Aviation Strategy

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Air France's partnership options

Successfully part-privatised, Air France can now concentrate on getting its alliance strategy worked out and has stated that it would like to do so by the end of the year. As the last major unaligned carrier in Europe, Air France is going to have to break into (or break up) one of the existing groupings.

Given entry into Star or oneworld is a non-starter, the two remaining options are:

• Northwest/Continental and their European partners KLM and Alitalia; or

• Delta and its primary European partner Swissair with its Qualiflyer affiliates, Sabena Austrian, TAP, THY (membership temporarily suspended), plus a set of regionals.

Indeed, in late February Air France announced that it would be increasing codeshare routes with Continental from 12 to 30 and those with Delta from 14 to 48.

Option one considerations include:

•The alliance would be attractive to Northwest and Continental;

• It would create a power block stretching from Amsterdam to Rome, across some of the richest territory in Europe;

• CDG would threaten Schiphol's role as the primary northern hub of the alliance and possibly undermine KLM's position in the alliance;

• There might be a conflict between Air France's development of its Lyons hub and Alitalia's investment at Milan Malpensa;

• It would provoke a negative reaction from the European Commission on grounds of market dominance, proximity of hubs, etc.

Option two considerations include:

• This alliance would be very good for Delta in terms of increased European market share;

• It could severely marginalise Swissair, though the SAirGroup could be compensated by, for instance, taking over Air France's ground handling and maintenance through SAirServices, Air France's catering operations through Gate Gourmet, cargo handling through SAirLogistics or in-flight sales through Nuance Trading;

• A primary hub like CDG is of much greater value than a series of secondary hubs;

• Swissair might moderate its competition with Air France for traffic in the east and south of the country; and

• Brussels would still have major concerns but would be less likely to block this link-up.

On balance, option two, with Delta, looks to be the more attractive course of action for Air France. But Swissair could well decide to opt out of what already seems to be an uncomfortable relationship with Delta (the Atlantic Excellence brand is not co-ordinated with Qualiflyer).

Then Swissair could well end up in oneworld. It would bring its Zurich hub, which could fit into oneworld's emerging pattern of European hubs - London (the mega-hub), Helsinki for Europe-northeast Asian connections, Madrid for Latin American connections, Warsaw for former East Bloc traffic and Munich and Paris Orly as enclaves in the Lufthansa and Air France empires.

Analysis

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The economic effects of alliances are not always what they seem

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The recent alliance of Iberia with British Airways and American Airlines will only serve to increase the antipathy of the EU competition commissioner Karel Van Miert towards alliances. He says he is not against them in principle but suspects they are undoing much of the benefits that liberalisation is otherwise bringing to the internal European aviation market. Indeed, it is difficult to see how the combination could do anything to serve anyone other than the two airlines, if you look at fares between Madrid and London.

But some of Mr Van Miert's other sallies against alliances could be undermined by recent academic work, eagerly seized upon by United Airlines and Lufthansa for their hearings with Mr Van Miert's officials, which suggest that consumers gain not just in service but in fare reductions from the creation of international alliances.

Two economists at the University of Illinois, Jan K. Brueckner and W. Tom Whalen, have trawled through flight data collected by the US Department of Transportation's passenger surveys to study fares paid by passengers travelling on alliance airlines for a given journey and those using two separate airlines in a classic interlining ticket of the old sort. Their conclusion: non-allied carriers charge 36% above those fares charged by alliance partners. This is the first indication of any reliable sort that consumers gain more than convenience, lounges and extra air miles from alliances.

All this may seem counter-intuitive since alliances, from simple code-sharing upwards, are basically a device to control capacity on given routes for the convenience of the airlines. Normally when two or more players combine or collude in any product market the consumer tends to suffer. Yet aviation once again seems to produce slightly different results. The answer to this defiance of A-level economics is that what airlines are really selling is access to a network of origins and destinations rather than tickets from A to B. Once you look at airlines and at alliances in terms of such networks and their economics, the results are interesting in that they seem to indicate a consumer benefit for most flights and no loss of benefit for those simple A to B routes where network economics are irrelevant.

The essence of alliances is that they produce networks for airlines to sell tickets across without incurring any extra investment. Such networks achieve efficiencies by collecting traffic from a variety of dispersed "thin" markets, routing it through central hubs and disseminating it through "pipeline" routes to other hubs (from which it is then dispersed into "thin" markets at the destination end). As with networks in other service industries, these alliance networks have an inherent economic incentive to expand service to - and collect traffic from - the widest possible range of local markets. There may be little or no profit to be made at the extremities, but the whole system conspires to produce accelerating scale economies at the hubs and on the fat pipeline routes. This is achieved by better use of terminal facilities, expensive aircraft and marketing campaign expenditure, not to mention well-paid flight crews rostered to do more hours or flying fuller aircraft.

A failed argument for BA

When British Airways tried to sell its proposed intimate alliance with American - virtually a merger in all but share ownership - it failed notably to get across the network economics argument. One reason for the failure was that the alliance contained very heavy overlap on many London-US routes, such as New York, Boston and Dallas. In some cases the combined market share of the two airlines was either 100% or not far off it. But London-New York is an atypical airline market these days, since most of its traffic is gateway-to-gateway rather than transfer. BA currently has just under 40% of its Heathrow passengers as transfer from somewhere else, and it is trying to reduce this proportion (or at least the low-yield transfer passengers) in order to concentrate on more lucrative business traffic between the world's two main financial centres. But the converse is true at most continental hubs such as

Frankfurt, Schipol, Paris Charles de Gaulle and Brussels, where transfer passengers are two thirds or more of passengers. This means that alliance network economics apply more to them than to other hubs.

When two firms merge to shrink competition and grow market share they achieve scale economies simply by pooling their assets and eliminating the least efficient. Actually, most academic work shows they try to do this but fail, in the case of friendly mergers, because they parcel out capacity cuts in a sub-optimal way. In the case of hostile takeovers, nearly all the research shows that the only gainers are the shareholders of the acquired company who sold out for a cash offer. They capture the takeover premium the acquirer is forced to pay. The airline industry might contemplate how much the acquisition of McDonnell Douglas and Rockwell has to do with the current woes of Boeing, whose shares have fallen so low that its chairman himself warned last month it could itself now be prey rather than predator.

In the case of airlines, national ownership rules inhibit most international mergers or takeovers and traffic rights under bilateral air treaties limit the possibility of capacity reduction. Instead the partners have to capture the scale economies of the network by co-operative pricing. This is possible because of the plethora of open skies deals that the US government has negotiated with European countries. These have been driven through by the administration largely as a second-best solution to global liberalisation (a practical impossibility) as a way of facilitating the growth and expansion of the US's carriers around the world. Since they give US airlines access potentially to the whole European market through a deal with one member country of the EU, while giving no real access behind US gateways they are ludicrously one-sided. With these deals goes immunity from antitrust rules on price collusion, hence for co-operative pricing.

As the Illinois authors explain, "under co-operative pricing each of the alliance partners recognises that asking for a high return for its portion of an interline ticket raises the overall fare, which in turn hurts the other partner by depressing traffic in the market. Taking the other partner's interest into account, each alliance partner thus moderates its pursuit of higher revenues, and the result is a lower interline fare". They have modelled the fare setting of non-allied and allied airlines and found that when setting fares for a section of an interlined journey, the non-allied airlines think only of themselves, getting what they can for that sector without any regard to the revenue and competitive effects of the total journey. This creates what the authors call negative externalities. These are internalised by alliance partners taking a broader picture of the total fare, setting it lower to maximise revenues and so offering the traveller a lower fare.

The effects of a Lufthansa/SAS split

The authors looked at how this analysis would affect consumers in the event that United's alliance with Lufthansa and with SAS were dissolved (the other Star partners were not included in the study). United and Lufthansa together serve 1,089 interline city pair markets, while United and SAS serve 169 markets. Total traffic is estimated in these markets to be 46,780 passengers per quarter. The authors conclude that if United's alliances were dissolved, fares would rise and the welfare loss to passengers doing interline journeys would total between $50m and $82m per year. Now this must all be providing food for thought for Mr Van Miert's people, whose main response so far has been to ask for slot surrender at Frankfurt and a curbing of frequency on some busy routes - as if cutting capacity was going to do anything to reduce fares instead of increase them. The regulators are trapped in the illusion that new carriers are going to spring up like warriors from the dragon seeds sown by the edicts of Brussels.

Now the Illinois work might be fine for network economics, but it lurches into problems when it comes to the sort of origin-destination traffic over London and New York that de-railed the alliance plans of BA and AA. The authors did study the effects, through their computer model, of scrapping the alliance on gateway to gateway flights. They found that fares could possibly rise by 5%, but that the statistical chances of this happening were so low that "the effect cannot be distinguished from zero". Hence there is no clear evidence of consumer loss from OD passengers at gateway airports where the allies have overlapping services and co-operative prices. How convenient for United and Lufthansa. Pull the other one.

A vintage year for privatisations

1999 could be by far the most active year ever for European airline privatisations. Air France, Iberia, Austrian and Alitalia are expected to come to the market with secondary offerings that will further dilute their level of government ownership. In addition, regional and niche players are looking to tap into the equity markets. Do the equity markets have the appetite for this onslaught; why all this activity this year; and what should investors be aware of when looking for good value?

Three of the four flag carriers coming to the market in 1999 - Air France, Alitalia and Iberia - have been through the European Commission's state aid process. All three airlines have emerged with their balance sheets restored and, equally importantly, their workforce and unions more attuned to some of the harsher realities of commercial life. Embarrassing as it is for a government to have to seek approval from the EC to rescue a high profile public company, there can be major benefits to the exercise.

