<b>377</b>	<b>445</b>	<b>661</b>	<b>720</b>	<b>645</b>	<b>551</b>	<b>5,859</b>

### TEAL GROUP JET AIRCRAFT DELIVERY VALUE FORECAST (1999 \$bn)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Airbus A300	0.39	0.54	0.62	0.62	0.62	0.46	0.46	0.46	0.31	0.31	4.77
Airbus A310	0.07	0.07	0.07	-	-	-	-	-	-	-	0.21
Airbus A319/320/321	9.17	8.89	7.18	4.06	3.39	4.10	7.72	8.15	7.41	6.44	66.50
Airbus A330	4.71	3.85	2.78	2.35	2.35	3.10	3.85	3.96	2.78	2.57	32.31
Airbus A340	2.62	2.85	1.82	1.37	1.60	1.82	1.82	1.82	1.37	1.37	18.47
Airbus A340-500/600	-	0.14	0.41	2.47	3.01	3.15	3.84	4.11	3.43	3.56	24.11
<b>Total Airbus</b>	<b>16.95</b>	<b>16.34</b>	<b>12.88</b>	<b>10.86</b>	<b>10.97</b>	<b>12.64</b>	<b>17.70</b>	<b>18.51</b>	<b>15.29</b>	<b>14.24</b>	<b>146.37</b>
Boeing 717	0.15	-	-	-	-	-	-	-	-	-	0.15
Boeing 737-300/400/500	1.36	0.06	-	-	-	-	-	-	-	-	1.43
Boeing 737-600/700/800/900	9.88	7.83	5.62	3.65	3.23	3.84	6.80	7.68	6.84	5.47	60.84
Boeing 747-400	6.98	3.41	3.10	3.41	3.72	2.95	1.24	-	-	-	24.80
Boeing 747-400X	-	-	-	-	0.18	0.36	4.30	8.59	7.52	7.16	28.10
Boeing 757	2.92	2.07	1.59	1.59	1.64	2.28	2.86	3.18	2.97	2.54	23.64
Boeing 767	2.79	3.61	2.95	2.62	2.87	3.36	3.61	3.44	3.77	3.12	32.14
Boeing 777	10.24	8.38	5.85	5.85	6.38	7.98	9.04	9.31	8.51	6.65	78.20
Boeing MD-11	0.79	0.59	-	-	-	-	-	-	-	-	1.39
Boeing MD-80	0.56	0.09	-	-	-	-	-	-	-	-	0.65
Boeing MD-90	0.65	-	-	-	-	-	-	-	-	-	0.65
<b>Total Boeing</b>	<b>36.31</b>	<b>26.04</b>	<b>19.12</b>	<b>17.12</b>	<b>18.03</b>	<b>20.76</b>	<b>27.85</b>	<b>32.20</b>	<b>29.61</b>	<b>24.94</b>	<b>251.99</b>
<b>TOTAL UNITS</b>	<b>53.26</b>	<b>42.38</b>	<b>32.00</b>	<b>27.98</b>	<b>29.00</b>	<b>33.40</b>	<b>45.55</b>	<b>50.71</b>	<b>44.90</b>	<b>39.18</b>	<b>398.36</b>

### Prospects for the really large aircraft

Teal also considers the large aircraft market, and believes it is just a matter of time before the 747-X/Y concept is revived. The forecast calls for some kind of low-cost update to arrive around 2005. All-new aircraft are too expensive, and the 747 needs to grow.

Concerning the A3XX, Teal believes that finding the \$10-15bn necessary to develop an all-new aircraft is highly problematic,

especially since Airbus has no history of generating money for new aircraft via cash flow. Teal believes that as Aérospatiale follows Daimler Benz Aerospace/DASA and British Aerospace, becoming privatised and responsive to equities markets, Airbus will find it increasingly difficult to convince its member companies to deprive their shareholders of dividends by spending heavily on independent R&D. Teal's view is in marked contrast to Airbus's stated strategy (see pages 14-17).

### TEAL GROUP JET AIRCRAFT DELIVERY VALUE SHARE FORECAST

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Airbus A300	0.7%	1.3%	1.9%	2.2%	2.1%	1.4%	1.0%	0.9%	0.7%	0.8%	1.2%
Airbus A310	0.1%	0.2%	0.2%	-	-	-	-	-	-	-	0.1%
Airbus A319/320/321	17.2%	21.0%	22.4%	14.5%	11.7%	12.3%	17.0%	16.1%	16.5%	16.4%	16.7%
Airbus A330	8.8%	9.1%	8.7%	8.4%	8.1%	9.3%	8.5%	7.8%	6.2%	6.6%	8.1%
Airbus A340	4.9%	6.7%	5.7%	4.9%	5.5%	5.5%	4.0%	3.6%	3.1%	3.5%	4.6%
Airbus A340-500/600	-	0.3%	1.3%	8.8%	10.4%	9.4%	8.4%	8.1%	7.6%	9.1%	6.1%
<b>Total Airbus</b>	<b>31.8%</b>	<b>38.5%</b>	<b>40.3%</b>	<b>38.8%</b>	<b>37.8%</b>	<b>37.8%</b>	<b>38.9%</b>	<b>36.5%</b>	<b>34.1%</b>	<b>36.3%</b>	<b>36.7%</b>
Boeing 717	0.3%	-	-	-	-	-	-	-	-	-	0.0%
Boeing 737-300/400/500	2.6%	0.2%	-	-	-	-	-	-	-	-	0.4%
Boeing 737-600/700/800/900	18.6%	18.5%	17.6%	13.0%	11.1%	11.5%	14.9%	15.1%	15.2%	14.0%	15.3%
Boeing 747-400	13.1%	8.1%	9.7%	12.2%	12.8%	8.8%	2.7%	-	-	-	6.2%
Boeing 747-400X	-	-	-	-	0.6%	1.1%	9.4%	16.9%	16.7%	18.3%	7.1%
Boeing 757	5.5%	4.9%	5.0%	5.7%	5.7%	6.8%	6.3%	6.3%	6.6%	6.5%	5.9%
Boeing 767	5.2%	8.5%	9.2%	9.4%	9.9%	10.1%	7.9%	6.8%	8.4%	8.0%	8.1%
Boeing 777	19.2%	19.8%	18.3%	20.9%	22.0%	23.9%	19.9%	18.4%	19.0%	17.0%	19.6%
Boeing MD-11	1.5%	1.4%	-	-	-	-	-	-	-	-	0.4%
Boeing MD-80	1.1%	0.2%	-	-	-	-	-	-	-	-	0.2%
Boeing MD-90	1.2%	-	-	-	-	-	-	-	-	-	0.2%
<b>Total Boeing</b>	<b>68.2%</b>	<b>61.5%</b>	<b>59.8%</b>	<b>61.2%</b>	<b>62.2%</b>	<b>62.2%</b>	<b>61.2%</b>	<b>63.5%</b>	<b>65.9%</b>	<b>63.7%</b>	<b>63.3%</b>
<b>TOTAL UNITS</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



## Latin American alliances: sleeping with the enemy

The past couple of years have seen Latin American airlines scramble to forge alliances with the major US carriers, and the economic problems spreading from Brazil have only accelerated the process. But is "sleeping with the enemy" a wiser strategy than getting together with your regional counterparts? Will Latin America retain a multitude of small operators but be wholly-owned by the US Majors? Or will intra-regional consolidation lead to a market of fewer but stronger independent airlines?

This subject was debated by a panel of eight Central and South American airline CEOs at *Aviation Latin America & Caribbean* magazine's annual conference, held in Miami in early May. At this remarkable gathering, the airline bosses explained what they wanted from alliances and spoke of their visions for the future.

In the early 1990s Latin America saw much intra-regional consolidation in response to American's aggressive expansion. This included the formation of the Taca, Vasp and CINTRA consortiums and some acquisitions by LanChile and others. But in recent years virtually all of the commercial and equity alliances have been with the four major US carriers - American, United, Continental and Delta.

This sudden change in emphasis and the pace and scale of the process have created a rather confusing overall picture of the Latin American alliance scene. However, the north-south deals can be broadly categorised depending on whether the Latin partner is strong and successful or whether it is weak and in need of cash and other types of assistance (most, of course, fall somewhere between those two extremes).

### Alliances between equals

The best-positioned alliance partners include Varig, LanChile and Taca - all well-

established companies with dominant local market positions and good international reputations. Although all are currently performing rather poorly financially (Varig is in the middle of yet another painful cost-cutting programme), they have been able to team up with the US carriers more or less as equals.

Varig and LanChile have also been judged to be good enough to be accepted into their US partners' global alliances. Varig, the region's largest carrier with a strong international presence and a high service quality, joined Star immediately after defecting to United from Delta in October 1997.

LanChile, which is financially successful, has an exceptionally strong local and regional market position and is the first and so far the only South American carrier to be listed on the New York Stock Exchange, will become the eighth member of oneworld next year. This was announced in mid-May after the US DoT tentatively granted

#### EXTRA-REGIONAL ALLIANCES

Major US partner American	Latin American partners
Continental	Grupo TACA
	AVIANCA (subject to approval)
	LanChile (provisionally approved April 99)
	TAM Group
	Aerocalifornia
	Aerolineas Argentinas (10% equity)
	Aeropostal Alas de Venezuela
	COPA (49% equity)
	ACES
	Aserca
Delta	Air Aruba
	Air ALM
	BWIA
	Vasp Group (LAB, Ecuatoriana, TAN)
	Aeropostal Alas de Venezuela
	Aeromexico
	Transbrasil
	Air Jamaica
	LAPA (Letter of Intent - pending government approval)
	AeroPeru (35% equity)
United	Varig (member of the Star alliance)
	Mexicana
Martinair	TAMPA (49% equity stake)

Source: CEO Panel Position Paper.

antitrust immunity for the LanChile/American alliance (with standard conditions like excluding the Miami-Santiago route and eliminating the exclusivity clause). The decision came after an 18-month wait and will pave the way for the signing of a US-Chile open skies ASA.

