

Aviation Strategy

Issue No: 1

November 1997

Stockmarket jitters - aviation implications

For some time stockmarket analysts have been warning that share prices were overvalued, so at the time of writing we are not quite sure if the 12% drop at the end of October on the New York and London stock exchanges represent a crash or merely a correction. What are the possible implications?

Traffic demand The October 1987 stockmarket crash had no perceptible repercussions on traffic growth despite predictions that the "wealth effect" would depress travel. This time round the underlying economies of North America and Europe are more healthy than they were ten years ago so we would suspect that travel plans are not going to be curtailed as a direct result of the stockmarket chaos.

However, in Asia there has also been a series of currency crises which will affect the emergent flying class who are finding that their Ringitts and Pesos, and maybe Hong Kong dollars, are worth 25% less abroad. And through their alliances the leading airlines are exposed to developments, good or bad, in all areas of the world.

Financing Reduced stockmarket valuations should in themselves not affect airlines' capacity to find finance for capital expenditure - unless their stockmarket decline is significantly worse than other industries, which would signify that they are underlying doubts about their credit worthiness.

The danger is more subtle. There is still a great deal of liquidity in the markets looking for a home. Now that shares are out of favour, the tendency will be to look for other investment vehicles, and aircraft have proved to have certain appeal in these circumstances as solid yet transferable assets. Such thinking led to speculation in aircraft values and production slots in the wake of the 1987 stockmarket crash. Initially, this provided welcome new sources of funds and provided the leasing companies with handsome profits, but ultimately it led to over-leveraged airlines which were incapable of dealing with the traffic recession of the early 1990s.

New issues This is what causes most concern. Equity funding for new entrant airlines is going to become much more difficult.

Virgin Express' announcement on October 22 that it intended to float on the Nasdaq and Brussels stock exchanges in November was unfortunately timed, with the shares of low cost new entrants taking a nasty beating.

Ryanair lost 19% of its value in one day. It was also a victim of rumours about BA starting up a new low cost subsidiary. Debonair, which had just issued a profits warning, saw its share price drop below its June issue price. Plans for other IPOs, such as those for Air Europe, the Milan-based long-haul charter operator Britair, the French regional carrier and Citybird, the Belgian start-up may now have to be revised, although Jonathon Ornstein, CEO of Virgin Express, immediately insisted his IPO was going ahead - "Two weeks is a long time", he observed.

Investors have been betting on finding a European Southwest among the European carriers, and, as a consequence, remarkably high ratings were achieved (Ryanair was floated at a P/E of over 18). That magical period may have now come to an end.

Analysis

Slot allocation: the need to dump grandfather **2-3**

New economy, new aviation, new danger **4-5**

Market balance - don't worry too much **6-7**

Olympic: the thirteenth labour **7-8**

KLM/Northwest: so much for equity cement **9-10**

A question of scheduling philosophy **10**

Briefing

Lufthansa: will it achieve star quality? **11-14**

Deutsche BA: turning the corner at last? **15-16**

Management

Brand line thinking inside the tubes **17-19**

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Aviation Strategy

Analysis

Slot allocation: the need to dump grandfather

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is published 12 times a year by *Aviation Economics* on the first of each month

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Printed by:

Printflow

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London N1 6DR
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One of the critical issues facing air transport in Europe today is that of slot allocation at congested airports.

The answer to the underlying problem is the construction of more runways, but, other than in exceptional circumstances, it is evident that environmental opposition will prevent such developments. The problem of airport congestion and excess demand can clearly only get worse.

This is why some form of regulation is necessary, to ensure that increasingly scarce slots are allocated in a fair, non-discriminatory and transparent way. But the Slot Allocation Regulation (EEC 95/93) which now prevails in Europe has another objective. It is designed, according to the European Commission, to increase competition in the internal aviation market by enabling new entrant carriers to serve their chosen destinations.

It is evident from the 1995 Coopers & Lybrand report on the operation of the Slot Allocation Regulation, produced at the request of the Commission, that the current rules leave much to be desired. There have been differing interpretations of clauses, resulting in confusion, and certain Member States have been slow to give effect to the obligations imposed upon them. However, relatively modest reform and clarification, combined with firmer enforcement action, would remove these problems.

A more fundamental difficulty is presented by the failure of the Regulation to do anything to increase competition. At Heathrow, for example, the principal competitors to the dominant airline, British Midland and Virgin Atlantic, have not gained at all from the Regulation. Instead, in recent years low frequency cargo operations and carriers from newly emerged States operating at off-peak times have been the main beneficiaries. British Airways' dominant position has not even been dented.

It is this missed opportunity that represents the greatest failure of the current Slot Regulation congestion. Radical solutions are needed. There is no shortage of such ideas, but there does appear to be a shortage of political will in parts of the Commission to pursue them. Instead, the much leaked but still officially confidential DG 7

proposals for a new Slot Allocation Regulation involve little more than tinkering with a system that has clearly failed.

Some argue that the problems associated with access to airports like Heathrow can be solved by simply charging airlines for the use of slots. Unfortunately, this would not create a single new slot. Rather, it would create yet another barrier to market entry for smaller airlines. A more open and transparent market for slots may have a role to play (although in reality everyone knows that a relatively efficient if murky market already exists), but it will not provide a solution to the underlying problem.

Slots in perpetuity

That requires the contentious issue of grandfather rights to be tackled head-on. From the beginning these have been a central feature of the slot allocation system first devised by IATA. They remain an important part of the EU's Slot Allocation Regulation and unfortunately the European Commission, or at least DG 7, shows little enthusiasm for getting rid of them.