Restructuring businesses is a painful process, and one that usually requires changes in long-established working practices and often job losses. Governments and the senior managers they appoint to run their airlines often have not had the conviction to carry out reforms themselves. Union conflicts are usually bloody, make bad press and can be potentially vote-losing. Placing the blame at the door of EC bureaucrats is sometimes viewed as an easier option.

The EC state aid approval process for many airlines has carried an obligation for the state to embark on a privatisation process when market conditions permit and when the airline is financially fit enough. Although the EC has no formal powers to insist that a government sell off its airline, the EC does have to give its approval for any funds that a government wishes to put into its airline under the Market Economy Investor Principle (MEIP). The MEIP rules only apply when there are no private investors in the company.

As Iberia, Air France and their respective government shareholders discovered, MEIP is a time-consuming and expensive process. Moreover, the EC has the power to place restrictions and make conditions that will determine the future strategy of the airline, including selling off assets and limiting capital expenditure.

So the governments of France, Italy and Spain, encouraged by the EC, have decided to embark on the partial sale of their airlines to the private sector. Each airline comes with repaired balance sheets and an EC inspired and approved cost reduction programme. Each has returned to profitability, and the equity market specialists at the relevant investment banks have persuaded the governments that there is enough investor appetite for a successful flotation.

Membership of strategic alliances

Having an association with a global alliance is certainly beneficial to flotation prospects and also likely to increase the sale proceeds. Private investors will probably feel comforted that successful carriers such as British Airways and American are taking a 10% stake in Iberia and that they will be bringing commercial skills to their new partners.

Yet the major airlines themselves have a very patchy track record in their own investment history. For example, British Airways, which is probably the most acquisitive airline in the world, has made some questionable investments. Although it eventually emerged from its investment in USAir showing a profit, for many years the shares in the US carrier traded well below the price paid by BA,

and the dividends due to BA were at one stage suspended.

Other investments made by British Airways provide examples of why private investors should be cautious in investing alongside alliance partners. From a strict RoI perspective, BA's investment in the shares of Deutsche BA and TAT have been questionable at best.

Both carriers have been loss-making and therefore unlikely to have provided an adequate return to BA in terms of dividends. While British Airways recognises strategic benefits from owning these carriers, these benefits may not apply to a private shareholder.

Air France: hugely oversubscribed

It is likely that the Air France sale will eventually be the first of possibly two or three tranches sold by the French government. Therefore, it was important that the sale of the first tranche was well received by the investing community so that appetite remains healthy for any subsequent tranches. Also, with the employees expected to take up their allocation of shares that would give them roughly 13% of the airline, an unsuccessful float was never on the cards.

The first phase of Air France's privatisation took place on February 22nd 1999. Some 17.4% of the airline's capital was placed on the stock exchange and put an initial valuation of the airline at roughly US$3.5bn.

The process was a success. The international portion was 41 times oversubscribed and the domestic tranche 12 times oversubscribed, which ensured a healthy demand in early trading. The shares closed on their first day of trading at Euro 16.1 - some 13% above the offer price.

The comparative market capitalisations of British Airways, Lufthansa, KLM and Swissair are shown in the table below. The potential exists for Air France to achieve the same level of profitability as its peers, and the advantage of having an unconstrained hub is a key selling point for the French airline.

But there are two questions investors must ask. First, will Air France be able to achieve and maintain a competitive cost base that will allow the airline to compete with rivals British Airways and Lufthansa in good times and bad? And second, will the airline be able to grow at twice the rate of the market in order to recapture lost market share, which is the stated company policy, without destroying yield and lowering profit margins?

EUROPEAN AIRLINE VALUATION INDICATORS

	Air France	Alitalia	British Airways	KLM	Lufthansa	SAir Group	Air France (discount)/ premium to peer group
Year-end	Mar.	Dec.	Mar.	Mar.	Dec.	Dec.	
Share price (Euros)	14.20	3.17	6.47	24.25	18.9	188.0	
Market cap. (Euro m)	2,775	4,915	6,660	1,790	7,210	2,170	
1997 revenues ($m)	10,185	5,085	14,184	6,688	13,354	7,386	
1997 RPK m	71,553	35,992	113,045	56,171	91,292	25,651	
1997 RTK m	11,747	5,022	15,406	9,550	15,589	4,086	
Historic							
P/E 1997 or 97/98	13.3	28.8	13.4	6.9	29.5	43.0	(45%)
P/GCF 1997 or 97/98	2.8	8.6	5.7	3.1	8.4	3.4	(52%)
Forecast							
P/E 1998 or 98/99	28.4	18.6	23.4	7.6	16.6	14.2	77%
P/E 1999 or 99/00	12.3	16.7	15.4	8.0	12.9	12.5	(6%)
P/E 2000 or 00/01	10.6	16.7	12.9	5.3	12.7	16.0	(17%)
P/GCF 1998 or 98/99	3.4	8.1	5.5	3.0	5.2	3.1	(32%)
P/GCF 1999 or 99/00	2.7	7.9	5.9	2.6	4.4	2.8	(43%)
P/GCF 2000 or 00/01	2.5	6.0	5.4	2.1	4.4	3.0	(40%)

Note: *P/GCF = profits to gross cash flow.* **Source:** *WATS and Credit Agricole Indosuez Chevreux.*

Iberia : major BA/AA influence

The first stage - whereby British Airways and American have acquired some 10% of Iberia through a joint venture company - was completed in February 1999. In March, the Spanish government, through the state holding company SEPI, will sell a further 30% of the airline directly to institutional investors.

In a third phase some 50% of the remaining state-owned shares will be ceded to the private sector probably through a public share offering on the Madrid stock exchange later in 1999. Iberia will also become a member of the oneworld alliance before the end of this year.

British Airways and American receive two seats on the Iberia Board and representation on the Board's delegated committees. Both British Airways and American have pledged to retain their shares in Iberia for a minimum period of three years.

However, their influence extends beyond that: 30% of the votes carried by the institutional shareholders are been pledged to BA and American on certain, but unrevealed, issues.

Alitalia: the appropriate public share

The second phase of the privatisation of Alitalia has now been delayed to probably the second half of 1999 by Italy's current left-wing government. The Italian government retains a 51% stake in the airline, with private investors holding 29% and the employees 20%.

The timing of the second phase sale now appears to rest on a government decision as to what is the appropriate level of retained ownership in Alitalia. There is a concern that if the government sells, for example, another 20%, the pilots will take up a significant share and gain effective management control at the airline.

Investors will be wooed by the prospect of material benefits arising from Alitalia's alliance with KLM and Northwest. But there are also some concerns about how much of the alliance benefits will accrue to Alitalia and how much to KLM.

Austrian: bankrolling eastern expansion

Austrian is coming to the market as part of a strategic alliance, bolstered by equity stakes from several airline shareholders. Although the airline is part of Swissair's Qualiflyer grouping with Swissair holding a 10% stake, Austrian also has two more passive shareholders in Air France and All Nippon, which hold 1.5% and 9% respectively.

The Sch3bn ($240m) share offering, which is expected in spring 1999, (it was originally planned for 1998 but postponed due to the adverse stock market conditions) will see the Austrian government share in the airline diluted to 39%. The funds raised will be used to bankroll Austrian's expansion of services in Eastern Europe where it ranks second behind Lufthansa in terms of the volume of east-west European traffic handled.

The role of investment banks

The fees earned by investment banks in major flotations are significant, and therefore the competition to win such profitable mandates is fierce. Separate roles are usually available, one group of banks advising the government, and a second set advising the airline. The government advisors have the primary role, conducting the sale process, including setting the price and forming a consortium of banks that will underwrite the issue.

The advisors appointed by the management of airlines will look after the carrier's interests (which often involves trying to talk down the initial price at which the shares are issued) and may be retained by the airline once the flotation is completed in order to advise on brokerage matters and consequent M&A activity.

The consolidation of the investment banking industry has left a handful of players that have a truly worldwide presence and therefore capable of handling a global share

offering. It is likely that any future privatisations will include at least one of these bulge-bracket firms and they are often asked to sit alongside banks that represent the local market.

Thus with the Air France privatisation roles have been given to French banks SG Investment Banking as global lead manager, and Credit Agricole Indosuez and Lazard Capital Markets as global joint lead managers, with the bulge-bracket tier being represented by Morgan Stanley Dean Witter acting as global joint lead manager.

If the sum total of the above were not enough for the investment community to digest in one year then it should be remembered that some privately owned airlines are expected to come to the market, either this year or next.

British Midland has retained Dresdner Kleinwort Benson to examine the possibility of conducting an IPO. EasyJet is also rumoured to be seeking a flotation on both the London stock market and on NASDAQ. The current strength of the European stock markets would suggest that there is probably enough liquidity to ensure that all of these share issues will be completed, but it would be prudent for the investment banks to be cautious about the pricing.

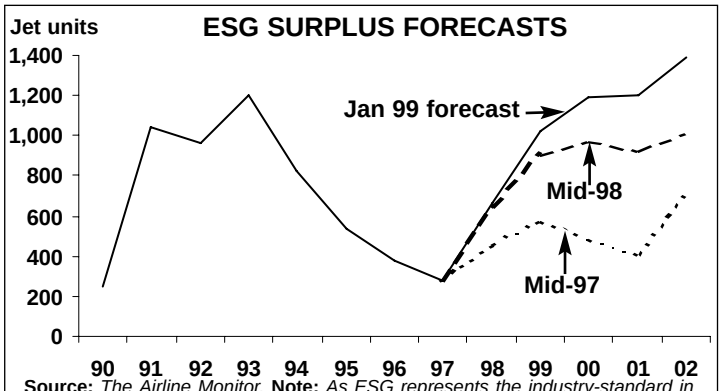
Market balance: Cassandra returns

Aviation Strategy regularly follows ESG's forecast of the global supply/balance, the latest of which was published in February. Unfortunately, the outlook is deteriorating.