Grupo Taca, which includes El Salvador's Taca and its large minority stakes in Guatemala's Aviateca, Honduras's SAHSA, Nicaragua's Nica and Costa Rica's Lacs, has been developing its codeshare alliance with American since securing DoT approval for the deal about a year ago after a two-year wait. The consortium's success and important position in Central America gave it clout in negotiations with the US carrier.

These alliances do not involve equity stakes; rather, they are operational and marketing relationships governed by long-term contracts. However, CEOs like Taca's Federico Bloch do not discount the possi-

bility of making equity stakes available to US carriers and others in the future, in order to meet investment needs if finance will not be readily available in international debt markets.

In addition, there are a host of looser but potentially promising north-south marketing and codeshare relationships, which include particularly the Mexican and Brazilian carriers: Aeromexico's and Transbrasil's code-shares with Delta, Mexicana's with United and Vasp's with Continental.

### Rescue deals involving equity

The alliances that fall into the less desirable second category typically involve equity purchases by the US Majors. The main ones have been Delta's 35% purchase into AeroPeru, American's 10% investment in Aerolineas Argentinas and Continental's 49% acquisition of Panama's Copa. Those smaller airlines offered desirable local or regional route networks but many were in dire need of capital or management assistance. With the equity purchases, the Majors obtained a say in the day-to-day running of the companies and added security through board seats and voting or veto rights.

However, there have been some mistakes. Delta's early 1998 investment in AeroPeru was one: the Peruvian carrier was not able to recover from various wounds inflicted by its own government. These included a botched privatisation, an open skies ASA with the US, domestic deregulation, granting cabotage rights to foreign carriers and horrendous fuel taxes. In January 1999 Delta and its investment partner CINTRA decided not to inject more funds and put their stakes up for sale, as a result of which the debt-ridden and cash-starved carrier was forced to cease operations. Although AeroPeru's debt has been successfully reduced, it faces liquidation if strategic partners cannot be found in the near future.

American's acquisition of a 10% stake in Interinvest - a holding company that owns 85% of Aerolineas and 90% of Austral - late last year holds much more promise for both parties. The anticipated benefits to the

#### INTRA-REGIONAL ALLIANCES

Latin American airline	Latin American partners
<b>Aerolineas Argentinas</b>	AUSTRAL (100% equity stake) Southern Winds AeroVIP/Aerolineas Argentinas Express TAM Group
<b>ASERCA</b>	Air Aruba (70% equity) Air ALM
<b>Aerospotal Alas de Venezuela</b>	Santa Barbara Airlines (undisclosed equity stake)
<b>Air Jamaica</b>	Trans Jamaican (100% equity stake)
<b>AVIANCA</b>	SAM, Columbia (100% equity stake)
<b>BWIA</b>	LIAT (29% equity stake)
<b>CINTRA</b>	Aeromexico (majority equity stake) Mexicana (majority equity stake) AeroPeru (35% equity stake) Aerolitoral & other domestic airlines
<b>Grupo Taca</b>	Aviateca (49% equity stake) NICA (49% equity stake) LACSA (10% equity stake) TACA de Honduras (100% equity stake) Costena (50% equity stake) Trans America Peru (minority equity stake)
<b>TAM Group</b>	TAM Mercosur (51% equity stake) TAM Regionais (100% equity stake)
<b>LanChile</b>	LADECO (100% equity stake) Fast Air Cargo (100% equity stake) LAN Peru (49% equity stake)
<b>Vasp Group</b>	ABSA, Brazil (undisclosed equity stake) Florida West International (24.9% equity stake) Lloyd Aero Boliviano (49% equity stake) Ecuatoriana de Aviacion (49% equity stake) Transportes Aereos Neuquen (49% equity stake)
<b>Varig</b>	RioSul (100% equity stake) PLUNA (51% equity stake)

Source: CEO Panel Position Paper.

Argentine carrier include help with fleet renewal, unit cost reduction, upgrading systems, improving service quality and better access to the US market. The carrier's new management, headed by former American executive David Cush, has already sorted out the business plan, recapitalised the company, placed a \$1.3bn order for 12 A340s and outsourced all information technology to Sabre - and the focus has now shifted to service quality.

ACES' earlier plans to sell a 19% equity stake to Continental fell through mainly because of a collapse in the Bogota stock-market. However, the ambitious Colombian carrier does have a codeshare with Continental and is continuing to seek a US industry investor. Meanwhile Panama's Copa has almost completed the sale of a 49% stake to Continental. Copa actually left its marketing partnership with Grupo Taca in favour of an equity alliance with the US Major.

Copa's CEO Pedro Heilbron says that the carrier wanted access to the US market, cost synergies, attractive world class systems and technical and human resources, that Continental shared a vision of Copa's growth and future potential and that there were no conflicts of interest. Its ability to offer a successful, strategically important hub through which Continental could channel traffic to Central and South America no doubt gave it a fairly strong negotiating position.

The codeshare alliance was formally launched in late May when Copa took delivery of the first of 12 new 737-700s that will replace its fleet over the next few years. The Panamanian carrier also unveiled a new corporate image and a new business class and announced full participation in the OnePass FFP. Codesharing will begin on June 10, initially on 35 Continental flights to 22 US cities and on Copa's services to Miami, Lima and other Latin American destinations.

### Why link up with the US Majors?

The Asian flu, the Russian banking crisis and Brazil's currency and economic prob-

lems have drastically reduced the availability of foreign capital for companies in emerging market economies, while local debt and equity markets are still very poorly developed in Latin America. Only the strongest airlines there have any realistic hope of raising commercial debt capital.

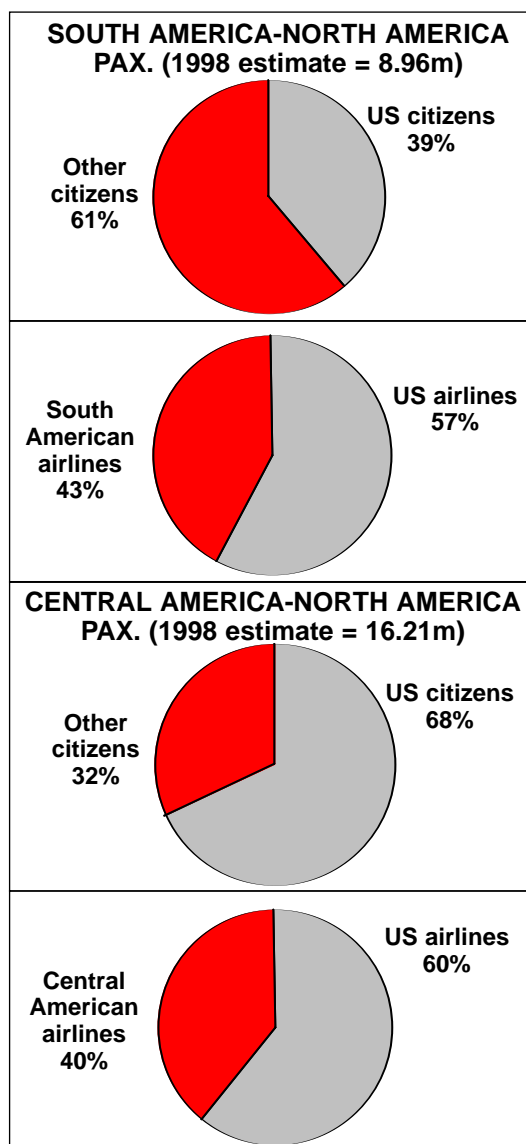
At the same time, several years of record profits have enabled the US Majors to build up healthy cash reserves. They find Latin America extremely desirable as it is currently the fastest-growing airline market in the world. Last year they were able to boost their capacity to the region by 28%, when Europe saw only 9% growth and Asia needed a 5% reduction. Consequently, the US Majors are an obvious source of capital for the weakest Latin American operators.

The added advantage for Latin carriers, of course, is gaining improved access to the US domestic market. For example, Aerolineas is neck-and-neck with United and American in market share on its routes to Miami and New York, but its traffic share beyond those gateways is a pitiful 8%. The airline hopes that the alliance with American will help solve that problem.

In fact, many of the Latin carriers feel that the potential benefits from co-operation are far more important to them than the actual investment. Copa's CEO Pedro Heilbron says that his company spent a lot more time negotiating the alliance agreement with Continental than the financial aspects of the deal.

Like many airline alliances elsewhere, the US-Latin America deals are designed to offer mainly revenue benefits. This is a pity because the Latin carriers could really benefit from cost savings. But the US Majors do not have to worry about economies of scale, and the Latin carriers do not bring enough to the negotiating table to be able to press the issue.

An exception here are the global alliances like Star, which should be able to offer members like Varig cost savings from the sharing of terminal facilities, joint reservations, joint purchasing, cargo co-operation, wet leasing of idle aircraft and such-like.



Merrill Lynch analyst Candace Browning suggests that the US-Latin America alliances could help solve the excess capacity problem in those markets in much the same way as the British Airways-Qantas union eliminated excess capacity on UK-Australia routes.

Many Latin American airline executives feel that their carrier cannot afford not to belong to one of the global alliances. They need world class standards in service quality and safety, as well as systems and procedures. Even companies like LanChile believe that they could not survive an open skies regime with the US without a US partner.