Grandfather rights allow an incumbent airline to keep a slot in perpetuity. Provided a slot is used on at least 80% of occasions during one season, it can be retained for the next corresponding season. There are no real restrictions on the use to which the slot can be put.

It is grandfather rights that present the largest single barrier to entry for smaller airlines wanting to begin or expand services from airports such as Heathrow. They cement into place the dominant positions held by flag-carriers and put a stop to the circulation of slots which the Slot Allocation Regulation was supposed to encourage.

These large slot holdings were accumulated, of course, at a time when the airlines concerned were the favoured recipients of their government-owners' largesse. They in no way reflect real consumer choice or the relative merits of the competing services which would emerge if slot allocation was truly opened up. It is not surprising that those with large slot holdings at congested airports, especially the major flag carriers, resist

Aviation Strategy

Analysis

strenuously any attempt to interfere with the grandfather principle.

There has been much debate about who actually owns a slot, but most would agree that whoever it is, it is certainly not the airline which actually uses it. No European airline includes the slot value as assets in its annual accounts. If a carrier actually owns a slot, it would be illogical to allow for that slot to be confiscated should the airline concerned fail to use it intensively, as provided for in the EU Slot Allocation Regulation.

In other words, slots are valuable assets which are loaned to airlines on a long-term basis. Other industries, such as radio and TV franchises work on a similar basis. They have access to certain assets or rights for a limited period. At the end of that period the assets/rights are handed back to the owner, usually the government, and a new round of bidding commences.

It is far from obvious why a similar system could not work for slots. There may be particular problems associated with air transport, but these are likely to be insurmountable only for those who do not want to be persuaded. If every year a fixed proportion of slots at an airport (say 5 or 10%) had to be handed back to the pool for re-allocation according to fair and non-discriminatory rules, the effect on competition in the air transport industry would be substantial.

This is not confiscation, since as already explained airlines do not own slots in Europe. Nor would it necessarily mean that the current holders of slots would be forced to abandon routes. They would be free to apply for released slots along with everyone else. They would just no longer be in an advantageous position compared with new entrants. Everyone would be treated equally.

The Competition Directorate, DG4, clearly appreciates the competitive implications of grandfather rights and is aid to want to do something about them. Slot sales, on the other hand, are less favourably regarded, mainly on the grounds that smaller airlines would have difficulty matching the deep pockets of the larger carriers. Experience of buying and selling slots in the US lends credence to DG4's concern in this respect.

DG7, however, has adopted the opposite position on both points. It sees slot sales as a way of increasing slot availability to smaller airlines, provided dominant carriers are prevented from adding significantly to their slot holdings. (It has been suggested that any one airline should be

allowed to add no more than 0.5% of the total number of slots at an airport each year. This would still permit a dominant carrier to increase its dominance, of course, albeit at a slow rate).

DG7 rejects out of hand any serious attack on grandfather rights, primarily on the grounds that stability and continuity of operations are of utmost importance for both airlines and passengers. Not only is this a poor justification (who says that passengers want stability if the alternative is a much improved service at lower prices?), it is also the very argument used for so long by those flag carriers resistant to liberalisation.

DG7 also argues that if grandfather rights were limited, there would be a serious risk that any released slots would be returned to the original holder. So what is the problem? The result would be no worse than the current situation, and it is just possible that a more competitive solution would result. If these are the best arguments the Commission can produce for resisting the abolition of grandfather rights, the intellectual debate is won.

In truth, of course, the main reason for DG7's reticence is that radical reform is opposed by the vast majority of Member States and EU airlines. Early acceptance of the abolition of grandfather rights seems highly unlikely. But the same could be said about the liberalisation of the EU internal aviation market in its early stages. It is a pity that DG7 is not prepared to bite the bullet and make proposals that would make a real difference to the competitive situation in Europe, even in the face of opposition.

Virgin Atlantic has brought real benefits for the travelling public on long-haul routes out of the UK, in the form of improved, innovatory products and lower fares. Yet the benefits created by Virgin and others could have been much greater had more slots been available at airports such as Heathrow.

Virgin's expansion has been substantially slowed by its inability to acquire sufficient slots for its expansion plans, even if by hard work it has been able to add the odd new route over the years.

This is the core of the argument. The costs for the travelling public of maintaining grandfather rights are huge. These costs represent a direct subsidy from consumers to those dominant airlines fortunate enough to have acquired slot holdings in the past as gifts from their government-owners. That should be unacceptable in a free market.

HEATHROW SLOTS 1996

	000s ATMs	%
British Airways	165.4	39.3%
British Midland	55.8	13.2%
Lufthansa	22.1	5.2%
Aer Lingus	14.5	3.4%
Air France	14.3	3.4%
SAS	13.4	3.2%
American	9.1	2.2%
Alitalia	8.5	2.0%
United	7.7	1.8%
Virgin Atlantic	5.6	1.3%
Others	105.0	24.9%
TOTAL	421.4	100%

Source: BAA & Dresdner Kleinwort Benson

*By Barry Humphreys
Director of External
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Aviation Strategy

Analysis

New economy, new aviation, new danger

The "new economy" promises inflation-free sustained growth and an end to the business cycle. Airlines, with their predilection for forecasts of perpetual 6%-plus annual growth and inevitable market shares increases, risk being enticed by this new theory.

The idea of the new economy originated, inevitably, in the US as analysts struggled to explain how the economy was able to sustain such high growth rates and such low unemployment rates without inflationary pressures reappearing. The explanation was that a fundamental change had taken place in the way the economy worked because of the processes of globalisation and IT development.