In fact this graph clearly shows how ESG has become progressively more pessimistic with each half-yearly forecast since mid-1997, when there were already a few concerns about the market balance but when no-one was anticipating the Asian crisis. The latest forecast indicates a surplus of 1,018 units in 1999, back to the levels of the early 1990s recession (though this now represents just 8% of the world fleet as against nearly 12% in 1993).

Essentially, the latest increase in the forecast surplus derives from a higher projection of deliveries. Neither the traffic forecast (see page 20) nor the scrapping rate have been changed. ESG comments: "Because of the larger near term production numbers the surplus is now on the edge of the real overcapacity danger zone." In the early 1990s ESG was accused of being a "Cassandra" forecaster, which was true in the sense that its gloomy predictions were disbelieved or ignored.

There is one important observation, however. Much of the increased production consists of regional jets, 1,200 of which were on order or option at the end of last year. Some of the traffic they carry is being switched from turboprops, whose business is not included in the ESG traffic totals. So there might be a case for arguing that the extent of the surplus is being exaggerated because these new aircraft will bring, in effect, traffic with them instead of just increasing capacity.



Source: *The Airline Monitor.* **Note:** *As ESG represents the industry-standard in supply/demand forecasts, it is useful to appreciate the basic methodology. To summarise: the actual or projected number of RPMs is converted into aircraft by factoring in the average global load factor to get to ASMs, which are then divided by optimal average utilisation, speed per hour and average seating to give an estimated demand (cargo jets are also added in). This demand figure can then be subtracted from the actual or projected supply of aircraft in the worldwide commercial aviation fleet, the fleet projections taking account of future deliveries and retirements. The difference between demand and supply is the surplus that can manifest itself in jets parked in the desert or in underutilised and/or underoccupied aircraft flying around.*

Sunset for turboprop manufacturing?

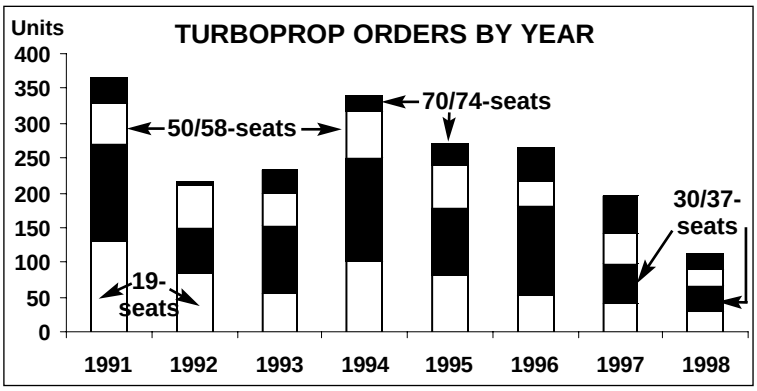
The end of another year, and yet another manufacturer exits the turboprop market. The last new-build ATPs and Jetstream 41s were delivered in December 1998, bringing to an end a 50-year era in turboprop production by British Aerospace.

British Aerospace's exit - joining Fokker and Saab - means that the question now may be not whether there is a long-term future for turboprops, but *when* will the new turboprop market disappear. As regional jets gain more and more popularity, turboprop orders in developed markets are becoming rarer. The remaining turboprop manufacturers probably realise this, although publicly they all claim to be confident abut the future of the turboprop market. Nevertheless, they appear to be developing regional jet products as fast as they can.

In calendar year 1998 there were just 112 turboprop orders recorded, compared with 195 in 1997. The 1998 figure was the lowest yearly total in the 1990s, and all seat-size categories suffered a substantial drop in sales compared with the year before (see chart, below).

The manufacturers

Embraer believes that Latin America in particular will remain an important market for turboprops for another five years, before a mass changeover to regional jets takes place. However the market for new orders in Latin America may still be tough as many second-hand turboprops may become available from the North American market as regional jet deliveries there begin to rise. Embraer has also opened a sales office in Melbourne as it seeks out turboprop and jet orders in the Asia/Pacific region.



The Emb-120 managed just one (large) order in 1998 - for 20 aircraft, from SkyWest - and it faces increasing competition from Embraer's own ERJ-135 and Fairchild Dornier's 328JET. These latter aircraft look set to do to the 30-37 seat turboprop market what regional jets have already done to the 50/58 seat and 70/74 seat markets in the late-1990s.

Increasingly, jets appear to be core to development plans at Embraer. In addition to the ERJ-135 and ERJ-145, only last month (February 1999) the Brazilian manufacturer announced plans for 70- and 90-seat jets - the ERJ-170 and ERJ-190. Interestingly, Embraer forecasts demand of 2,500 ERJ-170s and ERJ-190s over a 10-year period.

The only manufacturer developing a significant new turboprop product is Bombardier, which believes its 70-78 seat Dash 8-400 - now renamed the Q400 - will prove popular due to its reduced noise and vibration. The manufacturer still insists that turboprops are the best aircraft for short-haul, low yield routes of an average stage length of 340-350 kilometres - particularly if the aviation cycle downturn is steep. Bombardier is hoping for a market of 400 Q400s, although sales are slow at present. Bombardier recorded 25 orders for its Dash family in 1998, compared with 44 in 1997.

Bombardier is also developing its jet range. Roll-out of the CRJ-700 is on target for May this year, with initial deliveries scheduled for late 2000.

The French-Italian ATR consortium had to re-focus on turboprops following the dissolution of Aer International (Regional) in 1998. Twenty-one ATR 42 and 72s were sold in 1998, compared with 54 in 1997. ATR aims to reduce operating costs on ATR 42/72s by around 30% by 2003.

If a possible marketing agreement with Fairchild Dornier does go ahead, the two entities would jointly market the ATR42/72, Fairchild Metro and Dornier 328. However it is highly likely that any alliance will depend primarily on plans for jet products, with the turboprop market being only a secondary concern.

The future of the ATR turboprop product line may rest on further local assembly deals similar to an agreement with Xian Aircraft for partial building of the ATR 72 in China. Last month (February) a preliminary agreement was also signed for the manufacture of the ATR 42 in India by Hindustan Aeronautics.

However, ATR also claims that there is still a market for turboprops, particularly in Asia where the recession may force airlines on marginal routes to change to turboprops from jets. That may be so, but cash-strapped Asian airlines are much more likely to lease or buy second-hand aircraft than place new turboprop orders.

Fairchild Dornier recorded 25 turboprop orders in 1998, for the Metro 23, Do-228 and Do-328, compared with 29 in 1997. On the jet side, deliveries of the 328JET start this year, while the future of the 528JET, 728JET and 928JET may depend on the outcome of talks with ATR. The latest information was that final negotiations over a new marketing company for both manufacturer's jet and turboprop products were due to be completed by the end of February or early March.

Elsewhere, Indonesia's IPTN is still searching for partners for its N-250 turboprop project, but potential investors are likely to be wary not only about the turboprop market in general but about the future of IPTN in particular.

Raytheon says its 1998 firm order figures for the Beech 1900D are confidential (*Aviation Strategy* has estimated 1998 orders as 15, compared with 20 in 1997), but the pressure from the mass of second-hand 19-seaters that are now available must be immense.

TURBOPROP 1998 FIRM ORDERS

	Beech 1900D	Emb -120	ATR 42-500	ATR 72-500	Metro 23	Do-228	Do-328	Dash 8-100	Dash 8-200	Dash 8-300	Dash 8-400	BAe ATP	Saab 2000	Total
European airlines														
Augsburg Airways									1	2				
British World Airlines												2		
Brymon Airways										8				
Cimber Air				2										
EuroCityLine							3							
Rheintalflug										1				
SAS Commuter											2			
Sun-Air												1		
Wideroe										3				
European total														***25***
North American airlines														
SkyWest		20												
North American total														***20***
Asian airlines														
Air New Zealand				7										
Ryukyu Air Commuter								1						
Sunstate Airlines									1					
Asian total														***9***
Others														
Air Guadeloupe			1											
Amakusa Airlines								1						
Arkia				3										
BWIA										2				
Oman Air			2											
TAVAJ									1					
Undisclosed	15*		1	5	11	2	9		1	1			3	
Others total														***58***
TOTAL	**15***	**20**	**4**	**17**	**11**	**2**	**12**	**2**	**4**	**17**	**2**	**3**	**3**	***112***

Note: **Aviation Strategy* estimate.

AirTran: the airline formerly known as ValuJet

AirTran Airlines has reported a profit for only one quarter in the past three years but has survived thanks to enormous cash reserves. Is it now nearing a liquidity crisis? Over the past year the low-cost carrier has gone up-market and will be the first to introduce the 717 this summer. Will its new CEO - Joseph Leonard - get the costs down and restore profitability?

AirTran has had a brief but chequered history, even by US new-entrant carrier standards. It began life as ValuJet in October 1993, offering low-fare services in competition with Delta in leisure markets out of Atlanta, and became an immediate success in the marketplace.

Its June 1994 IPO and subsequent spectacular financial success made it a favourite on Wall Street and set a favourable trend for new entrants generally. The rapidly expanding carrier earned net profit margins as high as 16-18% in 1994 and 1995, as its yields were among the best and unit costs the lowest in the US airline industry.