### How to survive an alliance with a US Major

But there are also dangers in sleeping with the enemy (also see pages 18-19). In other parts of the world, US carriers usually forge alliances when they are unable to introduce own-account service due to bilateral or other restrictions. Not so in Latin America, where liberal or open skies ASAs give them plenty of access, including fifth and sixth freedom rights. What if the US carriers diminish the international roles of the Latin American carriers as, despite the alliances, they continue their own rapid expansion into the region? And given the precarious financial state of many Latin carriers, could the US Majors even tap into the local markets and reap all the benefits themselves?

Merrill's Browning recommends three strategies for the Latin carriers to follow. First, they should tread very carefully when choosing an alliance partner and deciding which corporate governance concessions to accept. While some concessions could actually prove beneficial, inserting new controls and fresh ideas, others may just aid a stronger competitor and hamstring future growth.

Most importantly, the partner should accept that your local market is yours, and that it is in the alliance's best interest to promote your growth in the area. The Latin airline CEOs also stressed this point. "I don't think an alliance will work if participants fall short in their own country", suggested a senior Varig executive.

Second, now is the time for Latin carriers to do something about overcapacity. Browning suggested that the best way to deal with that problem and achieve a more competitive position generally might be for two local carriers to merge and rationalise their fleets.

Third, Latin carriers should profitably dominate their local markets. "The more your market becomes identified as yours, the less tempted European and US carriers will be to poach in your backyard."

Browning cited the textbook example of LanChile, which has achieved a 75% market

share in Chile and a unique position in the region's booming cargo market through acquisitions and smart management strategies. "That set of strengths allowed LanChile to maximise its influence in negotiating an advantageous alliance structure with American, avoiding selling an equity stake and suffering any sort of American colonisation."

Taca's CEO Federico Bloch also stressed the importance of market dominance: "One brings two things to the party: money or market dominance. I think few airlines in Latin America bring money to the table."

### Regional consolidation?

Airline CEOs like ACES' Juan Emilio Posada say that they are at present totally focused on developing alliances with the US carriers and do not envisage regional consolidation until the north-south process has been completed. The reasons cited include the need for capital, the strategic benefits of linking up with the US Majors, underdeveloped capital markets and competition and antitrust authorities in many Latin American countries.

However, most in the industry accept that the emphasis will shift to intra-regional consolidation sooner rather than later. And executives like Taca's Bloch believe that the process will be extensive for three reasons. First, Latin America has high growth potential in virtually every sector of the market. Second, rapid liberalisation will increase competition, forcing the industry to consolidate. Third, Latin carriers are grossly undercapitalised and will have to consolidate in order to capture the funds needed for growth.

Bloch also regards future equity links as the key to helping existing alliances achieve their objectives. The current alliances are essentially based on increasing revenue on existing networks, but managing growth will be much more difficult due to conflicts of interest. As the partners start looking for ways to align economic interests completely, equity links come into play.

Bloch predicts a two-phase consolidation process. First, there will be only minority equity positions because of bilateral, labour

and foreign ownership rule constraints. Depending on how fast those obstacles can be abolished, in 5-10 years there could be extensive mergers within the region, to probably just a handful of airlines or airline groups.

As an alternative to mergers, Bloch envisages new types of structures like large holding companies, which will get around some of the labour and other obstacles but will be a handicap in obtaining all the economic benefits. The holding company idea was first proposed by Avman's Bob Booth, a prominent Latin American airline industry expert. In essence, executives like Bloch are talking about eventually becoming public companies.

In the shorter term, there will probably be more co-operative ventures within the region. However, as yet there is no sign of anything along the lines of the remarkable \$2bn joint A319/320 order placed by Taca, LanChile and TAM in early 1998.

LatinPass, the frequent-flyer programme owned by 10 Latin carriers, has survived because it has been able to adapt to the times. The programme now allows its members to have relationships with the four US Majors and has just opened membership to non-owners, including all airlines in Latin America and the Caribbean.

While carriers like Taca may well lead the process of further airline consolidation with mergers with South American operators in the future (at present it is focusing on building feeder links), Mexico may see the merging of Aeromexico and Mexicana. The domestic Mexican market is not big enough for two major carriers, while the country needs a strong representative in global alliances. The planned sale of the government's and banks' equity in CINTRA was again postponed late last year, with no firm dates set.

The combination of economic problems and the need to consolidate will undoubtedly mean many Latin American airline failures. Merrill's Browning suggested that the Latin American market right now is similar to what the US market was like 15 years ago - in transition to an industry structure of fewer but stronger airlines.

By Heini Nuutinen

### Airbus: a protected past, but a commercial future

At the Paris Air show in June Airbus will be celebrating the 30th anniversary of the launch of the first A300, the original widebodied twin-engine aircraft. This was the start of the family that would supplant the three-engined widebodies of Lockheed and McDonnell Douglas and move up to rival Boeing. These days the Toulouse-based consortium and Boeing are neck-and-neck for orders (see *Aviation Strategy*, May 1999), even if Boeing is still producing twice as many aircraft. If only Airbus could reorganise as quickly as it is catching Boeing, its outlook would be brighter.

In the first four months of 1999, Airbus claimed 152 firm orders (plus 109 commitments for its new small model, the A318), compared with only 41 sales made by Boeing. Last year's orders for 556 aircraft, worth \$39bn, represented a 30% rise in value terms and about 20% in volume. Boeing's orders in 1998 totalled 656 units, and were worth \$42bn. Yet only a few years ago Boeing had two-thirds of the market while Airbus trailed with one-third. So Airbus's growing share of the order intake is a leading indicator of where it might be in relation to its Seattle rival in a few years' time.

Even so, an order lead over Boeing even for a year can be meaningless. Over time the only measure that directly correlates to profits in commercial aircraft is aircraft deliv-

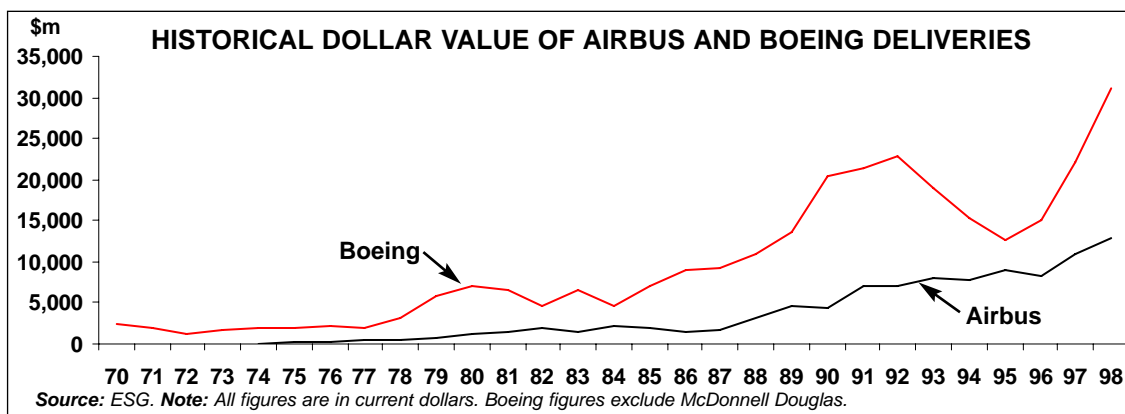
eries: after all, most of the money is paid only when the delivery is made. And this year Boeing will deliver 620 aircraft, against Airbus's 295. The current reality is that last year Boeing delivered 559 civil aircraft worth \$36bn, while Airbus delivered 229 aircraft worth only \$13.5bn.

Comparing profits is an impossible task because of the fundamentally different methods of accounting and Airbus's continuing opaqueness when it comes to financial reporting. Nevertheless, Boeing reported an operating profit on commercial sales of just \$63m last year. Airbus's loss on its own manufacturing was put at \$204m in 1998 (after write-offs) but "system" profit (the consortium plus the four partners' sub-contracting work) was claimed to be around \$650m.

While Boeing is signalling a downturn in sales caused largely by the Asian crisis, Airbus sees little sign of decline. It monitors its 1,300 order backlog to see if any of its customers appear to be heading into problems that could lead to cancellations. Airbus also keeps close to the leasing companies, which often want production slots at short notice.

#### Streamlining production processes

Airbus has also made significant progress in streamlining its production



processes in order to shorten delivery cycles and respond to market fluctuations. The A320 family can now be made in nine months, down from over 15 months; the A330/A340s is down to 12 months from nearly 18.

But Airbus still suffers from very slow stock-turns because of its consortium structure. This means that work is not always done in the optimal sequence, because a partner frequently has to hand over its completed part of the aircraft with all sorts of fancy bits and pieces on it that would normally be added only at the last minute. Airbus's stock-turn has improved from 1.7 (ratio of the value of turnover to stocks) in 1994 to 2.9 last year, but the aim is to push it up to at least 4, which would free up about \$1bn of cash.

Speeding the stock-turn further would require the unified command structure of a single corporate entity (SCE). Such issues become more important as Airbus grows - this year's 295 deliveries will be more than double its output in 1996, and it foresees production rising to about 350 aircraft a year. To its credit, however, Airbus has managed to ramp up production smoothly, even if it is not as efficient as it could be. Broadly, the consortium is within reach of its target of half the market in 2000.

### SCE accounting

Noel Forgeard, the Airbus CEO, has other preoccupations. The vicious price war between Airbus and Boeing has brought profitless prosperity to both manufacturers last year. As mentioned above, Airbus as a *groupement d'interet economique* made a loss of \$204m last year, although the system as a whole, made a profit. This figure includes \$326m that Forgeard insisted was written off to take into account aircraft sold at a loss in the price war with Boeing. He will ensure that the same amount is written off this year and maintains that the consortium no longer sells any aircraft at a loss.