Globalisation meant that costs were being contained through sourcing production from cheaper areas of the world while the market for goods and services had expanded enormously. The IT revolution meant that productivity had been boosted onto a new level. Both processes have helped erode trade union power and labour market rigidities.

The new economy idea (more pretentiously known as the new paradigm) has been accepted, at least in part, by economists at leading investment banks in the US, and has drifted across the Atlantic to the UK which is also currently experiencing strong growth without inflation (although interest rates have been increased on concerns over overheating).

Leaving aside the fanatics who claim that all limits to economic growth have now vanished, proponents of new economy do raise some intriguing points. In the new economy it is less likely that production bottlenecks will be encountered so sudden inventory changes, which are thought to cause turning points in the economic cycle, can be avoided. It may now be possible to have sustainable demand growth and diminishing unit costs at the same time.

How could the airline industry fit into the new economy?

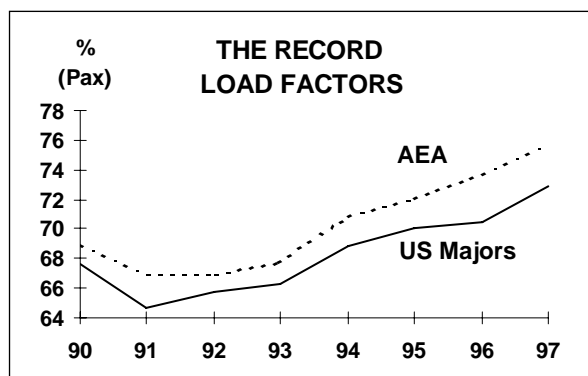
Happy airlines

We are now in the sixth consecutive year of the upturn in the traffic cycle, significantly longer than the traditional four-five year phase, and there is little sign that the growth rate is slowing. The US Majors recorded 5.2% growth in the first eight months of the year; AEA international traffic shows a 10% increase for the same period. Load factors are at record levels - 75% for US carriers, 73% for European.

It would appear that, far from the demand for air travel becoming saturated, new markets are opening up as new strata of society move into the flying class and existing flyers fly more often. Nor is the traffic growth based on yield dilution; airlines have been able to push fares back up over the past 18 months.

On the capacity side of the equation it is possible to point out changes which, maybe, now allow airlines to take full advantage of buoyant demand conditions. The leading airlines could claim that they have learnt to control supply, or minimise the risk of overcapacity.

First, there is the mega-flexi-order as placed by American, Delta and Continental. In return for dedication to one manufacturer the airline gets the benefit of bulk buying plus control over when and in what numbers the aircraft are delivered, so avoiding the



Aviation Strategy

Analysis

sad coincidence of peak deliveries and deep recession. The EC's decision prohibiting Boeing from including sole-supplier conditions in its contracts is more or less irrelevant to the commercial reality as Delta's recent statement on its \$6bn Boeing order indicates - Delta recognised Boeing as the sole supplier but noted that Boeing would not enforce the exclusivity "unless permitted to do so by the EC".

Second, there are alliances, which represent a way of expanding into new international markets without gearing up with new equipment. It is not necessary to take on the risk of additional capital investment in order to expand because the airlines that are able to form powerful alliances can, in effect, use the equipment of their partners. And if the alliance allows joint seat inventory control then load factors can be pushed up.

There is also the issue of cost restraint during the upturn. Leading airlines have not just been able to prevent operating costs escalating, they have managed to reduce them. According to our index of airline labour costs (see page 21), labour costs per ATK were 6% lower in 1996 than they were in 1990 for the leading US Majors and 12% lower for the leading European carriers. Overall unit operating costs dropped in the US but remained stable in Europe, the result of increasing efficiency outweighing increase in individual employee costs.

The IT revolution has impacted airlines as well. New CRS and E-ticketing programs hold out the promise of continuing falls in administration and distribution costs. Ever more sophisticated YMSs are also contributing to the record load factors and stable yields.

The warning signs

But does this really indicate a new aviation economy?

The evidence shows that the leading airlines have made important advances in developing successful strategies for a deregulated and increasingly globalised market, but the fundamentals have not changed. Specifically, an objective review of supply/demand trends reveals market balance could be somewhat precarious (see following

story). Even with continuing strong demand the aircraft surplus starts to bulge next year.

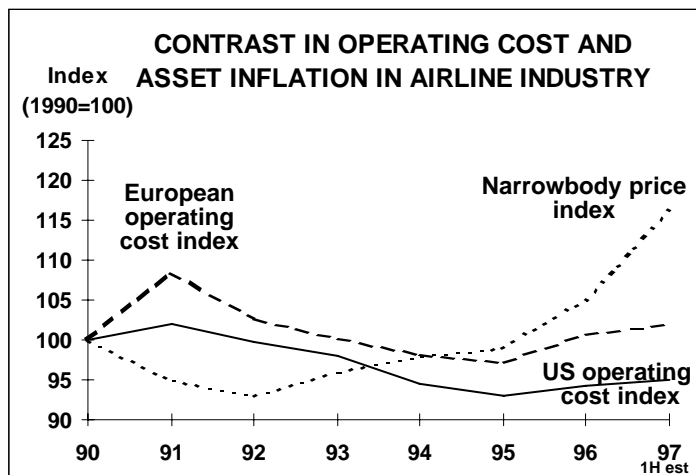
The worrying aspect is that speculation has returned to the aviation finance markets.

In the last recession asset inflation led to excessive borrowing and the precarious leveraging of airlines just before demand collapsed, partly as a side-effect of the Gulf war.