Then it all went wrong. A crash in May 1996, followed by a safety review by the FAA and a four-month grounding, changed ValuJet's fortunes in a short period of time. However, there had already been signs that rapid growth and Delta's more aggressive pricing would reduce ValuJet's profit margins. The net effect was a $41.5m net loss for 1996, in contrast to the previous year's $67.8m profit.

ValuJet was able to weather the crisis because of its exceptionally strong financial position: it had $254m in cash in April 1996. But when it was finally allowed to resume scaled-down operations at the end of September that year, it faced formidable challenges. On the revenue side, it faced a severe image problem resulting from the negative publicity and the extended debate about maintenance practices - something that affected the low-cost industry sector generally. ValuJet found that it had to discount heavily to win back passengers, which depressed yields, and even then load factors were unsatisfactory.

The problem on the cost side was twofold. First, the carrier was handicapped by a reduced fleet size (just 15 initially) and was not allowed to build up the fleet fast enough. In the summer of 1997 it was still five aircraft short of the 30 considered necessary to restore profitability.

Second, increased maintenance needs and structural changes required by the FAA had an adverse impact on unit costs, which surged from under 7 cents/ASM in 1995 to 9.40 cents in 1997.

To tackle the new challenges, in November 1996 ValuJet strengthened its leadership by appointing former TWA and Continental president Joseph Corr as president/COO. The two top executives and original founders of ValuJet, Robert Priddy and Lewis Jordan, focused on overseeing the operations of a newly-created holding company.

The leadership believed that the higher costs would be largely offset by efficiency improvements. But some of the cost increase was permanent, because the changes implemented in maintenance, organisational structure and compensation methods made ValuJet a more conventional type of operation. On the positive side, it passed all the subsequent FAA inspections with flying colours.

After $48m net losses in October 1996-June 1997 and when facing a further loss in the critical third quarter of 1997, the company grabbed the opportunity to buy AirTran Airways for $62m and give up the ValuJet name. The merger, completed in late 1997, retained key directors from both companies and gave Joseph Corr the job of CEO. It also spawned a new business strategy designed to attract a broader customer base.

The high costs associated with the merger, aircraft refurbishment, product rebranding and an aggressive advertising campaign contributed to the doubling of the net loss to $96.7m in 1997.

AIRTRAN FLEET PLANS

	Current fleet	Orders (options)	Delivery/retirement schedule
DC-9-30	40	0	To be gradually replaced by 717s
717-200	0	50 (50)	Launch customer. Deliveries from summer/autumn 1999.
737-200	10	0	5 to be retired in 2H1999, remaining 5 in 1Q2000
TOTAL	**50**	**50 (50)**	

But hopes were high that cost synergies would kick in and that profitability could be restored in the summer of 1998.

One of the biggest potential benefits was an immediate substantial increase in scale from 32 to 43 aircraft. ValuJet also benefited from AirTran Airways' maintenance facility in Orlando. However, a mix of DC-9s and 737s did not make any sense.

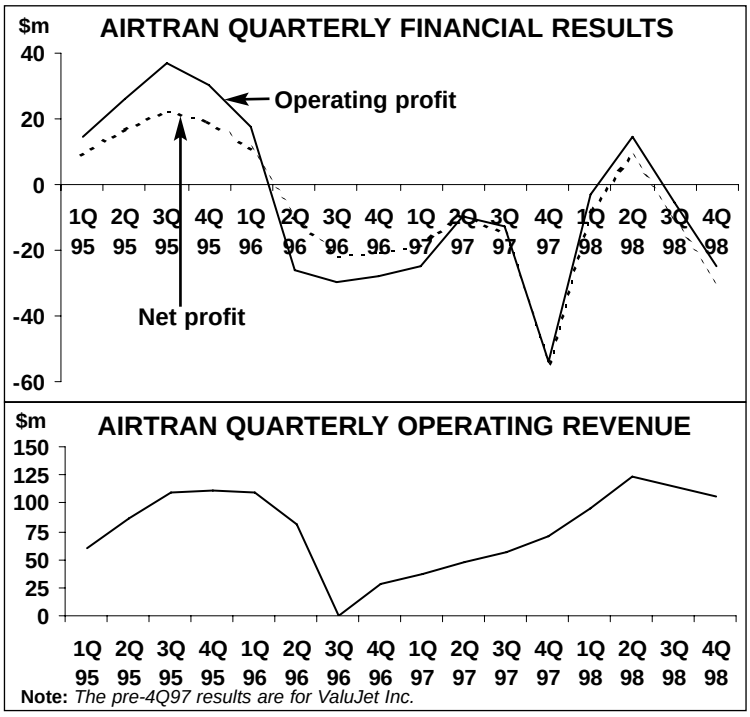
By March last year AirTran reported that a turnaround was well under way and that it would be "solidly profitable" in 1998. A $8.6m net profit was posted for the second quarter - the first positive result in two years. But the important third quarter saw an unexpected $10.9m loss, which was blamed on predatory pricing by Delta, higher maintenance costs and expenses associated with threatened job action by flight attendants.

The latter looked like a major blunder: the company had spent $3m to reconfigure aircraft so that they could be operated with fewer crew members in the event of work stoppages by flight attendants, which seemed likely when a 30-day cooling off period expired in early September. But the threat was averted when agreement was reached on a new contract.

In an attempt to rescue the situation, a major route realignment was implemented in September that eliminated several cities from the network but boosted service in key business markets. This necessitated some furloughs, including pilots and flight attendants.

But AirTran reported a $40.8m net loss for 1998. That included a $27.5m charge to write off the 737 fleet, but the previous year's results included a similar amount in shutdown, rebranding and other special charges. Nevertheless, the 1998 loss was less than half of the previous year's and, when the fleet charge is excluded, AirTran was close to breakeven in the fourth quarter.

The past year's trends in operational performance have been in the right direction. Unit costs fell significantly at long last, from 9.40 cents per ASM in 1997 to 7.90 cents in 1998 (excluding one-time charges), helped by a 16.4% decline in fuel prices. Traffic and revenues more than doubled, while the load factor rose by 6.7 points to 59.6%. Yield and unit revenues rose by 3% and 15% respectively in 1998, though the average fare and yield trends reversed in the fourth quarter when AirTran faced the same considerable pressures on the pricing front as the rest of the industry.



Note: *The pre-4Q97 results are for ValuJet Inc.*

A turnaround is all the more critical because AirTran's previously substantial cash reserves have whittled down to almost nothing. The reserves have fallen at a steady rate from $254m in April 1996 to just $43m at the end of September 1998. On the basis of the fourth-quarter loss, the year-end cash figure (not released) could be as low as $10m.

On the positive side, the company has kept its debt burden moderate by selling surplus DC-9s (which were kept in pristine condition during and after the 1996 grounding by sending them to the Mojave Desert) and refinancing or retiring debt, which has helped offset initial payments for the 717s. But the continued losses and uncertainties have had an adverse impact on credit ratings.

AirTran's share price fell from a peak of $25-$30 in early 1996 to less than $5 at the end of that year and has since then barely risen above that level. In mid-February the price was just over $3.

New leadership

The failure to return to profitability, as well as debacles like the spending on possible job action by flight attendants, cost CEO Joseph Corr his job - he resigned in January. The company said that Corr, a turnaround specialist, had been taken on the understanding that he would only lead the air-

line through the restructuring process, but he would have obviously preferred to see profits. AirTran named a prominent AlliedSignal executive, Joseph Leonard, as chairman, president and CEO.

Leonard, a 30-year airline industry veteran with stints at Northwest, Eastern and American, is extremely highly regarded in the industry. He has been described as a strong and aggressive leader, with a record of improving profitability. He has been given a clear line of authority in his new position, which many think bodes well for AirTran.

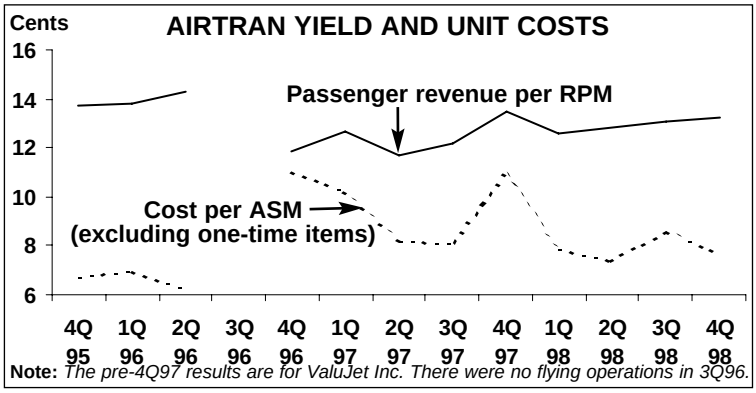
Leonard has indicated that, in addition to continuing Corr's focus on safety, reliability, caring customer service and market image as a value producer, his immediate focus will be on the basics: reducing AirTran's unit costs to around 7.50 cents per ASM and improving liquidity.

Fleet plans

Fleet strategy plays a critical role in AirTran's cost-reduction and financial recovery efforts. First, there is the ongoing process of simplifying the existing fleet. Second, the 717 will offer substantial cost savings - the airline says that it will be 20% cheaper to operate than the DC-9-30 and up to 35% cheaper at peak periods.

Having earlier standardised the DC-9 fleet from as many as 11 different configurations to just one and disposed of the MD-80s, AirTran has now accelerated the retirement of the 10 737-200s gained in the merger. Five will leave the fleet in the second half of this year, and the remaining five (of which four are owned) are expected to retire early next year. The 40-strong DC-9-30 fleet will remain unchanged in the short-term.