The reason he is so keen to clean up the accounts is that he wants the process of conversion into an SCE to go smoothly when work on it re-starts (see *Aviation*

*Strategy*, December 1998). This long-delayed project ground to a complete halt last autumn when the French partner, Aerospatiale, grew alarmed at the mooted merger of British Aerospace and Dasa, part of DaimlerChrysler. This would have given the Anglo-German pair a combined share of 57.9% of Airbus. The French insisted on parity, which would have implied an artificial inflation of Aerospatiale's 37.9% share.

Forgeard's best hope now is that the partial flotation of Aerospatiale, which is merging with part of the Lagardere group on June 4th, will open the door to a more commercial approach. Although the French government will continue to hold 48% of Aerospatiale, the decree which pronounced the privatisation specifically cites the SCE conversion as one of the aims. Even so, Forgeard admits that even if there is a resumption of discussions after the Aerospatiale Matra flotation in June, it could take until the autumn before the partners exchange valuations and a further year before the conversion could be made.

### Betting on the A3XX

All this is very awkward, because Airbus is still going through this painful process at a time when it is about to bet its future on the A3XX. Forgeard is convinced that the consortium needs to launch a jumbo of its own, breaking the lucrative monopoly Boeing enjoys at the top end of the range - over 400 seats. It is now touting the latest version of this aircraft around a couple of dozen airlines, with the most likely candidates being British Airways and Singapore Airlines.

The basic 550-seater version will cost \$10bn in non-recurring costs, according to Forgeard. There are two other versions - a A3XX-100R extended range model and a A3XX-200 higher capacity model with 650 seats in a tri-class format. He says that the partners have stepped up by 50% the work they are doing on the aircraft; there are now 1,000 people working on detailed proposals to start putting to airlines around the end of this year, with a view to landing

launch orders in 2000. Even in the best case, the first aircraft would not fly until 2005. However, Forgeard is always careful to insert the caveat that this scenario is subject to the market condition being favourable.

While Boeing has always insisted the market for a super-jumbo is around 400, Airbus sees a market for 1,400, some 10% of the total number of aircraft it forecasts will be ordered over the next 20 years. By value, Airbus reckons the super-jumbos would be worth \$300bn, 25% of the overall market.

Although half the potential customers are Asian airlines, suffering to some degree from the fall-out of the 1997 crisis, Forgeard maintains that global traffic growth of 5% a year is enough to ensure demand for the aircraft. The key pipeline routes between major hubs will need big double-decker aircraft, if only because of the limited room to expand capacity at these airports. So, while it also develops bigger and longer-range versions of its A340 for the point-to-point traffic in aircraft under 400 seats, it foresees a lucrative market over 400 seats, even if it has to share it 50-50 with Boeing.

Boeing itself appears to blow hot and cold on super-jumbos, but there is no doubt that it now has a twin-track approach. One is to quietly work away at an all-new aircraft; the other is to find ways of putting a new wing and fly-by-wire avionics into a revamped 747. The challenge that version faces is obtaining operating costs that are sufficiently low to compete with the all-new A3XX. For 10 years Boeing has wrestled with the problem of what to do when the 30-year monopoly of the 747 expires.

Launching that aircraft was betting the whole company back in the 1960s, when a syndicate of banks advanced loans secured on the company's net assets. At one point Boeing proposed a joint working group with the Airbus partners to develop a joint aircraft, but that collapsed because the two sides could not agree on the market or on how they could work together. The Airbus CEO at the time, Jean Pierson, who was excluded from the joint project, always main-

tained it was merely a talking shop designed to stop Airbus pressing ahead with its own model.

The curious thing is that all these delays have worked in favour of Airbus. The consortium is in effect about to offer the market the product that presents itself as the successor to the 747, now visibly in decline. In April, British Airways, one of Boeing's best customers over the years, took delivery of its last 747; production is down from 60 last year to 47 this year, and there are orders for only 15, and even three of those could fall away.

So Airbus executives find they are welcomed in the big airlines when they talk about the A3XX. Apparently, at least one airline boss wrote to Forgeard when the A3XX programme slipped two years asking for reassurance that it was still going to happen.

### Tripartite funding

But making it happen may be more difficult than just impressing airlines with the numbers about its operating costs and potential yields. For a start there is the problem of coming up with the \$10bn which will have to be spent before the first aircraft rolls out the hangar. Forgeard's plan is that a third will be raised by the Airbus partners, a third by risk-sharing associate companies and a third by European governments advancing the money at market rates.

However, although governments may share the revenue risk they charge highly for doing so. One British Aerospace executive points out that it had an extremely difficult job prising launch aid from the UK Treasury for the A340, and sees no reason why the process should be any easier with the A3XX, especially since the sums are so large.

Significantly, British Aerospace recently raised some development money towards the new versions of the A340 from a syndicate of banks at a lower interest rate than the government charges it. Both banks and governments would be happier about financing the A3XX if the SCE conversion comes first, but that is looking less and less likely. If Airbus were already an SCE it might even be able to dispense with gov-



ernment launch aid in favour of private sector finance.

### Lockheed to the rescue?

On the industrial third of the programme's financing, Airbus is claiming lots of success already. Forgeard points to companies such as Fokker Aviation, Saab, Finavitel, Aerostructures, Alenia and an unnamed Japanese company (believed to be Mitsubishi) that are prepared to put up 30-35% of the \$10bn between them. There is a distinct possibility that Airbus has an even more dramatic partner to unveil sooner or later. Lockheed Martin executives have apparently been meeting with their counterparts from Aerospatiale, twice in the past month.

On the agenda is the formation of an alliance between the American defence aerospace group and Airbus and Aerospatiale. Last September Lockheed said that it saw no large equity stakes being swapped in the near term, and in early May both Airbus and Lockheed denied a deal was imminent. Indeed that is probably the case, since it would be difficult for Lockheed to placate Wall Street if it formed an alliance with a consortium with no profit and loss account and no transparent financial reporting. Lockheed has enough problems in its own backyard without upsetting investors on this front. Wall Street analysts worry that defence margins in Europe are thinner than in America, so it would do Lockheed little good to invest in them.

But longer term it is likely that executives of Lockheed and the companies in Airbus are trying to put together two sorts of deals. It makes sense for Lockheed to have a stake in the civil aircraft business, given its growth prospects, because defence is a shrinking business. Airbus is a convenient way back into the business, providing a ready-made brand, product range and market access. All it lacks is capital, and Lockheed could get itself a good deal by buying into the A3XX in the future, once Airbus has become an SCE and is planning for a flotation.

Two and a half years ago Lehman Brothers investment bank did a study on

Airbus which suggested that as a company it could be floated. Lockheed has shown interest in allying with Airbus before, but the then chairman Norman Augustine got fed up waiting for the SCE conversion that he saw as a prerequisite to any deal. But there are now voices within Lockheed urging that opportunities such as Airbus do not come along all that often and should be seized before it is too late. What better time to make a deal than just when Airbus is looking for industrial partners for the A3XX.

### The military angle

The other deal that Lockheed would like to do with Airbus is in military transport. The Kosovo war has brought home to European governments that they are short of the right sort of aircraft to ship troops and tanks a long way to war zones. The Europeans have a design called the FLA, but it has many critics and the project has failed to get off the ground. Lockheed would be prepared to collaborate with Airbus on a military transport - just so long as it is not the FLA design, which the Americans think is rubbish.

Defence insiders think the momentum is building up for a deal. Charles Grant, director of the Centre for European Reform, a think-tank with close defence industry ties, says "there are interesting possibilities here to their mutual advantage for Lockheed and Airbus to collaborate either on a project such as the A3XX or on a military transport plane. Each would help the other to become more global with a foot in each other's markets".

The real point about Airbus is that, despite the repeated hiccups with its conversion to a company and the huge task it faces with launching the A3XX, Airbus is a success and is increasingly perceived as so. Conversion to a corporate entity will reinforce that perception because it will unearth the profits buried in the system. That in turn will make it easier to raise capital and realise value for the consortium's members. At the outset Airbus had parents which were state-owned. As of June 4th, when Aerospatiale is floated, it will be mostly in private hands and raring to go.

### Alliances: don't forget to calculate the costs as well as the benefits

Securing entry into one of the global Alliances appears to be a matter of urgency for most of the world's large and medium-sized airlines. But do airlines' managements truly know the full implications of joining a global alliance, and what will alliances expect of their airline members over the next few years?

Alliance fever has as its foundation hard economic logic - by allying with others, airlines can reap huge economies of scale and scope. In an industry where one or two per cent net margins are seen as an aspiration, knocking the odd \$100m off costs or increasing revenue by the same amount - in one quick and easy step through joining a global alliance - appears too good to resist.

And alliances do - theoretically at least - offer this kind of impact on the bottom line. For example, excluding aircraft, Star airline members purchase an estimated \$15bn of goods and services per annum - and Star believes joint purchasing will knock 7% off this bill, or \$1bn p.a. The table below lists some of the other claimed revenue and cost benefits of alliances.

So, on purely economic grounds, joining a global alliance seems a no-brainer. However, there is another side to the alliance story, and one that some airline managements appear reluctant to contemplate.

### Over-inflated forecasts?

The first problem is that forecasts of the financial benefits of alliances may be optimistic. Much airline financial reporting is fiction anyway - there are too many accounting tricks and differences in international accounting standards for any figures to be regarded as 100% accurate. In particular, the airlines' own ability to calculate alliance benefits is questionable. Incremental cost and revenue calculations of any strategic move are very difficult, particularly when revenues and costs are being apportioned with another airline with different accounting periods, methodologies etc.