The warning signs of a new wave of asset inflation in the aviation industry are:

- Second-hand values are zooming skyward: for example, the value of a five-year-old A320 is estimated to have increased 15-20% over the past year.
- Lessors have re-entered the market in a big way: ILFC in September placed a \$7bn order for A330s, A320s, 737s, 757s, 767s, 777s and 747s - not quite a return to the mega-orders of 1990 when GPA attempted to take over the world, but pretty significant nevertheless (some mini-GPAs have now appeared, like Pembroke Capital which placed a \$500m order for 737s in March).
- Some banks are now offering 100%-plus financing on aircraft deals in anticipation of further increases in values; production slots are being viewed as scarce, tradable commodities; low margins are available even for second-rate clients and new banks have entered the aviation finance business for the first time.

At the same time as debt again threatens to balloon, old fashioned cost pressures have re-emerged. Labour disputes at nearly all the major US and European airlines are being settled with substantial concessions from management. There is a grim determination on the



Aviation Strategy

Analysis

part of unions to recover some of the ground that has been lost over the past five or so years, even from union members who are also shareholders at United. Management's strength in demanding trade-offs for pay increases or job security - for example, changes in working practices from BASSA at BA or the establishment of a low cost subsidiary at USAirways - is not as evident as it was even 12 months ago.

The new economy concept is being used, or rather misused, as an explanation and justification for very high stockmarket valuations, which is dangerous. In the aviation sector the danger is that airlines and their financiers will again ignore the perils of the business cycle, allow debt to accumulate, operating costs to rise and capacity to explode. Operating cost inflation has been brought under control but asset inflation is threatening to get out of hand again.

Market balance - don't worry too much

The last aviation recession, in 1991/92, was a traumatic experience and as a consequence many of its lessons have been forgotten. One of those lessons was to keep monitoring the global supply/demand balance, especially when things seem to be going rather well.

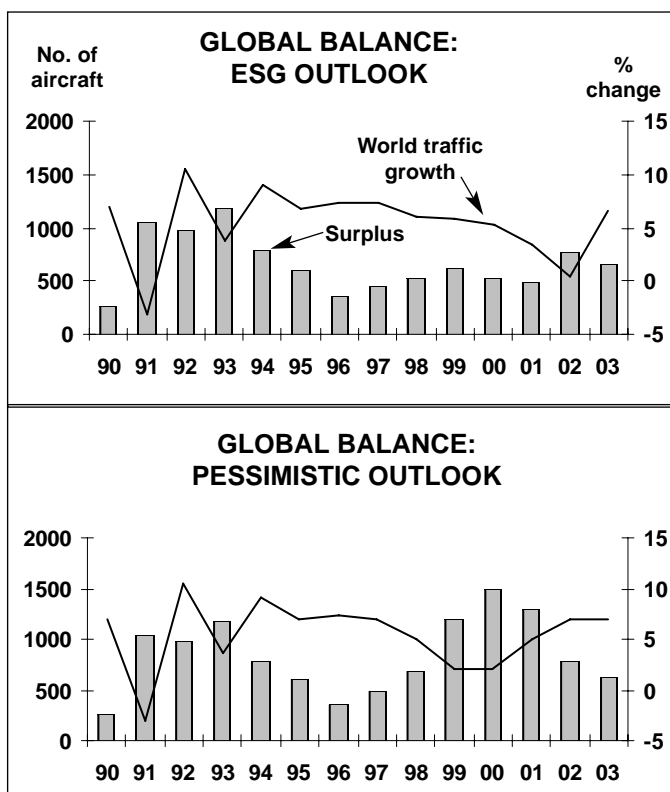
Currently the manufacturers, particularly Boeing, are having some well-publicised dif-

ficulties coping with increased demand. Boeing had been aiming for 350 deliveries this year but has cut this back to 335, which is still 63% up on last year. In 1998 it intends to ramp up production to 480. Airbus will probably deliver 195 jets this year, 53% up on 1996. In 1998 production should rise to 230 or maybe more, as it now says that it plans to push production of the A320 family alone up to 216 a year by 1999 if the USAirways mega-order is confirmed. Overall deliveries (including Bombardier, Embraer, AVRO and MDC) will touch 700 this year, some 40% up on 1996.

More significantly, based on current orderbooks, over the period 1997-2001 some 4,160 jets are predicted to be delivered, in contrast to 2,940 in the previous five-year period. Can the market absorb this increase?

Ed Greenslet, of ESG Aviation Services, regularly produces forecasts of the global commercial aviation market and has a deserved reputation for identifying trends - he clearly foresaw and quantified the huge surplus that appeared in the early 1990s.

To summarise (and greatly simplify) the ESG methodology: the actual or projected number of RPMs is converted into aircraft by factoring in the average global load factor in order 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



Aviation Strategy

Analysis

RETIREMENT FORECASTS

(No. of jet aircraft)	ESG	Boeing	Rolls Royce
1997-2001	1,476	1,369	1,109
2002-2006	1,093	542	1,347
2007-2011	1,202	1,052	1,524
Total	3,771	2,963	3,980

Source: ESG, Boeing 1997 Current Market Outlook, Rolls Royce Market Outlook 1996-2015 (forecasts for 1996-2000, etc.)

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, which can manifest itself in jets parked in the desert or in underutilised and underoccupied aircraft flying around.

ESG's forecast shows the surplus growing significantly from the low point of 1996, although it gets nowhere near the 1,000-plus surplus of 1991-93. Greenslet sums up the outlook in this way:

"The healthy market we enjoy today is in great danger of ending in two years or so. By almost doubling production between 1996 and 1999 the industry will greatly increase its exposure to the risk of unanticipated events of which an early recession is the largest. The prospects do not give cause for panic but they certainly do make a case for worrying."