Both the DC-9 and the 737 will be replaced by the 100-seat 717-200 - the former MD-95 ordered by ValuJet. There are 50 firm orders and 50 options, with deliveries beginning this summer. In addition to securing good prices, AirTran's launch customer status has given it useful publicity - the aircraft rolled out in its colours in late January.



Note: *The pre-4Q97 results are for ValuJet Inc. There were no flying operations in 3Q96.*

The speedy 737 retirements mean that there will be no net addition to the fleet this year. From next year, the plan has been to retire one aircraft for every two 717s delivered. However, fleet growth may well be slowed by liquidity considerations or a desire to halt growth temporarily in order to restore profitability.

Route network strategy

AirTran has returned to most of the old ValuJet markets. Its network now covers 29 cities throughout the Southeast, Florida and the East coast, including many in the Northeast and Midwest. The hubs are at Atlanta and Washington Dulles. The merger meant a relocation of headquarters from Atlanta to Orlando - apparently due to incentives provided by the state of Florida.

But AirTran remains firmly committed to Atlanta Hartsfield, the world's busiest airport where it is the second largest carrier. Much of the growth over the past two years has focused on Atlanta, most recently to boost frequencies in key business markets.

Most significantly, the carrier began serving New York LaGuardia at the end of 1997, after testing that market briefly (just before its grounding) in May 1996. This time around, it had adequate slots thanks to the DoT's intervention. According to analysts, the six-per-day service has been successful.

But the strategy of operating non-stop flights between Orlando and various points in the Northeast turned out to be a mistake, as the low frequencies did not attract sufficient traffic in those fiercely competitive markets. In September AirTran discontinued all Orlando non-stops except for its 11 daily flights to Atlanta, so all Orlando traffic is now routed via the main hub.

In that same month, AirTran also eliminated all service to five smaller cities (Allentown, Des Moines, Islip, Syracuse and West Palm Beach) in favour of boosting frequencies in bigger and more profitable markets and introducing new service to Newark, Miami and Quad Cities/Moline from Atlanta. The carrier said that the benefits of this major schedule realignment would not be fully realised until early this year.

In an interesting new move, the company has announced a joint marketing partnership with Beau Rivage Resort to operate daily non-stops to Gulfport (Mississippi) from six major Southeast cities from mid-March, to coincide with the opening of a $675m resort. But otherwise the new leadership looks likely to continue to focus resources on Atlanta, where AirTran has 18 gates and the ability to expand to 22.

Going up-market

AirTran's new post-merger strategy of catering better for the business passenger was broadly in line with the strategies already adopted by low-cost carriers like Reno and Frontier. It includes a "no-frills" business class which offers larger seats, more legroom and assigned seating, plus full refunds in the case of cancellation (none of its fares have roundtrip purchase or Saturday night stay requirements), for a $25 fare supplement on non-stop flights and $40 on multi-stop flights. AirTran has also joined all major CRS systems and begun paying commissions to travel agents.

In an innovative and aggressive approach to boosting customer loyalty, a year ago the carrier began offering an FFP that gives passengers the option of redeeming awards on 14 competing airlines. Since AirTran does not have agreements with the other airlines, it has to purchase the award tickets on the open market.

But is going up-market producing benefits for AirTran? It is probably too early to tell, though yields have improved and in June last year, when the carrier had completed the installation of business class seating, it won Entrepreneur magazine's 1998 award for "Best domestic low-fare airline".

Like its competitors, AirTran probably felt that it did not have much choice, because the environment has changed and it is no longer possible to compete as a pure low-cost, low-fare, no-frills, ValuJet-type shoestring operation. But the carrier is not abandoning its basic low-fare strategy and leisure market orientation - it likes to think of itself as an "affordable fare airline".

Although analysts were initially sceptical about the business class strategy, many now believe that that is precisely where low-cost carriers can make the biggest impact. This is because the major carriers can easily offer just as low leisure fares but cannot afford to match the low-cost carriers' business class fares.

Like many other low-cost carriers paying extremely low wages, AirTran has seen its workforce unionise in recent years. Since 1994 its pilots, mechanics and flight attendants have all voted to be represented by various unions. The pilots and the mechanics never posed problems because they were offered satisfactory overall compensation packages.

But relations with the flight attendants, who are among the lowest-paid in the industry and were previously refused the same benefits and provisions as the pilots, have always been difficult. Tentative agreement on a first contract was reached in early September, but only after the flight attendants had reached the end of their tether after three years of unsuccessful, federally-mediated negotiations and were threatening work slowdowns and stoppages.

The four-year deal, ratified by union members, granted an immediate 10% pay increase, 4% annual rises and longevity increases. AirTran's 500 flight attendants also secured the same per diem rates, vacation and sick pay, merger protection and grievance procedures as the pilots.

Prospects

AirTran's immediate priority now is to become profitable, and analysts believe that will be achieved in 1999 thanks to last year's restructuring and marketing initiatives. The current First Call consensus forecast is a net profit of about $6.5m for the second quarter and marginal profits for the third quarter and the year, followed by a $23m profit in 2000.

But there could be some further restructuring to avoid a cash crunch. AirTran's CFO Dick Schroeter indicated recently that the cash flow may not be sufficient to cover the costs of owning and operating the planned fleet. It is not clear whether this might mean order cancellations or deferrals - at this stage the airline is merely talking about selling some excess aircraft to raise cash. As is the case with Frontier at Denver, AirTran's biggest asset is probably its Atlanta hub. But it now has a leaner and much more aggressive Delta to compete with, as well as Delta Express and more East coast-oriented Southwest. Like other low-cost new entrants, AirTran will have a hard enough job coping with legitimate competition, let alone practices that may be predatory.

By Heini Nuutinen

Japanese deregulation: Skymark and Air Do jolt JAL, ANA and JAS

This year will see the curtain of deregulation finally rise on the domestic air transportation industry in Japan. 1998 saw the dramatic debut - at least in Japanese terms - of two new airlines, Skymark Airlines and Air Do. Skymark started operations on Haneda (Tokyo) to Fukuoka - the second busiest domestic route - on September 19, while Air Do started flying between Haneda and Sapporo - the busiest domestic route - on December 20. Their impact on the domestic aviation market was instant.

JAPANESE AIRLINES' FLEET PLANS

	Current fleet	Orders (options)	Delivery/retirement schedule/notes
All Nippon Airways			
747-100	14	0	
747-200	5	0	
747-400	21	1	
767-200	20	0	
767-300	42	0	
777-200	12	8 (7)	Delivery by 2002
777-300	4	5	Delivery by 2003
A320-200	25	0	
A321	3	4 (8)	Delivery by 2000
A340-300	0	5 (5)	Delivery in 2002
TOTAL	**146**	**23 (20)**	
Japan Airlines			
737-400	4	1	
747-100	7	0	
747-200	28	0	
747-300	13	0	
747-400	37	13	For delivery by 2002
767-200	3	0	
767-300	18	1	
777-200	6	4 (10)	Delivery in 1999
777-300	3	2	Delivery in 1999
DC-10	16	0	
MD-11	10	0	
TOTAL	**145**	**21 (10)**	
Japan Air System			
777-200	7	0	
DC-10	1	0	
MD-80	29	0	
MD-90	16	0	
A300	36	0	
TOTAL	**89**	**0**	
Skymark Airlines			
767-300	2	0	Plans to lease at least one more 767
Air Do			
767-300	1	0	Plans to lease at least one more 767

That's because Skymark and Air Do are the first new entrants in 43 years (since JDA, now known as JAS, began operations in 1945) - and thus they have an importance way beyond their current small size.

Partial deregulation was introduced in Japan in 1985 when the government abolished the so-called 45/47 policy (named after the Japanese Showa year, equivalent to 1970/71), which had applied strict economic rules to all aspects of the Japanese airline industry. The three main airlines - JAL, ANA and JAS - were required to follow the Ministry of Transport's (MOT's) 'administrative guidelines' as to their business plans and domestic and international routes flown.

The partial deregulation enabled the three carriers to make their own decisions on capacity increases, introduction of new types of fares, routes to fly, etc. In 1997, the government further deregulated the business by allowing new entrants into the domestic market.

The new carriers

Skymark Airlines was set up by HIS, which is the number two Japanese tour operator in terms of overseas travellers handled. As well as developing into the airline business via Skymark, HIS is a major force behind changing the distribution system in Japan.

Air Do started up with 26 shareholders, owners of small- and medium-sized Hokkaido-based companies, plus professional individuals. The main shareholders are now Kyoto Ceramics, Reikei Co., Tokyo Marine and Fire Insurance and Hokkaido Electric. The company has made a direct appeal to the citizens of Hokkaido to support the new airline and bring more affordable fares to the region. So far 7,000 shares have been sold at Y50,000 each ($450) mostly on a one share per person basis,

which has created a useful market of loyal passengers.

From the outset, Skymark Airlines and Air Do have been achieving load factors of around 80%, compared with the initially expected level of 70%. Moreover, Skymark Airlines has introduced a second 767 from November last year and has applied to the MOT to open two new routes Osaka-Fukuoka and Osaka-Sapporo, as Tokyo (Haneda) slots are virtually full at present. Air Do also plans to introduce a second 767 this year.