Some airlines conveniently forget to calculate the tangible costs of an alliance, but there are many - for example the cost of IT systems' integration, increased overhead, greater FFP redemption etc. And even if all the tangible costs of alliances are included in forecast figures, in most cases calculations do not include the non-financial costs of alliances. These include:

- Loss of control. Decision-making in a global alliance is collective, not individual. And will one airline tend to dominate a global alliance over the long-term?
- Brand dilution. Airlines risk being only as strong as the weakest member of alliance, and a customer's poor experience with one alliance member will affect the brand reputation of others.
- Exposure to problems at other alliance members. From union unrest to safety concerns, the principle of all for one and one for all also has a downside.
- A re-regulation backlash. Another cost of the increasing global alliance trend is regulatory concern about anti-competitive practices - e.g. the requirement for slot surrenders for approval of the British Airways/American link.
- Culture clashes. Will member airlines' staffs be able to work with each other? This

#### ALLIANCE BENEFITS - AIRLINE CLAIMS

	Revenue benefit	Cost benefit	Other benefits
<b>Lufthansa</b>	Expected 1998 benefit of €255m	Saving €200m p.a. due to Star	
<b>United</b>		\$200m saved since 1997 due to alliances	
<b>SAS</b>		By 2001 plans to save \$200m p.a.	19% traffic rise on Scndvia/Germany in 1H98 due to Star
<b>Northwest</b>	Continental alliance will increase Northwest rev. by \$275m by 2002		55% p.a. rise in Detroit/Amsterdam traffic over 5 years
<b>KLM</b>		Alitalia alliance will save \$445m	55% p.a. rise in Detroit/Amsterdam traffic over 5 years

Source: Deutsche Bank.

so-called "soft" aspect of alliances is often overlooked, but differences in mundane practices such as timekeeping, attitudes towards customers etc. between two airlines' workforces can often lead to disparagement and resentment from one set of staff to another.

Of course, putting figures on these non-tangible effects of alliances is an extremely difficult task, but it is one that must be undertaken if airlines want to make the correct strategic decision.

Another factor that may distort logical cost/benefit appraisals is the possibility that certain airline managements believe that joining an alliance will help paper over problems at their own airline. It may be easier to try to join a global alliance in the hope of achieving an instant boost in revenues rather than address fundamental problems at their own airline (almost always high costs and/or union problems). This may particularly be the case when an airline is going through a privatisation process: joining a global alliance is sexy and appealing to investors; hard-bargaining with an intransigent union is not.

This trend is probably made worse by increasing signs of exclusivity by the global alliances. Lufthansa's Weber has said that "Star will not become the United Nations of the sky" - although the previous limit of a maximum of 10 Star partners has been raised to 12. But the major global alliances do appear to be in place right now (although Air France could upset the status quo), so it will be increasingly difficult to get into them if they decide they only want one or two members per global region.

### And the future?

What will happen to alliances in the future? Some analysts believe that 100% equity consolidation is the logical conclusion of global alliances, whenever regulatory constraints against cross-border airline mergers (i.e. bilaterals and rules forbidding foreign ownership of domestic airlines) are loosened.

Whether an airline wants equity consolidation is entirely up to itself and its shareholders, but carriers must not be fooled into

thinking that alliances will be much easier to back out of than equity ties. Barriers to exit are easier for non-equity alliance members in the short-term - but as alliances become longer-lasting and more successful, the barriers to exit start to increase.

For example, as relationships between alliance members become closer, service levels become standardised (hopefully upwards) and passengers become used to the same level of service throughout the alliance, whatever airline they fly with. Alliance steering committees may then start pushing the concept of the alliance super-brand, at the expense of the national brands/identities. This could start with marketing pushing the super-brand, with member airlines listed underneath in large letters - and then over time member lettering gradually gets smaller, until just the super-brand is promoted, with no mention of the member airlines.

With service levels standardised across the alliance, and the super-brand now dominating all marketing - even in the home markets of individual member airlines - steering committees may then call for the dropping of all national brand identities (i.e. oneworld replaces British Airways logos everywhere, from liveries to staff contracts).

This would be a key moment for member airlines. If they agree to this, the barriers to exit rise substantially, because once a national airline identity goes it will be very difficult to get it back - i.e. this is a "virtual merger", without the equity.

Of course Europe in three or four years' time - with a common currency - may be very different from today, and the surrender of national airline identities may be acceptable in some countries. On the other hand a hint of things to come may have been given by the rows over British Airways' tailfin logo redesign, or over British Aerospace's plans to drop the "British".

This scenario may seem far-fetched at present, but it serves to make the point that in entering alliance an airline must think about the long-term consequences of its actions. And at the very least, an airline must make a detailed calculation of the economic net benefits of joining a global alliance in the short- and medium-term.

# Aviation Strategy

## Macro-trends

### EUROPEAN SCHEDULED TRAFFIC

	Intra-Europe			North Atlantic			Europe-Far East			Total long-haul			Total international		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
1991	114.8	65.2	56.8	120.9	84.3	69.7	80.0	53.1	66.4	267.6	182.0	68.0	397.8	257.9	64.7
1992	129.6	73.5	56.7	134.5	95.0	70.6	89.4	61.6	68.9	296.8	207.1	69.8	445.8	293.4	65.8
1993	137.8	79.8	57.9	145.1	102.0	70.3	96.3	68.1	70.7	319.1	223.7	70.1	479.7	318.0	66.3
1994	144.7	87.7	60.6	150.3	108.8	72.4	102.8	76.1	74.0	334.0	243.6	72.9	503.7	346.7	68.8
1995	154.8	94.9	61.3	154.1	117.6	76.3	111.1	81.1	73.0	362.6	269.5	74.3	532.8	373.7	70.1
1996	165.1	100.8	61.1	163.9	126.4	77.1	121.1	88.8	73.3	391.9	292.8	74.7	583.5	410.9	70.4
1997	174.8	110.9	63.4	176.5	138.2	78.3	130.4	96.9	74.3	419.0	320.5	76.5	621.9	450.2	72.4
1998	188.3	120.3	63.9	194.2	149.7	77.1	135.4	100.6	74.3	453.6	344.2	75.9	673.2	484.8	72.0
Mar 99	16.1	10.2	63.6	16.6	13.4	80.8	11.3	8.8	78.2	39.5	30.6	77.4	58.3	42.7	73.2
Ann. chng	5.9%	6.7%	0.5	15.3%	16.2%	0.6	-1.1%	1.5%	2.0	10.1%	9.3%	-0.6	9.3%	9.3%	0.0
Jan-Mar 99	45.8	26.6	58.1	46.8	33.1	70.6	32.8	25.0	76.0	113.6	82.8	72.9	167.4	114.6	68.5
Ann. chng	5.4%	6.4%	0.5	14.4%	13.5%	-0.5	-1.1%	1.9%	2.2	9.3%	8.2%	-0.7	8.6%	8.4%	-0.1

Source: AEA.

### US MAJORS' SCHEDULED TRAFFIC

	Domestic			North Atlantic			Pacific			Latin America			Total international		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
1991	835.1	512.7	61.4	108.0	75.2	69.6	117.0	78.5	67.1	44.3	27.4	61.8	269.2	181.0	67.2
1992	857.8	536.9	62.6	134.4	92.4	68.7	123.1	85.0	69.0	48.0	27.4	57.0	305.4	204.7	67.0
1993	867.7	538.5	62.1	140.3	97.0	69.2	112.5	79.7	70.8	55.8	32.5	58.2	308.7	209.2	67.8
1994	886.9	575.6	64.9	136.1	99.5	73.0	107.3	78.2	72.9	56.8	35.2	62.0	300.3	212.9	70.9
1995	900.4	591.4	65.7	130.4	98.5	75.6	114.3	83.7	73.2	62.1	39.1	63.0	306.7	221.3	72.1
1996	925.7	634.4	68.5	132.6	101.9	76.8	118.0	89.2	75.6	66.1	42.3	64.0	316.7	233.3	73.7
1997	953.3	663.7	69.6	138.1	108.9	78.9	122.0	91.2	74.7	71.3	46.4	65.1	331.2	246.5	74.4
1998	961.0	679.1	70.7	150.3	118.5	78.8	112.1	81.6	72.8	84.0	52.3	62.3	346.4	252.4	72.9
Mar 99	84.5	61.1	72.4										29.4	22.3	76.0
Ann. chng	3.7%	4.4%	0.5										4.4%	7.0%	1.9
Jan-Mar 99	238.5	162.1	68.0										83.9	59.3	70.7
Ann. chng	2.0%	3.8%	1.2										2.6%	3.4%	0.6

Note: US Majors = American, Alaska, Am. West, Continental, Delta, NWA, Southwest, TWA, United, USAir. Source: Airlines, ESG.