Olympic: the thirteenth labour

Wanted: *Chief Executive/Chairman for \$1bn-plus EU airline, profitable for two years following restructuring, moving to major new airport in preparation for global sporting event in 2004, fleet renewal plans backed by government guarantees, historic location on Mediterranean coast.*

The actual advert, recently placed in leading business magazines, for the position of Managing Director at Olympic Airways didn't quite put it that way. Rather the requirements for the position emphasised such attributes as a Hellenic University Degree or one recog-

Suitably worried, we have rerun the ESG forecast, plugging in a two-year downturn during 1999-2000 when traffic growth falls to 2% pa from 5-6% in the other years of the outlook (whereas ESG had assumed a one year recession in the year 2002). The result is that the surplus shoots up to well over 1,000 for a three year period 1999-2001, at least as bad as the early 1990s recession.

The perennial unknown is what will happen with retirements. The risk of another severe recession would be obviated if the long-awaited acceleration in retirements materialised. One would expect this to happen because airlines are supposedly more sophisticated in controlling capacity and because Chapter 3 noise legislation will force airlines to phase out older aircraft from the year 2000 in the US and 2003 in Europe.

The apparent surplus that we show appearing can then simply be dismissed as a backlog of noisy, elderly types awaiting demolition or sale to the Third World.

Based on life cycles of 26-30 years for various passenger types and 46 years for freighters, ESG forecasts 1,476 retirements in the next five years compared with just 663 during 1992-96. On a five year view ESG is more aggressive on retirements than Boeing and Rolls-Royce, both of which have a vested interest in promoting aircraft scrapping, and on the 15-year outlook is also well above Boeing.

Close monitoring of the situation is needed.

nised by DIKATSA (the Greek authority responsible for certifying non-Greek degrees); fluency in Greek and preferably English; and, disconcertingly, the candidate "should not have committed offences mentioned in article 2.2 of the Presidential Degree 611/77(A198)".

The wording of the advert is even odder given that the reason for its placement was the extension of the time period for applications in order to attract talent from outside Greece. The job was originally advertised late last year as the result of a new law which required that the chief executives of all Greek public companies

Aviation Strategy

Analysis

re-apply for their posts in competition with new candidates in order to weed out unsuitable political appointees.

Jordan Karatzas, the incumbent MD, is a probable re-appointee, but two or three former chief executives are also short-listed. Olympic chief executives may have an excessively short tenure - less than a year on average - but they are recyclable.

Yet Olympic is, on admittedly narrow criteria, the success story among Europe's state-aided carriers. Between Aristotle Onassis's sale of Olympic to the State in 1974 and the acceptance by the EC of the airline's restructuring and recapitalisation plan in 1994, regular heavy losses had reduced the company's net worth to a remarkable negative Dr2.5bn (i.e. its net debt was three times turnover). This was partly the result of the Greek government charging penalty interest rates (2.5% per month cumulative) on overdue debt theoretically owed to it by the airline. Frankly, it is impossible to unravel Olympic's accounts from this period - various auditors have suffered nervous break-downs trying to do so.

In any case, the losses definitely came to an end in 1995 with a net profit of Dr7bn (\$30m), and the improvement continued in 1996 when profit reached Dr14bn (\$60m).

The turnaround plan, backing the Greek government's 1994 state aid Submission, would appear to have been effectively implemented by Karatzas and his predecessor Prof. Rigas Doganis. Remarkably, it has produced the results forecast in the official Submission to the EC in contrast to most of the turnaround plans accepted by the EC.

However, the turnaround plan was essentially negative - it was designed to extract Olympic from deep, deep trouble, but could not at the time of its formulation set up Olympic as a commercial, market-orientated, niche flag-carrier, which was the longer-term aspiration. The turnaround plan's key elements were:

- Imposition of a three-year wage freeze in an economy with 12%-plus inflation;
- 1,750 redundancies (on generous terms);
- Elimination of loss-making long-haul routes with break-even load factors well above 100% - Tokyo, Boston, Chicago;
- Freezing the fleet and returning two A300s to the lessor.

Now Olympic's strategy must move into a positive phase without again losing control of costs. The key questions are:

- As Olympic's permanent management has been in reality the pilots' union, is the airline suitable for an ESOP-based privatisation?
- Can the problem of the inherently unprofitable long hauls (low yield, extreme seasonality, high fixed cost) really be solved by replacing the four 747-200s with A340s? Two firm orders plus two options have been placed with the intention of building up the A340 fleet to 10 by 2004, implying ultimate expenditure of about \$1bn on a loss-making sector.
- How to reconcile the investment on long-haul types with the critical need to replace Olympic's fleet of 11 Chapter 2 737-200s before the 2003 deadline for the elimination of these aircraft? Olympic has to turn its Lol for 4 plus 4 737-800s into a firm order before the end of 1997 in order to take advantage of the remaining \$375m in state-backed loan guarantees. The plan is to expand its fleet to 25 737-800s by 2004 - an investment of about \$2bn.
- Given that ground handling is by far Olympic's most profitable activity, how can it greatly improve service standards and avoid further censure from the EC and a final dismantling of its near-monopoly? A second handler on the passenger side is permitted from next January while ramp side liberalisation starts a year after.
- How can Olympic efficiently market to its major growth opportunity, which is leisure travellers from northern Europe, when its sales operation is so focused on VFR?
- Can it learn to compete on cost and quality with the charters and start to fly where tourists really want to go (Rhodes, Corfu, Heraklion rather than Athens)?
- What happens if other Greek airlines start to compete with Olympic? At present the main competition comes from Crete-base Air Greece in the islands market and Cronus Air with limited 737 service from Athens and Salonika to London Heathrow and Frankfurt, but Stelios Haji-Ianniou of easyJet is known to be interested.
- Will the move from Athens Hellinikon airport to Spata be completed in time for the Olympic Games in 2004, and who will finance the transition, estimated at Dr120bn (\$500m)?