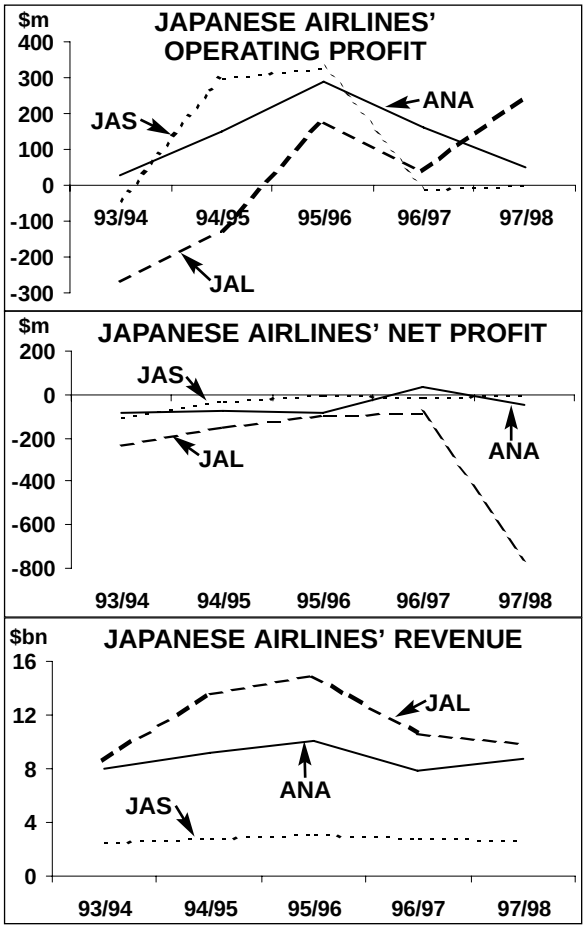
Impact on the domestic market

Skymark Airlines and Air Do introduced a new concept to the Japanese domestic market - no frills service and fares 36% cheaper than the incumbent in Skymark's case and 50% lower in Air Do's.

Japan Airlines, All Nippon Airways and Japan Air System have been forced to react to the entry of the two new airlines. They have been expanding FFP programmes aggressively in an attempt to tie up their customers; JAL has 4.3m members, ANA 3m and JAS 1.5m. Skymark and Air Do have no plans to introduce an FFP (though Air Do has the support of the 7,000 shareholders in Hokkaido).

Moreover, the three incumbents advertised 30-40% discount fares on the routes that the new entrants were going to operate, although the fares were limited to advance purchases of restricted seats. Yet such drastic discounting efforts did not prevent the drift of passengers to the new airlines. Passengers flown by JAL and ANA between Tokyo and Fukuoka in October were down by 5.0% and 6.5% respectively. Load factors dropped by some 10 percentage points; from 75.5% to 65% on JAL and from 75% to 66.2% on ANA, as against 81.3% for Skymark.

MOT statistics for the peak peak season traffic between December 25 1998 and January 4 1999 show that total passengers carried by all the domestic carriers registered a tiny growth of 0.3% on a year-on-year basis, but that total passengers carried by JAL, ANA and JAS fell by 1.7%.



Also, passengers on the high-speed Shinkansen train operated by JR Sanyo between Osaka and Kyushu Island, where Fukuoka is the major city, decreased by 8%. JR attributes the decline to competition from the new airlines.

In the latest development, JAL, ANA and JAS have extended reduced fares (which match those of the two new airlines) onto 50% of the frequencies where Skymark and Air Do compete.

This will inevitably squeeze profitability on their two main domestic routes. ANA, for example, generates some 16% of its revenue, and a higher proportion of its operating profit, on the two routes. On Tokyo-Sapporo, JAL alone operates 11 747 flights daily plus one DC-10 flight, and ANA and JAS have similar frequencies.

As Skymark and Air Do expand with the Osaka routes, the incumbents' control of the

domestic market will be further eroded. Domestic revenue as a proportion of total revenue is 26% for JAL, 70% for ANA and 94% for JAS. Unfortunately, there appears to be little prospect that the new entrants will stimulate the overall market because of the depth and extent of Japan's recession. Their impact is therefore directly on the three incumbents' traffic and yields. The high-speed Shinkansen train is also going to continue to lose passengers.

Cost breakdowns for the two new airlines are not yet available, but they seem to be pursuing classic low-cost strategies. They are minimising overhead costs by outsourcing, selling a simple fare structure and reservation system, offering no frills in in-flight service, using direct sales, and avoiding FFPs.

Skymark and Air Do have also entered into an agreement to share facilities at airport offices. Skymark has a maintenance agreement with ANA, but ANA is apparently claiming that it does not have capacity to handle more than a couple of Skymark aircraft.

Meanwhile, JAL, ANA and JAS are still operating on most of the non-profitable routes, a legacy of the MOT's administrative guidelines. And the three airlines, or at least JAL, are no longer very high cost plus high yield airlines by international standards. Air fares in Japan have fallen by 17% on domestic routes and by 29% on international routes during 1990-1997. JAL's staff cost is coming down to Western levels with the wage bill having been cut by 41% since 1990.

Domestic yield is no longer completely out of line with the US industry. In 1997 revenue per RPM was 22.3 cents for domestic Japanese service (at US$=Yen130) which could be compared to US Airways' average yield of 17.2 cents.

But 25% of the unit revenue goes to pay user charges in the case of Japanese airlines, while it is only 3% in the case of US airlines. A comparison of average landing charges, for example, reveals that prices at Narita, New Kansai and Tokyo-Haneda are two and a half times higher than at JFK-New York.

However, the entry of the two new airlines is helping to accelerate the reform and rationalisation of the distribution system in Japan. Publishing discounted fares is an innovation in Japan where passengers looking for reasonable fares have traditionally had to search around buckets shops in the hope of finding a tour package to fit their schedule. As already mentioned above, HIS is the leading tour operator in selling promotional tickets directly to the Japanese flying public.

The incumbents' strategies

As the graph on page 15 illustrates, the three main incumbent airlines have been consistently loss-making over the past five years, and the Asian downturn is unlikely to improve matters in the 1998/99 financial year.

JAL's 1998/99 half-year year results (the six months ending September 30 1998) included a 6.5% fall in net profits - despite a 10% fall in fuel costs. In the half-year international passengers carried rose by 1%, but this was the only good news in the face of a 0.7% fall in domestic passengers (with overall passenger load factor dropping by 1.7 percentage points) and a 3% fall in total cargo carried.

As a consequence of these results and the ongoing Asian crisis, the airline has halved its 1998/99 full-year forecasted profit to Y10bn ($85-90m).

The obvious reaction is cost-cutting, which JAL is trying to implement as much as possible. In 1997 JAL had announced a four-year medium-term restructuring plan for 1998-2001, but the worsening Asian situation forced the airline to reshuffle its medium-term plans in October 1998. The new measures included:

• Advancing the target year for a 10% cut in units costs from 2001 to 2000;

• Further reducing planned aircraft purchasing (by another 10 units) in order to improve cash flow by a predicted Y12,000m by 2001;

• Cutting staff numbers further, with 2,300 staff going by 2001 instead of 1,500 in the initial plan; and

• Putting much greater emphasis on restructuring domestic operations, increasing services on profitable routes and cutting loss-making routes. More domestic services are to be handed over to the subsidiary JAL Express.

In January 1999 JAL announced that as a corollary to domestic restructuring the airline would be expanding its international services - particularly transpacific. Codesharing ties with oneworld members will increase substantially this year, including with American in the second quarter and with British Airways and Cathay Pacific in the third quarter (although JAL may be wary of getting too close to the oneworld grouping).

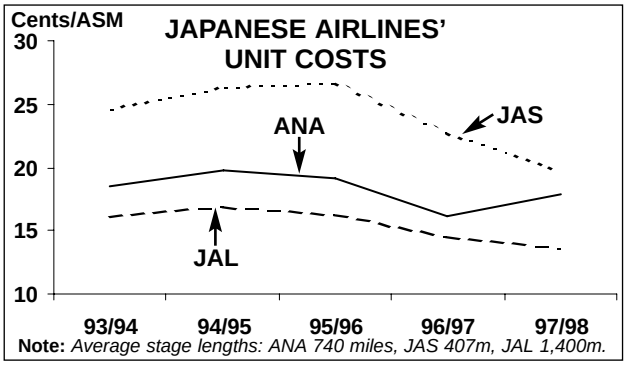
ANA, on the other hand, reported a 68% increase in net profit for the first-half of 1998/99. ANA's domestic load factor fell 1.1 percentage points while its international load factor rose 1.5 points in the half-year. Domestic cargo revenue rose 9.3% while international cargo revenue rose by 7.5%.

ANA claims that, although it faced the same domestic and international pressures as its rivals, it managed to weather the Asian storm better due to successful, continuing restructuring. On February 19 ANA announced a plan to transfer unprofitable routes to/from New Kansai and local cities - some 20% of its current 100 routes - to subsidiary Air Nippon (ANK) over the next three years. ANK has smaller aircraft types and its staff costs are some 15% lower than that of ANA.

Although conditions will remain difficult in the second-half of its fiscal year, ANA says that it is confident that its restructuring will leave the airline well-positioned once the Asian crisis improves.

Japan Air System appears to have suffered the most out of the three incumbents from the Asian downturn.

In the half-year to September 30 1998 JAS recorded a net loss of Y237m ($1.9m), compared with a profit of Y700m in April-September 1997. This result effectively means it will be very difficult for JAS to break-even this year, despite deep cost-cutting measures that have included the planned transfer of all international routes to subsidiary Harlequin Air. JAS also agreed a 3% wage cut with unions, although initially management has wanted a 10% cut in wages.



Note: *Average stage lengths: ANA 740 miles, JAS 407m, JAL 1,400m.*

The future for ANA, JAL and JAS

Despite all the cost-cutting and restructuring, it will not be at all easy for the three incumbent airlines to make their operations profitable until the Japanese economy recovers.