### ICAO WORLD TRAFFIC AND ESG FORECAST

	Domestic			International			Total			Domestic growth rate		International growth rate		Total growth rate	
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK %	RPK %	ASK %	RPK %	ASK %	RPK %
1992	1,300	840	64.6	1,711	1,149	67.2	3,011	1,989	66.1	2.7	5.0	15.0	15.2	9.4	10.7
1993	1,347	856	63.6	1,790	1,209	67.5	3,137	2,065	65.8	3.6	1.9	4.6	5.2	4.2	3.8
1994	1,403	924	65.8	1,930	1,326	68.7	3,333	2,250	67.5	4.2	7.9	7.8	9.7	6.3	9.0
1995	1,477	980	66.3	2,044	1,424	69.7	3,521	2,404	68.3	5.3	6.1	5.9	7.4	5.6	6.9
1996	1,526	1,046	68.6	2,163	1,537	71.1	3,689	2,583	70.0	3.3	6.7	5.8	7.9	4.8	7.4
1997	1,617	1,102	68.2	2,387	1,704	71.4	4,004	2,807	70.1	4.6	5.5	7.6	9.1	6.4	7.7
*1998	1,624	1,122	69.1	2,470	1,751	70.9	4,094	2,873	70.2	0.4	1.8	3.5	2.7	2.3	2.4
*1999	1,675	1,155	69.0	2,586	1,833	70.9	4,261	2,988	70.1	3.2	3.0	4.7	4.7	4.1	4.0
*2000	1,738	1,194	68.7	2,729	1,930	70.7	4,467	3,124	69.9	3.7	3.3	5.5	5.3	4.8	4.5
*2001	1,791	1,218	68.0	2,857	2,004	70.1	4,648	3,222	69.3	3.1	2.0	4.7	3.8	4.0	3.1
*2002	1,806	1,210	67.0	2,916	2,015	69.1	4,722	3,225	68.3	0.8	-0.7	2.1	0.6	1.6	0.1
*2003	1,857	1,273	68.5	3,066	2,165	70.6	4,923	3,437	69.8	2.9	5.2	5.1	7.4	4.3	6.6

Note: \* = Forecast; ICAO traffic includes charters. Source: Airline Monitor, January/February 1999.

### DEMAND TRENDS (1990=100)

	Real GDP					Real exports					Real imports				
	US	UK	Germany	France	Japan	US	UK	Germany	France	Japan	US	UK	Germany	France	Japan
1991	99	98	101	101	104	106	99	112	104	105	99	95	113	103	97
1992	102	98	102	102	105	113	103	112	109	110	107	101	115	104	96
1993	105	100	100	101	105	117	107	106	109	112	117	104	108	101	96
1994	109	103	103	104	106	126	117	115	115	117	131	110	117	107	104
1995	111	106	105	106	107	137	126	122	123	123	141	115	124	113	119
1996	114	108	107	107	111	152	135	128	128	126	155	124	127	116	132
1997	118	112	110	109	112	172	146	142	142	138	177	135	136	123	132
1998	122	115	113	112	109	173	150	152	150	135	196	144	147	133	121
*1999	124	116	115	115	109	179	154	159	156	140	211	150	156	141	124

Note: \* = Forecast; Real = inflation adjusted. Source: OECD Economic Outlook, December 1998.

# Aviation Strategy

## Macro-trends

### COST INDICES (1990=100)

	Europe						US					
	Unit revenue	Unit op. cost	Unit lab. cost	Efficiency	Av. lab. cost	Unit fuel cost	Unit revenue	Unit op. cost	Unit lab. cost	Efficiency	Av. lab. cost	Unit fuel cost
1991	106	109	103	105	108	88	100	102	102	101	103	84
1992	99	103	96	119	114	80	98	100	101	107	108	75
1993	100	100	90	133	118	82	101	98	99	116	115	67
1994	100	98	87	142	123	71	98	94	101	124	125	62
1995	99	97	86	151	128	67	99	93	98	129	127	61
1996	100	101	88	155	135	80	102	94	98	129	126	72
1997	102	105	85	148	131	81	104	94	100	129	129	69
*1998	107	105	84	151	127	71	108	96	106	127	134	61

**Note:** \* = First-half year. European indices = weighted average of BA, Lufthansa and KLM. US indices = American, Delta, United and Southwest. Unit revenue = airline revenue per ATK. Unit operating cost = cost per ATK. Unit labour cost = salary, social charges and pension costs per ATK. Efficiency = ATKs per employee. Average labour cost = salary, social costs and pension cost per employee. Unit fuel cost = fuel expenditure and taxes per ATK.

### FINANCIAL TRENDS (1990=100)

	Inflation (1990=100)					Exchange rates (against US\$)						LIBOR 6 month Euro-\$	
	US	UK	Germany	France	Japan	UK	Germ.	France	Switz.	Euro**	Japan		
1990	100	100	100	100	100	1990	0.563	1.616	5.446	1.389	0.788	144.8	8.27%
1991	104	106	104	103	103	1991	0.567	1.659	5.641	1.434	0.809	134.5	5.91%
1992	107	107	109	106	105	1992	0.570	1.562	5.294	1.406	0.773	126.7	3.84%
1993	111	109	114	108	106	1993	0.666	1.653	5.662	1.477	0.854	111.2	3.36%
1994	113	109	117	110	107	1994	0.653	1.623	5.552	1.367	0.843	102.2	5.06%
1995	117	112	119	112	107	1995	0.634	1.433	4.991	1.182	0.765	94.1	6.12%
1996	120	114	121	113	107	1996	0.641	1.505	5.116	1.236	0.788	108.8	4.48%
1997	122	117	123	114	108	1997	0.611	1.734	5.836	1.451	0.884	121.1	5.85%
1998	123	120	124	115	109	1998	0.603	1.759	5.898	1.450	0.896	130.8	5.51%***
*1999	125	122	126	116	108	May 1999	0.626	1.867	6.260	1.520	0.954	121.9	5.19%***

**Note:** \* = Forecast. **Source:** OECD Economic Outlook, December 1998. \*\*Euro rate quoted from January 1999 onwards. 1990-1998 historical rates quote ECU. \*\*\* = \$ LIBOR BBA London interbank fixing six month rate.

### WET LEASE RATES

	ACMI RATE \$/BLOCK HOUR		ACMI RATE \$/BLOCK HOUR		ACMI RATE \$/BLOCK HOUR		ACMI RATE \$/BLOCK HOUR
737-200A	2,950-3,250	757-200ER	4,250-4,750	MD-87	2,550-2,850	BAe 146-100	1,750-1,850
737-300	3,000-3,250	767-200ER	5,500-5,750	L-1011-100	4,800-5,600	BAe 146-200	2,500-2,600
737-400	3,250-3,500	767-300ER	5,800-6,000	L-1011-500	5,300-5,650	BAe 146-300	3,000-3,150
747-200	6,000-6,800	MD-11	7,500-8,000	A300B4-200	4,250-5,000	F-70	1,800-1,900
747-300	7,000-8,000	MD-83	3,000-3,300	A320-200	3,500-3,750	F-100	1,900-2,500

**Note:** ACMI = Wet lease rate (aircraft, crew, maintenance & insurance). **Source:** Alan Hodder.

### JET AND TURBOPROP ORDERS

	Date	Buyer	Order	Price	Delivery	Other information/engines
ATR	-	-	-	-	-	-
Airbus	-	-	-	-	-	-
BAe	-	-	-	-	-	-
Boeing	May 7	American Airlines	3 737-800s		00	
	May 6	EVA Airways	3 747-400Fs		00+	
Bombardier	Apr 30	SkyWest Airlines	10 CRJs	\$230m		From options
Embraer	-	-	-	-	-	-
Fairchild Dornier	Apr 29	Lufthansa	60 728JETs	\$1.6bn	02+	+ 60 options

**Note:** Prices in US\$. Only firm orders from identifiable airlines/lessors are included. MoUs/Lols are excluded. **Source:** Manufacturers.