Aviation Strategy

Analysis

KLM/Northwest: so much for equity cement

KLM and Northwest agreed terms of their divorce settlement at the end of September while maintaining joint custody of their offspring, the transatlantic codesharing alliance. KLM will receive the following payments from Northwest: \$324m in 1997, \$210m in 1998, \$147m in 1999 and \$491m in 2000 - a total of \$1.2bn. In turn, KLM's voting stock position in Northwest will decrease from about 19% today to zero by 2000.

Back in 1989 KLM was persuaded to invest some \$400m into Northwest as part of the LBO effected by Al Checchi. The \$1.2bn KLM stands to take back by 2000 implies that it has achieved a RoI of about 12% pa on its original investment, a respectable but hardly spectacular return, considering the risk involved.

Following the LBO, Northwest's results went in the opposite direction to that predicted in the over-optimistic prospectus. Overladen with debt, the airline teetered on the brink of Chapter 11 bankruptcy and KLM wrote the investment off in its books. By slashing capital expenditure and wringing major concessions from its unions Northwest was able to exploit the upturn in the US market after 1992 and stage a remarkable turnaround. However, its balance sheet did not show a positive net value again until 1996.

By that time KLM itself was performing surprisingly poorly, but fortunately was able to boost its bottom line by writing the stockmarket value of its Northwest investment back into its P&L. In 1995/96 Northwest write-backs accounted for 47% of KLM's net profit of Dfl 547 (\$323m); in 1996/97 these accounted for 187% of a net profit of Dfl 236m (\$134m).

But at the same time, the boards of KLM and Northwest had become entangled in an acrimonious legal dispute, which occupied far too much of the time and effort of KLM's top management and eventually led to the departure of President Pietr Bouw. KLM claimed the right to exchange its preference shares in Northwest for common stock which would have brought its voting rights up to about 23.5% but

the Northwest board had blocked this by passing a resolution limiting any one shareholder to less than 20% of the stock.

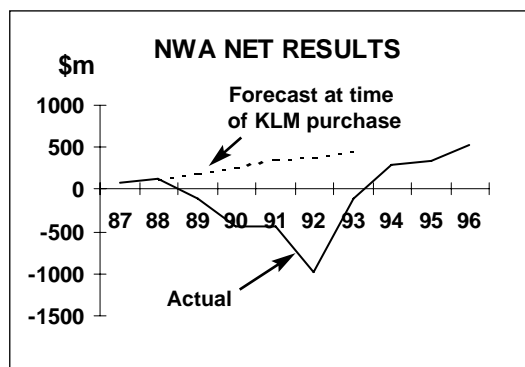
In any case, the sales agreement resolves the legal dispute and, importantly, provides KLM with a cash injection, which it is likely to use to buy out the remaining 28% Dutch government stake in the airline.

The tormented history of the KLM/Northwest investment makes nonsense of the claims that are still made for the "cementing" role of equity in alliances between major airlines. KLM could have achieved the same return on its \$400m through much lower risk financial instruments and still enjoyed the same operational benefits.

The benefits of the transatlantic alliance are put at Dfl100-150m (\$50-87m) by KLM, compared to KLM's total operating profit in 1996/97 of Dfl89m (before a restructuring provision of a Dfl290m). The alliance will now be governed by an 10-year contract, with three year extensions.

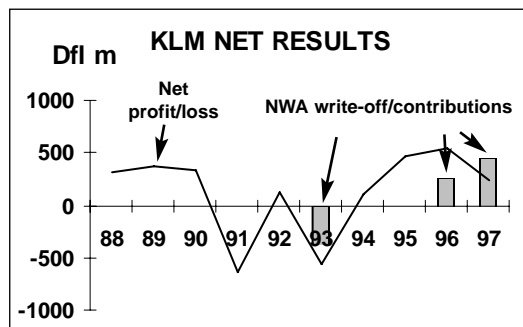
According to the agreement, KLM and Northwest will pursue an aggressive growth strategy, which will include:

- Adding new partners (and discarding unwanted ones like Asiana which has just had its code-share with Northwest terminated), boosting code-shared flights from the current level of 60,000 a month and widening geographic coverage;
- Improving commonality for scheduling, inventory management, CRS and FFPs; and
- Streamlining marketing, purchasing, ground handling, etc.



Aviation Strategy

Analysis



Ultimately, the only thing that can guarantee the alliance is continued antitrust immunity, allowing the two airlines to operate as one on the Atlantic. Indeed, the new agreement stipulates that the second and third tranches of the NWA payment are contingent on the US DoT re-confirming immunity in 1988.

It may be of concern to recall that in their joint application for immunity presented to the DoT in 1991 KLM and NWA, as well as presenting the US-Netherlands open skies argument, claimed that immunity was linked to the equity stake. Because the FAA Act's limits on foreign ownership in US airlines prevented airlines from structuring their relationships like companies in other industries, i.e. through mergers and takeovers, KLM and NWA were unable to fulfil their desired strategy of becoming one airline. This was seen as an anomalous position which could only be resolved by antitrust immunity.

Now, however, the two airlines, far from stating a wish to merge, are reasserting their independence yet still insisting on protection from charges of collusion on the Atlantic.