Perhaps their profitability long-term depends on collaboration, rather than continuing fare wars that damage everybody. Last month (February) JAL and JAS announced plans for a CRS joint venture that will take effect from April 2001. Equity will be split 50:50, and the two airlines forecast that the CRS joint venture - which will also handle FFPs and yield management - will cut $100m from joint costs over an eight-year period.

ANA will not be part of the joint venture, stress the two other airlines, although ANA, JAL and JAS signed an unconnected agreement in November 1998 for the sharing of domestic computer infrastructure (but not content).

Inevitably perhaps, the CRS joint venture move has prompted some analysts to speculate that it may lead to further operational/marketing tie-ups in the future, perhaps leading to an eventual merger between JAL and JAS. A merger might make strategic sense (although ANA and the two new airlines would disagree), but any such equity linkage remains - for now - a long way in the future.

By S. Yanamoto and S. Innami of Innami & Associates, Tokyo. e-mail: innami@netlaputa.ne.jp

Internet bookings - passing fad or distribution revolution?

What is the most important challenge facing airline managers and strategists as the industry prepares for the new Millennium? Cost-cutting? The search for alliances, perhaps? It may be neither of these, because whether airlines like it or not, a far greater challenge is being posed by an external factor - the Internet.

At this point some airline managers are likely to have a quiet chuckle and turn quickly to another page. But more and more strategists are beginning to realise that the Internet is having an impact upon distribution that cannot be ignored.

While Internet penetration in Europe and Asia lags behind North America (partly due to slower PC penetration and partly due to European and Asian telcos charging for local calls, unlike in the US), it is catching up. In Europe, for example, more than 50m people are forecast to be online by 2001. That is just 13% of the population (compared with one-third connected in the US today), but the percentage will be significantly higher in the more 'wired' countries such as the UK and Germany. Significantly, survey after survey shows that travel is not only the fastest-growing area of Internet commerce - but now also *the* largest area.

Sceptics may also want to reconsider their opinions in the light of what happened in the North American market in January 1999. Early in that month three North American airlines started imposing fare surcharges on all customers that *did not* use the airlines' preferred method of booking - the Internet. Delta added $1 to every domestic flight while Alaska and its regional affiliate Horizon Air imposed an extra $10 on certain paper-issued tickets. Condemnation from US travel agents was predictable and instant, and less than two weeks later Delta was forced to drop the non-Internet ticket surcharge.

However, two-tier pricing - offering cheaper fares to customers booking tickets over the Internet - makes perfect economic sense. Internet ticket sales are at least 5% cheaper for airlines to process than any other sales means. According to Al Lenza, Northwest vice-president: "It's pretty clear that the Internet is the lowest-cost channel for us. It's pretty easy to book and buy the product." And with a lower cost, airlines can and will pass this on to consumers through lower prices. The only mistake Delta appears to have made this time around is to increase costs for non-Internet customers, rather than to decrease prices for Internet bookings, leaving fares booked through agents at the same level. That's what Continental does, with a $20 discount to customers booking online.

The last cost-cutting frontier?

Travel agents counter that whatever the methodology, this would be price discrimination against their customers - but that misses the point completely. The Internet *is* a cheaper channel, so why shouldn't there be price discrimination?

As recently as 1997 the head of the Association of British Travel Agents claimed that she hadn't heard of Microsoft's Expedia web site, and added that "the Internet may take a small amount of business away from agencies, but it will never replace them". She's right of course - the information age will divide people into the haves and have-nots, and perpetually IT-afraid consumers will always want to see an intermediary such as a travel agent in person, But today Net users (even in the UK!) are high-income, sophisticated people who want a lot of information about purchase options - and, more importantly, their children will grow up to think that the Internet is as natural as the telephone is today. (British Airways' e-ticketing trials found that it was only older and less frequent flyers who disliked ticketless travel.)

But whatever their public protestations, what travel agents know only too well is that distribution costs account for 20-25% of airline costs, second only to labour. Given the aviation industry's wafer thin margins, any development that could slash costs in distribution cannot be ignored. Airlines are already attempting to reduce commissions (which account for 50-60% of airline distribution costs) but some are now starting to realise that an even better strategy is to bypass the agent completely and sell direct to the public, via call-centres and the Internet.

But it's not just about lower costs. In essence the Internet truly is a revolution because it allows any one PC or laptop user to gain access to information that was previously only accessible through, for example, a travel agent. Instant consumer access to airline schedules and fares fundamentally changes the way the aviation industry does business, as anyone with a PC now has 24-hour accessibility to airline ticketing, with options to choose seat and meal preferences, as well as destination information, video clips, currency converters etc. As more and more tickets become available online, the comparative value-added services that agents provide become more and more eroded. For all their claimed added value, travels agents are basically intermediaries - and what the Internet is guaranteed to do is disintermediate.

For businesses, the Internet will mean that they will be able to control better the travel booking process by doing it themselves online, and as a by-product capturing travel expense data directly and ensuring that corporate travel policies are kept to.

The Internet also gives another benefit to airlines, and one that may have the greatest effect of all. Marginal pricing becomes much easier online, and last-minute price reductions to fill up an aircraft are available to the public as soon as someone at an airline types them in (or, more likely, a computer generates them). Delta is already exploiting tie-ups with the numerous US auction web sites, which allow customers to make bids for tickets within a certain time frame, with the highest bidder winning when the time limit expires.

And, in addition, when a customer books direct it is the airline that captures direct the details of the customers for its database and not an intermediary such as a CRS or a travel agent.

The next few years will be an interesting time for the CRSs. An attempt by Galileo (soon withdrawn) to impose a 50 cents fee on electronic ticketing in May 1998 prompted Continental to announce plans for Internet distribution that would bypass CRSs entirely. But Continental had to tread warily, given its stake in rival CRS Amadeus. Nevertheless, as airlines reduce their ties to the CRSs the large US airlines may be even keener to support e-ticketing and Internet bookings than they are now (particularly as some airlines feel that CRS fees are rising too sharply).

Most of the CRSs realise this too. Some of them are setting up their own Internet products (e.g. Sabre with Travelocity) or joining up with new media experts (e.g. Worldspan and Microsoft's Expedia). In effect they too are saying that if customers want to bypass agents, then they will do all they can to facilitate this.

How Internet booking will evolve is still open - it could be via one or two vast, neutral web sites (such as Expedia) which collate all ticket and fare information, or it may be that each airline will produce its own web site, allowing consumers to trawl through each site to find the best deals around. This later option may not be as far-fetched as it sounds, as Internet users will be able to automate the process for ticket searches via software programmes (called spiders) that search the Web for suitable fares and only inform the user when the most suitable deal is found.

Is it all good news?

Inevitably, the Internet also presents dangers to the aviation industry. The Internet gives more power to consumers - not suppliers. As price comparisons are instant and clear, they may persuade many an executive to take a cheaper flight (particularly if Internet booking is controlled by a company's own in-house travel team). The distinction between business and leisure travellers will be eroded by the Internet unless business-class products are truly valued by customers.

But evidence that Internet sales can be significant cannot be ignored any longer. In its financial year to September 30th 1998, easyJet sold 10% of its tickets over the Internet, with peaks of 40% during certain times. Of course easyJet has one significant advantage - it has always bypassed travel agents, so there is no agent backlash to counter. In fact British Midland was the Internet ticket pioneer in the UK, closely followed by BA. Although e-ticketing (ticketless travel, which can be booked direct via the Internet or a call centre) and Internet bookings account for just one per cent of BA's revenues, according to a BA executive "the potential is huge and new ways of buying and organising travel are fast becoming reality".

What is clear is that to understand the potential of the Internet needs a change in industry mindset - it's not just a case of taking out the insurance of a potential new distribution channel. Last year United bought a stake in the travel technology company Internet Travel Network. Is this a pointer to the future - or is it more likely that new media giants such as Microsoft will buy airline stakes?

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
Dec 98	15.1	8.4	56.0	15.9	10.5	66.0	11.1	7.9	71.3	38.3	26.5	69.2	56.1	36.7	65.3
Ann. chng	6.2%	5.5%	-0.4	15.5%	9.2%	-3.8	-1.9%	2.5%	3.2	8.3%	7.2%	-0.7	8.2%	7.4%	-0.5
Jan-Dec 98	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
Ann. chng	7.3%	8.3%	0.6	10.1%	8.4%	-1.2	3.8%	3.8%	0.0	8.3%	7.4%	-0.6	8.1%	7.7%	-0.3

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 %
1990	863.1	523.2	60.6	121.3	84.2	69.4	106.7	75.8	71.0	42.2	26.6	63.0	270.2	186.5	69.0
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
Dec 98	82.6	56.0	67.8										28.8	19.5	67.4
Ann. chng	3.0%	2.0%	-0.7										3.0%	1.2%	-1.5
Jan-Dec 98	961.0	679.1	70.7										346.4	252.4	72.9
Ann. chng	0.8%	2.3%	1.1										4.5%	2.4%	-1.5

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 %
1991	1,267	800	63.2	1,487	998	67.1	2,754	1,798	65.3	-0.3	0.6	-2.6	-6.1	-1.6	-3.2
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**	121	113	113	113	112	180	154	155	154	145	200	148	146	133	130
***1999**	124	115	116	116	113	189	160	166	163	155	219	156	156	141	133