# Aviation Strategy

## Micro-trends

	Group revenue	Group costs	Group operating profit	Group net profit	Total ASK	Total RPK	Load factor	Group rev. per total ASK	Group costs per total ASK	Total pax.	Total ATK	Total RTK	Load factor	Group employees
	US\$m	US\$m	US\$m	US\$m	m	m	%	Cents	Cents	000s	m	m	%	
<b>American*</b>														
Jul-Sep 97	4,377	3,868	509	323	65,093.0	46,943.3	72.1	6.72	5.94	21,343	9,637.3	5,406.0	56.1	87,793
Oct-Dec 97	4,228	3,871	357	208	63,308.3	42,715.7	67.5	6.68	6.11	19,681	9,366.9	5,025.2	53.6	88,302
Jan-Mar 98	4,229	3,802	427	290	62,405.4	41,846.6	67.1	6.78	6.09	19,267	9,207.0	4,889.4	53.1	87,569
Apr-Jun 98	4,491	3,885	606	409	64,471.8	46,075.9	71.5	6.97	6.03	20,901	9,512.3	5,317.6	55.9	87,076
Jul-Sep 98	4,583	3,958	625	433	65,920.1	48,093.9	73.0	6.95	6.00	21,457	9,739.3	5,466.1	56.1	89,078
Oct-Dec 98	4,152	3,857	295	182	64,317.3	43,811.6	68.1	6.46	6.00					90,150
Jan-Mar 99	3,991	3,954	37	158	62,624.3	41,835.4	66.8	6.37	6.31					
<b>America West</b>														
Jul-Sep 97	462	425	37	18	9,623.6	6,779.9	70.5	4.80	4.42	4,692	1,205.8	724.3	60.1	11,506
Oct-Dec 97	473	432	41	20	9,573.7	6,219.9	65.0	4.94	4.51	4,375	1,200.4	670.1	55.8	11,232
Jan-Mar 98	483	434	49	25	9,408.0	5,851.4	62.2	5.13	4.61	4,149	1,180.7	630.2	53.4	11,329
Apr-Jun 98	534	457	77	41	9,787.8	6,899.1	70.5	5.46	4.67	4,643	1,228.9	733.0	59.7	11,645
Jul-Sep 98	499	453	46	22	9,884.3	7,108.3	71.9	5.05	4.58	4,665	1,240.4	746.9	60.2	11,600
Oct-Dec 98	507	470	37	20	10,037.2	6,491.9	64.7	5.05	4.68	4,335				12,100
Jan-Mar 99	520	469	51	26	10,135.4	6,485.5	64.0	5.13	4.63	4,263				
<b>Continental</b>														
Jul-Sep 97	1,890	1,683	207	110	28,462.1	20,982.1	73.7	6.64	5.91	10,822	3,331.3	2,206.5	66.2	35,630
Oct-Dec 97	1,839	1,707	132	73	28,278.6	19,400.1	68.6	6.50	6.04	10,188	3,381.1	2,140.0	63.3	37,021
Jan-Mar 98	1,854	1,704	150	81	28,199.8	19,427.5	68.9	6.57	6.04	10,072	3,372.4	2,134.4	63.3	37,998
Apr-Jun 98	2,036	1,756	280	163	29,891.1	22,007.2	73.6	6.81	5.87	11,261	3,629.6	2,399.3	66.1	39,170
Jul-Sep 98	2,116	1,973	143	73	31,609.9	24,049.4	76.1	6.69	6.24	11,655	3,801.8	2,542.9	66.9	40,082
Oct-Dec 98	1,945	1,817	128	66	30,557.4	21,273.3	69.6	6.37	5.95	10,637				40,700
Jan-Mar 99	2,056	1,896	160	84	30,938.8	22,107.0	71.5	6.65	6.13	12,174				
<b>Delta</b>														
Jul-Sep 97	3,552	3,121	431	254	57,424.7	42,783.2	74.5	6.19	5.43	26,478	8,112.8	4,946.2	61.0	69,502
Oct-Dec 97	3,433	3,101	332	190	56,177.4	38,854.9	69.2	6.11	5.52	25,464	7,941.4	4,639.6	58.4	69,982
Jan-Mar 98	3,390	3,053	337	195	54,782.2	37,619.0	68.7	6.19	5.57	24,572	7,766.6	4,448.9	57.3	71,962
Apr-Jun 98	3,760	3,165	595	362	57,175.5	43,502.6	76.1	6.58	5.54	27,536	8,189.9	5,049.5	61.7	74,116
Jul-Sep 98	3,802	3,250	552	327	59,017.9	45,242.3	76.7	6.44	5.51	27,575	8,486.8	5,196.9	61.2	75,722
Oct-Dec 98	3,448	3,128	320	194	57,810.9	39,947.7	69.1	5.96	5.41					75,160
Jan-Mar 99	3,504	3,148	356	216	56,050.3	39,163.9	69.9	6.25	5.62					
<b>Northwest</b>														
Jul-Sep 97	2,801	2,298	504	290	41,491.3	32,231.1	77.7	6.75	5.54	14,743	6,587.3	4,189.3	63.6	47,843
Oct-Dec 97	2,491	2,264	227	105	38,465.5	27,791.0	72.2	6.48	5.89	13,383	6,247.0	3,820.5	61.2	48,852
Jan-Mar 98	2,429	2,273	156	71	38,260.1	27,038.2	70.7	6.35	5.94	12,704	6,052.7	3,513.4	58.0	49,776
Apr-Jun 98	2,476	2,356	120	49	38,332.7	29,533.7	77.0	6.46	6.15	13,676	6,102.8	3,745.5	61.4	51,264
Jul-Sep 98	1,928	2,204	-276	-224	32,406.3	24,295.8	75.0	5.95	6.80	11,148	5,107.4	3,058.6	59.9	50,654
Oct-Dec 98	2,212	2,404	-192	-181	37,947.0	26,534.3	69.9	5.83	6.34					50,565
Jan-Mar 99	2,281	2,295	-14	-29	37,041.3	26,271.8	70.9	6.16	6.20					
<b>Southwest</b>														
Jul-Sep 97	997	845	152	93	18,494.3	12,176.9	65.8	5.39	4.57	13,019	2,362.1	1,274.1	53.9	24,273
Oct-Dec 97	975	847	128	81	18,501.4	11,654.2	63.0	5.27	4.58	12,612	2,361.5	1,222.6	51.8	24,454
Jan-Mar 98	943	831	112	70	18,137.1	11,102.3	61.2	5.20	4.58	11,849	2,304.2	1,161.6	50.4	24,573
Apr-Jun 98	1,079	870	209	133	18,849.6	13,236.7	70.2	5.72	4.62	13,766	2,394.0	1,378.0	57.6	24,807
Jul-Sep 98	1,095	891	204	130	19,762.1	13,620.3	68.9	5.54	4.51	13,681	2,519.0	1,420.4	56.4	25,428
Oct-Dec 98	1,047	888	159	100	19,763.0	12,603.4	63.8	5.49	4.59	13,291				25,844
Jan-Mar 99	1,076	909	167	96	19,944.0	12,949.2	64.9	5.40	4.56	12,934				
<b>TWA</b>														
Jul-Sep 97	908	845	64	6	15,922.4	11,447.0	71.9	5.70	5.31	6,324	2,209.2	1,284.2	58.1	22,539
Oct-Dec 97	813	812	1	-31	14,348.8	9,570.2	66.7	5.67	5.66	5,743	1,966.4	1,098.0	55.8	22,322
Jan-Mar 98	765	834	-69	-56	13,626.4	9,276.3	68.1	5.61	6.12	5,629	1,879.7	1,046.5	55.7	22,198
Apr-Jun 98	884	838	46	19	14,142.2	10,787.3	76.3	6.25	5.93	6,417	1,979.0	1,186.2	59.9	22,147
Jul-Sep 98	863	839	24	-5	14,293.8	10,531.3	73.7	6.04	5.87	6,273	1,999.7	1,150.0	57.5	21,848
Oct-Dec 98	747	813	-66	-79	13,452.4	8,731.6	64.9	5.55	6.04					21,500
Jan-Mar 99	764	802	-38	-22	13,352.4	9,205.2	68.9	5.72	6.01					
<b>United</b>														
Jul-Sep 97	4,640	4,077	563	579	71,375.4	53,721.0	75.3	6.50	5.71	22,641	10,566.8	6,561.1	62.1	90,324
Oct-Dec 97	4,235	4,144	91	23	68,364.7	47,419.6	69.4	6.19	6.06	20,608	10,269.1	6,023.6	58.7	91,721
Jan-Mar 98	4,055	3,932	123	61	66,393.3	44,613.0	67.2	6.11	5.92	19,316	9,987.5	5,589.7	56.0	92,581
Apr-Jun 98	4,442	3,972	470	282	69,101.7	50,152.2	72.6	6.43	5.75	21,935	10,453.0	6,202.6	59.3	94,064
Jul-Sep 98	4,783	4,088	695	425	73,913.5	56,283.7	76.1	6.47	5.53	23,933	11,255.3	6,847.4	60.8	94,270
Oct-Dec 98	4,281	4,090	191	54	70,620.9	49,484.4	70.1	6.06	5.79					94,550
Jan-Mar 99	4,160	4,014	146	78	67,994.5	46,899.8	69.0	6.12	5.90					
<b>US Airways</b>														
Jul-Sep 97	2,115	2,032	83	187	24,070.3	17,668.5	73.4	8.19	7.83	15,080	3,245.5	1,918.0	59.1	42,159
Oct-Dec 97	2,085	2,015	70	479	22,662.2	15,800.1	69.7	9.20	8.89	14,178	3,066.2	1,733.2	56.5	40,865
Jan-Mar 98	2,063	1,871	192	98	22,102.1	15,257.8	69.0	9.33	8.47	13,308	2,993.8	1,669.2	55.8	40,974
Apr-Jun 98	2,297	1,923	374	194	22,818.3	17,567.1	77.0	10.07	8.43	15,302	3,107.6	1,895.9	61.0	40,846
Jul-Sep 98	2,208	1,938	270	142	23,267.3	17,639.5	75.8	9.49	8.33	15,290	3,166.1	1,898.2	60.0	40,660
Oct-Dec 98	2,121	1,943	178	104	23,318.8	16,112.3	69.1	9.10	8.33					40,540
Jan-Mar 99	2,072	1,983	89	46	22,745.8	15,405.8	67.7	9.11	8.72					
<b>ANA</b>														
Jul-Sep 97	3,928	3,829	99	50	39,702.7	25,742.0	64.8	9.89	9.65	20,730				
Oct-Dec 97	SIX MONTH FIGURES													
Jan-Mar 98	3,459	3,545	-86	-68	40,446.9	26,187.7	64.7	8.55	8.76	20,102				
Apr-Jun 98	SIX MONTH FIGURES													
Jul-Sep 98	3,399	3,355	44	73	42,415.9	27,404.4	64.6	8.01	7.91	21,449				
Oct-Dec 98														
Jan-Mar 99														
<b>Cathay Pacific</b>														
Jul-Sep 97	SIX MONTH FIGURES													
Oct-Dec 97	1,921	1,784	137	117	28,932.0	18,917.0	64.4	6.64	6.17	4,810	5,325.0	3,718.0	69.8	
Jan-Mar 98	SIX MONTH FIGURES													
Apr-Jun 98	1,677	1,682	-5	-20	28,928.0	19,237.0	66.5	5.80	5.81		5,208.0	3,481.0	66.8	
Jul-Sep 98	SIX MONTH FIGURES													
Oct-Dec 98	1,769	1,713	56	-45	31,367.0	21,173.0	67.5	5.64	5.46		5,649.0	3,847.0	68.1	
Jan-Mar 99														
<b>JAL</b>														
Jul-Sep 97	5,325	5,016	309	169	56,060.9	39,748.3	70.9	9.50	8.95	16,020	8,555.0	5,705.2	66.7	
Oct-Dec 97	SIX MONTH FIGURES													
Jan-Mar 98	4,279	4,344	-65	-911	56,514.7	39,012.2	69.0	7.57	7.69	15,344	8,570.8	5,628.5	65.7	
Apr-Jun 98	SIX MONTH FIGURES													
Jul-Sep 98	4,463	4,262	201	133	58,439.5	40,413.9	69.2	7.64	7.29	16,008	8,959.7	5,725.4	63.9	
Oct-Dec 98														
Jan-Mar 99														

Note: Figures may not add up due to rounding. 1 ASM = 1.6093 ASK. \*Airline group only.