A question of scheduling philosophy

An apparently ideal merger between two US low cost start-ups - Western Pacific and Frontier Airlines - failed in October, precipitating WestPac's Chapter 11 bankruptcy (losses totalled \$35m on \$79.5m of revenues in the first half of the year) and causing the resignation of four key board members. The reasons given for the failure of the merger were different corporate cultures, which is usually inevitable, and differences in scheduling philosophy. What does this mean?

In the summer WestPac moved from its original base in Colorado Springs (about 100km from Denver) to Denver International, the super airport opened in 1995, which is dominated by United with competition coming from new entrant Frontier Airlines.

Acquiring Frontier's Denver position appeared to be the logical way of quickly gaining mass and most importantly building network connectivity. Frontier operates a fleet of a fleet of 13 737s while WestPac's fleet has built up to 22 737s. Acquiring Frontier would have eliminated a product that was too similar to WestPac's. Denver may be big enough to support one low cost low frill airline - or even two well financed ones - but two weak competitors would have to fight each other as well as United.

Both Frontier and WestPac operate a hub-and-spoke network. However, WestPac has focused on aircraft utilisation at the expense of preferable arrival and departure times.

This appears to have been an attempt to prevent an increase in unit costs following the move from Colorado Springs.

This strategy resulted in some peculiar scheduling. For example, WestPac operates a bank of red-eye flights from Denver to the East leaving Denver at 1am and arriving in the eastern US at 6am. Red-eye flights are common from points in California where a 10pm departure results in a 6am arrival on the opposite coast. But Denver's mid-continent position makes this type of flying unattractive due to the post midnight check-in time.

WestPac also operates a bank of flights from Denver to the west at 11:45pm. These arrive in California between 1-2am, which is unheard of. United operates more than 400 daily flights from Denver with no departures after 10pm.

WestPac may have found a unique time channel to offer some of their flights but with very questionable consumer demand.

Frontier's position on schedules became clear a few days after the merger was cancelled when it eliminated its red-eye flight from Denver to Boston. Their press release contained a statement, clearly directed at WestPac, indicating they were leaving in place one daily high-demand flight which more closely matched capacity to the consumer demand.

WestPac is now looking for new financing.

Aviation Strategy

Briefing

Lufthansa: will it achieve star quality?

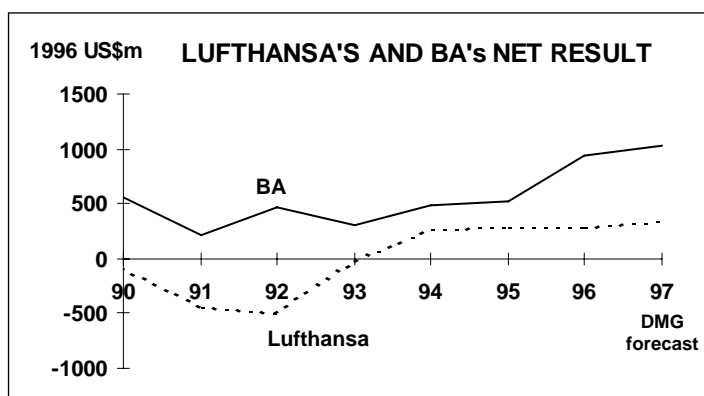
On October 15 Lufthansa joined the elite club of fully privatised European flag carriers. Can it now challenge British Airways for the number one position?

Lufthansa's share offer for the remaining 37.5% government share of the airline was twice oversubscribed, which was hardly surprising as the stock price of Dm33.3 was priced slightly down on the existing shares and individual investors were given a discount of Dm1 per share. More remarkable is that 37% of Lufthansa's shares are held by non-Germans.

At the end of October Lufthansa was capitalised at Dm14.8bn (\$8.3bn) compared with £6.2bn (\$10bn) for British Airways. On 1997 price/earnings ratios Lufthansa is being rated by the stockmarkets more highly than BA - at 21 against 14 - but this is largely reflective of more conservative accounting policies in Germany. On price/cashflow, Lufthansa is being rated at just under five while BA is achieving just above six.

Lufthansa's 1996 and first half 1997 results are shown in table below. Although Lufthansa's revenue is now greater than BA's, on key indicators it is still lagging: a cashflow margin of 9.5% against BA's 12.6%, a net margin of 2.3% against 6.6%.

Still, Jürgen Weber, the CEO, describes Lufthansa as having undergone "a stunning metamorphosis". He is right: back in 1990/91 Lufthansa was the most unprofitable of the European flag carriers, worse than Air France,



Alitalia and Iberia, and among the most traditional. Its slogan - "Growth through our own resources" - signalled its aversion to alliances.

When Weber was appointed CEO in September 1991, coming from maintenance arm Lufthansa Technik, the company faced disaster - a message he had to communicate to the management and workforce. In July 1992 Weber addressed 20 senior managers - known as the "Samurai of change" - at a crisis meeting which turned out to be the critical point in his presidency. Key issues were discussed for the first time, like conflicts between network management and the area profit centres, and the need to cut costs through, among other things, reducing the workforce by 6,000.

As all this was taking place in Germany the unions were closely involved. Accepting that no subsidies could be extracted from Bonn the unions, ÖTV and DAG, made concessions on redundancies and work flexibility, but insisted on monitoring the reforms. The Deputy Chairman of Lufthansa's Supervisory Board is currently the ÖTV representative, Herbert Mai, but that does not necessarily ensure harmonious labour relations - the airline suffered short strikes last year.