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

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$)						LIBOR
	US	UK	Germany	France	Japan		UK	Germ.	France	Switz.	Euro**	Japan	6 month Euro-$
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	119	125	116	109	**1998**	0.603	1.759	5.898	1.450	0.896	130.8	5.51%***
***1999**	126	122	127	117	109	**Feb 1999**	0.621	1.781	5.974	1.452	0.911	121.2	5.06%***

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

1998 EUROPEAN AIRPORT TRAFFIC RESULTS

Country/code	Commercial movements	% chg.	Commercial pax.	% chg.	Country/code	Commercial movements	% chg.	Commercial pax.	% chg.
Amsterdam/AMS	380,878	7.6	34,420.1	9.0	**Milan/LIN**	155,216	-6.4	13,611.0	-4.6
Barcelona/BCN	215,964	2.4	16,082.1	6.7	**Milan/MXP**	72,625	88.7	5,920.0	51.0
Berlin/SXF	12,920	6.3	1,947.3	-0.4	**Moscow/SVO**	127,670	8.5	10,056.5	7.1
Berlin/THF	33,593	0.9	933.8	6.3	**Munich/MUC**	262,446	3.7	19,321.4	8.0
Berlin/TXL	105,509	1.4	8,881.8	1.7	**Nice/NCE**	138,119	9.9	8,086.9	9.7
Brussels/BRU	277,022	8.7	18,396.3	16.3	**Oslo/OSL**	184,615	5.6	12,304.9	4.2
Copenhagen/CPH	276,645	-1.0	16,670.5	-1.0	**Palma de Mallorca/PMI**	154,206	6.2	17,664.7	6.7
Dublin/DUB	162,098	8.0	11,641.1	13.0	**Paris/CDG**	421,461	6.6	38,628.9	9.5
Dusseldorf/DUS	176,963	1.5	15,754.9	1.4	**Paris/ORY**	242,020	2.1	24,952.0	-0.4
Frankfurt/FRA	407,859	6.4	42,143.0	6.2	**Rome/CIA**	24,516	-6.1	789.1	-9.8
Gran Canaria/LPA	87,129	7.2	8,692.5	6.5	**Rome/FCO**	258,151	5.1	25,337.3	1.3
Lisbon/LIS	91,561	19.3	7,965.6	16.8	**Stockholm/ARN**	256,876	4.3	16,409.7	8.0
London/LGW	241,991	5.5	29,155.3	8.2	**Stockholm/BMA**	24,360	15.1	953.6	4.4
London/LHR	441,163	2.8	60,635.1	4.4	**Tenerife Sur/TFS**	60,490	10.7	8,294.9	9.4
London/STN	105,037	24.4	6,860.6	26.5	**Vienna/VIE**	163,945	5.1	10,639.1	9.3
Madrid/MAD	269,201	2.8	25,272.6	7.0	**Zurich/ZRH**	261,955	4.3	19,301.4	5.3
Manchester/MAN	163,742	10.3	17,507.6	8.3					

Source: Airports Council International.

JET AND TURBOPROP ORDERS

	Date	Buyer	Order	Price	Delivery	Other information/engines
ATR	Feb 11	Air Nostrum	5 ATR 72-500s		1Q99-1Q00	
Airbus	Feb 11	Singapore Airlines	5 A340-500s		4Q02-2Q03	+ 5 options
BAe	-					
Boeing	Feb 23	Atlas Air	2 747-400Fs		1Q00-2Q00	From options
Bombardier	Feb 24	Maersk Air	2 CRJ-200s		1Q00-2Q00	
	Feb 18	Northwest Airlines	54 CRJ-200LRs	$1.3bn	2Q00-2Q04	+ 70 options
	Feb 9	Augsburg Airways	3 Dash 8-300s	$45m	1Q00	From options
	Feb 1	Air Wisconsin	5 CRJ-200LRs	$108m	1Q00-4Q01	+ 5 options
Embraer	Feb 24	LOT	6 ERJ-145s	$200m	2Q99+	+ 6 options
Fairchild Dornier	-					

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

	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	%	
American*														
Apr-Jun 97	4,292	3,812	480	302	64,026.0	45,012.1	70.3	6.70	5.95	20,697	9,482.2	5,241.2	55.3	87,248
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	4,223	3,798	425	290	62,405.4	41,846.6	67.1	6.77	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					88,300
Oct-Dec 98	4,152	3,857	295	182	64,317.3	43,811.6	68.1	6.46	6.00					
America West														
Apr-Jun 97	478	427	51	23	9,410.5	6,668.9	70.9	5.08	4.54	4,674	1,180.1	712.8	60.4	11,690
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				11,560
Oct-Dec 98	507	470	37	20	10,037.2	6,491.9	64.7	5.05	4.68	4,335				
Continental														
Apr-Jun 97	1,786	1,555	231	128	26,530.9	19,186.1	72.3	6.73	5.86	10,462	3,032.6	1,996.8	65.8	34,672
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				40,300
Oct-Dec 98	1,945	1,817	128	66	30,557.4	21,273.3	69.6	6.37	5.95	10,637				
Delta														
Apr-Jun 97	3,541	3,022	519	301	55,604.5	41,457.2	74.6	6.37	5.43	26,617	7,777.3	4,798.9	61.7	69,118
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	3,389	3,053	336	195	54,782.3	39,602.7	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					75,000
Oct-Dec 98	3,448	3,128	320	194	57,810.9	39,947.7	69.1	5.96	5.41					
Northwest														
Apr-Jun 97	2,558	2,267	291	136	38,985.3	29,195.9	74.9	6.56	5.82	13,780	6,175.7	3,817.3	61.8	48,025
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	2,272	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					50,669
Oct-Dec 98	2,212	2,404	-192	-181	37,947.0	26,534.3	69.9	5.83	6.34					
Southwest														
Apr-Jun 97	957	800	156	94	17,672.1	11,288.4	63.9	5.42	4.53	12,722	2,264.0	1,180.6	52.1	24,226
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				25,460
Oct-Dec 98	1,047	888	159	100	19,763.0	12,603.4	63.8	5.30	4.49	13,291				
TWA														
Apr-Jun 97	844	839	6	-14	14,705.8	10,273.7	69.9	5.74	5.71	5,958	2,051.9	1,169.5	57.0	23,490
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					22,200
Oct-Dec 98	747	813	-66	-79	13,452.4	8,731.6	64.9	5.55	6.04					
United														
Apr-Jun 97	4,382	3,970	412	242	67,458.0	48,894.2	72.5	6.50	5.89	21,271	9,917.6	6,032.1	60.8	88,939
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					93,575
Oct-Dec 98	4,281	4,090	191	54	70.620.9	49,484.4	70.1	6.06	5.79					
US Airways														
Apr-Jun 97	2,213	1,957	256	206	24,014.0	17,707.1	73.7	9.22	8.15	15,533	3,234.0	1,911.0	59.1	42,320
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					40,390
Oct-Dec 98	2,121	1,943	178	104	23,318.8	16,112.3	69.1	9.10	8.33					
ANA														
Apr-Jun 97	SIX MONTH FIGURES													
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														
Cathay Pacific														
Apr-Jun 97	2,037	1,858	179	138	28,172.0	20,044.0	71.2	7.23	6.60	5,208	5,074.0	3,613.0	71.2	
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														
Oct-Dec 98														
JAL														
Apr-Jun 97	SIX MONTH FIGURES													
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														

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

	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	%	
Korean Air														
Apr-Jun 97														
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														
Malaysian														
Apr-Jun 97														
Jul-Sep 97														
Oct-Dec 97	TWELVE MONTH FIGURES													
Jan-Mar 98	2,208	2,289	-81	-81	42,294.0	28,698.0	67.9	5.22	5.41	15,117	6,411.0			
Apr-Jun 98	SIX MONTH FIGURES													
Jul-Sep 98	860	958	-98	-11			57.2							
Oct-Dec 98														
Singapore														
Apr-Jun 97	SIX MONTH FIGURES													
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														
Thai Airways														
Apr-Jun 97	773	775	-2	11	11,352.0	7,583.0	66.8	6.81	6.83	3,700	1,620.0			
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	-179	12,084.0	7,963.0	65.9	4.84	4.82		1,700.0			
Jul-Sep 98														
Oct-Dec 98														
Air France														
Apr-Jun 97	SIX MONTH FIGURES													
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														
Alitalia														
Apr-Jun 97														
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														
BA														
Apr-Jun 97	3,624	3,395	229	260	39,697.0	28,756.0	72.4	9.13	8.55	10,613	5,589.0	3,875.0	69.3	60,083
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
Iberia														
Apr-Jun 97														
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														
Jul-Sep 98	TWELVE MONTH FIGURES													
Oct-Dec 98					45,515.2	32,520.9	71.5			21,753				
KLM														
Apr-Jun 97	1,692	1,566	126	99	17,310.0	13,640.0	78.8	9.77	9.05		2,996.0	2,335.0	77.9	34,804
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	17,598.0	13,240.0	75.2	8.74	8.91		2,981.0	2,250.0	75.5	34,953
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
Lufthansa* **														
Apr-Jun 97	3,654	3,463	192	220*	32,109.0	23,465.0	73.1	11.38	10.79	11,618	5,505.0	3,893.0	70.7	57,901
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	23,763.0	16,239.0	68.3	12.21	12.04	8,808	4,621.0	3,171.0	68.6	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														
SAS														
Apr-Jun 97	1,379	1,151	228	178*	7,962.0	5,392.0	67.7	17.31	14.46	5,617				23,904
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
Swissair**														
Apr-Jun 97	1,787	1,724	63	76	17,464.4	11,880.7	68.0	10.23	9.87	7,643	3,340.6	2,291.9	68.6	10,163
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														
Oct-Dec 98														

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.

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