# Aviation Strategy

## Micro-trends

	Group revenue	Group costs	Group operating profit	Group net profit	Total ASK	Total RPK	Load factor	Group rev. per total ASK	Group costs per total ASK	Total pax.	Total ATK	Total RTK	Load factor	Group employees
	US\$m	US\$m	US\$m	US\$m	m	m	%	Cents	Cents	000s	m	m	%	
<b>Korean Air</b>														
Jul-Sep 97	TWELVE MONTH FIGURES													
Oct-Dec 97	3,029	2,774	255	-234	58,246.9	40,190.3	69.0	5.20	4.76	25,580		9,737.7		17,139
Jan-Mar 98														
Apr-Jun 98														
Jul-Sep 98														
Oct-Dec 98														
Jan-Mar 99														
<b>Malaysian</b>														
Jul-Sep 97	TWELVE MONTH FIGURES													
Oct-Dec 97	2,208	2,289	-81	-81	42,294.0	28,698.0	67.9	5.22	5.41	15,117	6,411.0			
Jan-Mar 98														
Apr-Jun 98	SIX MONTH FIGURES													
Jul-Sep 98	860	958	-98	-11			57.2							
Oct-Dec 98														
Jan-Mar 99														
<b>Singapore</b>														
Jul-Sep 97	2,549	2,171	379	402	38,125.4	28,216.7	74.0	6.69	5.69	6,135	7,231.9	5,091.5	70.4	27,777
Oct-Dec 97	SIX MONTH FIGURES													
Jan-Mar 98	2,336	2,080	256	258	39,093.6	26,224.3	67.1	5.98	5.32	5,822	7,303.0	4,951.5	67.8	
Apr-Jun 98	SIX MONTH FIGURES													
Jul-Sep 98	2,232	2,013	219	278	41,466.2	29,456.2	71.0	5.38	4.86	6,240	7,693.4	5,225.2	67.9	
Oct-Dec 98														
Jan-Mar 99														
<b>Thai Airways</b>														
Jul-Sep 97	697	672	25	-1,050	11,462.0	7,668.0	66.9	6.08	5.86	3,500	1,639.0			
Oct-Dec 97	656	649	7	-661	12,144.0	7,715.0	63.5	5.40	5.34	3,800	1,712.0			
Jan-Mar 98	631	558	73	610	12,211.0	8,522.0	69.8	5.17	4.57	4,000	1,715.0			
Apr-Jun 98	586	583	3	-121	12,084.0	7,963.0	65.9	4.84	4.82		1,700.0			
Jul-Sep 98	629	584	45	176	12,118.0	8,769.0	72.4	5.19	4.82					
Oct-Dec 98	727	647	80	170	12,599.0	9,195.0	73.0	5.77	5.14					
Jan-Mar 99														
<b>Air France</b>														
Jul-Sep 97	5,224	4,850	374	297			76.1							
Oct-Dec 97	SIX MONTH FIGURES													
Jan-Mar 98	5,126	5,079	47	18										
Apr-Jun 98	SIX MONTH FIGURES													
Jul-Sep 98	4,982			224			76.5							
Oct-Dec 98														
Jan-Mar 99														
<b>Alitalia</b>														
Jul-Sep 97	TWELVE MONTH FIGURES													
Oct-Dec 97	5,083	4,878	205	161	50,171.4	35,992.3	71.7	10.13	9.72	24,552				18,676
Jan-Mar 98														
Apr-Jun 98														
Jul-Sep 98														
Oct-Dec 98														
Jan-Mar 99														
<b>BA</b>														
Jul-Sep 97	3,646	3,319	327	244	40,909.0	30,884.0	75.5	8.91	8.11	11,194	5,711.0	4,098.0	71.8	61,321
Oct-Dec 97	3,580	3,436	144	110	40,059.0	26,929.0	67.2	8.94	8.58	9,837	5,618.0	3,791.0	67.5	61,144
Jan-Mar 98	3,335	3,210	125	119	39,256.0	26,476.0	67.4	8.50	8.18	9,311	5,485.0	3,642.0	66.4	60,770
Apr-Jun 98	3,783	3,497	286	217	44,030.0	31,135.0	70.7	8.59	7.94	11,409	6,174.0	4,157.0	67.3	62,938
Jul-Sep 98	4,034	3,601	433	357	46,792.0	35,543.0	76.0	8.62	7.70	12,608	6,533.0	4,630.0	70.9	64,106
Oct-Dec 98	3,585	3,431	154	-114	44,454.0	29,736.0	66.9	8.06	7.72	10,747	6,277.0	4,111.0	65.5	64,608
Jan-Mar 99	3,343	3,481	-138	-119	43,544.0	29,537.8	67.8	7.68	7.99	10,285	6,130.0	3,933.0	64.2	64,366
<b>Iberia</b>														
Jul-Sep 97	TWELVE MONTH FIGURES													
Oct-Dec 97	4,168	3,900	268	126*	37,797.6	27,679.2	73.2	11.03	10.32	15,432				
Jan-Mar 98														
Apr-Jun 98	TWELVE MONTH FIGURES													
Jul-Sep 98					45,515.2	32,520.9	71.5			21,753				
Oct-Dec 98														
Jan-Mar 99														
<b>KLM</b>														
Jul-Sep 97	1,842	1,592	250	438	18,798.0	15,736.0	83.7	9.80	8.47		3,231.0	2,587.0	80.1	34,928
Oct-Dec 97	1,630	1,570	60	23	18,096.0	13,555.0	74.9	9.01	8.68		3,114.0	2,414.0	77.5	35,092
Jan-Mar 98	1,538	1,568	-30	528	17,595.0	13,240.0	75.2	8.74	8.91		2,995.0	2,259.0	75.4	33,227
Apr-Jun 98	1,702	1,572	130	105	18,600.0	14,290.0	76.8	9.15	8.45		3,177.0	2,365.0	74.4	35,666
Jul-Sep 98	1,865	1,675	190	121	19,363.0	15,984.0	82.6	9.63	8.65		3,359.0	2,583.0	76.9	33,586
Oct-Dec 98	1,673	1,661	12	-15	18,476.0	13,767.0	74.5	9.05	8.99		3,214.0	2,415.0	75.1	33,761
Jan-Mar 99	1,550	1,670	-120	-45	17,716.0	13,294.0	75.0	8.75	9.43		3,088.0	2,284.0	74.0	33,892
<b>Lufthansa***</b>														
Jul-Sep 97	3,721	3,418	303	321*	33,739.0	26,410.0	78.3	11.03	10.13	12,807	5,787.0	4,298.0	74.3	58,178
Oct-Dec 97	3,989	3,566	423	384*	30,209.0	21,691.0	71.8	13.20	11.80	10,839	5,457.0	3,919.0	71.8	59,630
Jan-Mar 98	2,902	2,860	42	223	23,742.0	16,236.0	68.4	12.22	12.05	8,778	4,618.0	3,171.0	68.7	54,849
Apr-Jun 98	3,507	3,081	426	289	26,132.0	19,489.0	74.6	13.42	11.79	10,631	5,078.0	3,575.0	70.4	54,556
Jul-Sep 98	3,528	3,167	361	198	26,929.0	20,681.0	76.8	13.10	11.76	11,198	5,231.0	3,748.0	71.6	54,695
Oct-Dec 98	2,929	2,106	823	96	25,530.0	18,259.0	71.5	11.47	8.25	9,819	5,204.0	3,676.0	70.6	55,368
Jan-Mar 99	3,301	3,210	91	64	25,445.0	17,942.0	70.5	12.97	12.62	9,658	4,972.0	3,435.0	69.1	56,420
<b>SAS</b>														
Jul-Sep 97	1,244	1,093	151	83*	8,084.0	5,598.0	69.2	15.39	13.52	5,325				24,168
Oct-Dec 97	1,334	1,204	130	63*	7,771.0	4,940.0	63.6	17.17	15.49	5,211				28,716
Jan-Mar 98	1,184	1,077	106	76*	7,761.0	4,628.0	59.6	15.25	13.88	4,863				24,722
Apr-Jun 98	1,323	1,149	174	107*	7,546.0	5,260.0	69.7	17.53	15.23	5,449				25,174
Jul-Sep 98	1,283	1,152	131	127*	8,283.0	5,843.0	70.5	15.49	13.91	5,714				26,553
Oct-Dec 98	1,368	1,266	102	46*	8,116.0	5,089.0	62.7	16.86	15.60	5,431				27,071
Jan-Mar 99	1,203	1,227	-24	-3*	8,062.0	4,713.0	58.5	14.92	15.22	5,017				27,110
<b>Swissair**</b>														
Jul-Sep 97	SIX MONTH FIGURES													
Oct-Dec 97	2,084	1,946	138	147	18,934.8	13,770.8	72.7	11.01	10.28	6,352	3,536.4	2,538.1	71.8	10,132
Jan-Mar 98	SIX MONTH FIGURES													
Apr-Jun 98	1,907	1,780	127	86	18,983.8	13,138.7	70.5	10.05	9.38					9,756
Jul-Sep 98	SIX MONTH FIGURES													
Oct-Dec 98	2,187	2,070	117	165										10,396
Jan-Mar 99														

Note: Figures may not add up due to rounding. 1 ASM = 1.6093 ASK. \*Pre-tax. \*\*SAirLines' figures apart from net profit, which is SAirGroup. \*\*\*Excludes Condor from 1998 onwards. 4Q+ data are on IAS basis.

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