The key elements of the turn-around were:

- The creation of separate business units, each with its own cost control and transparent profitability, which would have to "trade" with each other and with the core company. These are listed in the table left. The process is being carried to its logical conclusion as Lufthansa is considering the sale of its new integrated tourism opera-

	1996	1997 1H	1997/96 1H chg
Turnover	20,863	11,524	10.6%
Operating profit	674	326	201.9%
Pre-tax profits	686	364	313.6%
Net profit	494	156	92.6%
Operating cashflow	2,070	na	
Fixed assets	12,509	12,611	-1.2%
Current assets	6,182	7,946	31.3%
Total assets	18,691	20,557	9.2%
Liabilities	5,671	6,726	0.3%
Provisions	7,667	8,500	17.1%
Shareholders' funds	5,353	5,331	10.0%
Liabilities & equity	18,691	20,557	9.2%

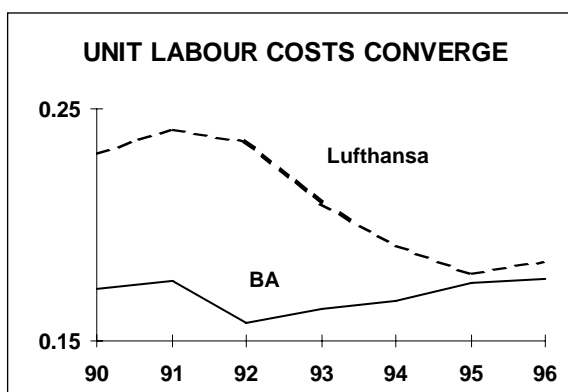
Aviation Strategy

Briefing

	Revenue	Operating profit	Margin
Pax business	13,623	436	3.2%
CityLine	1,098	8	0.7%
Condor	1,945	112	5.8%
Cargo	3,431	-53	-1.5%
LH Technik	2,866	68	2.4%
LSG (Catering)	1,490	64	4.3%
LH Systems	527	31	5.9%
TOTAL	24,980	666	2.7%

tion, the result of a merger between Condor and NUR, Germany's second largest tour operator; LSG Catering; and its 29% holding in the Amadeus CRS;

- The resolution of Lufthansa's expensive inflexible pension scheme, the VBL, through a federal government subsidy of Dm500m plus Dm1.1bn of guarantees;
- The conversion of the existing Germany-US bilateral, which actually was very liberal in terms of capacity, frequencies and fifth freedoms, into a full "open skies" agreement, enabling the antitrust-immunised alliance with United to be signed in 1993.
- Most fundamentally, implementation of the cost reduction and efficiency improvement scheme, known as "Programme 93". The results are clear from the graph below. Lufthansa's unit labour costs in 1996 were more or less the same as BA's, having been 30% higher in 1990; they have converged because Lufthansa's physical productivity has increased enormously and because the inflation in average employment costs (each employee's salary, social costs and pension) has been more moderate at Lufthansa.



The private challenge

The question now is whether Lufthansa can continue this trend and adapt completely to the demands of being a 100% stockmarket-quoted company. Before the announcement of the final privatisation, there were worries that the airline's turnaround had been too rapid and too successful, and that managers were not yet mentally attuned to shareholder culture. The equity market has traditionally played a much smaller role in the German economy than in the US or the UK, but Lufthansa's top 200 managers have been given a major incentive through a bonus scheme which is based on a comparison of Lufthansa's stock relative to BA's, KLM's and Swissair's.

The ongoing cost cutting regime is now referred to as "Programme 15" with the 15 curiously being an allusion to Dm1.5bn (\$850m) of savings the airline plans to make by 2001. Although over half of these savings have already been identified, Lufthansa faces some difficult tasks as it continues to squeeze its cost base.

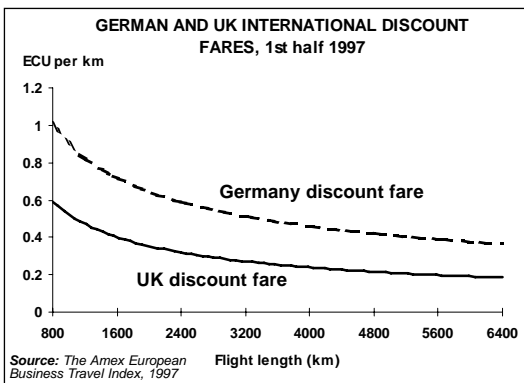
Moreover, Lufthansa is vulnerable because its profit equation depends on maintaining its yields. Its unit costs are now about 5% higher than BA's and its average pax load factor is 4.6 points lower, but its average pax yield is 33% higher. The graph on the right illustrates the present difference in discount international fares, the choice of the value conscious business or leisure traveller, to/from the UK and to/from Germany: around 60% according to the latest American Express survey (although full business fares were much closer). German fares will remain higher for the foreseeable future simply because of the inescapable costs (airport charges, etc) of operating in the country, but it has to be assumed that the gap between the curves will narrow as deregulated competition increases.

Two vaguely related developments, mostly outside of Lufthansa's control, will determine whether it can adjust to new fare pressure.

First, Germans are going through a painful reappraisal of their working habits - the so-called 9 months work for 13 months pay syndrome. Efficiency at work is no longer enough - much more flexibility in, for example, overtime worked to holidays taken is required especially in a service based industry. Lufthansa appears to be a leader among German industry in this regard, but it is still very difficult to envisage the unions

Aviation Strategy

Briefing



agreeing to, for example, a new low cost European subsidiary, a plan they blocked in 1994.

Second, there is the prospect of EMU. In the first half of this year Lufthansa gained an estimated Dm125m (\$90m) as a result of a 5% depreciation in the Deutschmark. Normally, however, it is used to losing money because of the strength of the currency. Weber is strongly in favour of the implementation of EMU by 1999, not just because of the stabilising effect on revenues and costs but also because EMU implies a harmonisation of national government's social expenditure. Weber seems to suggest that Germany should be regarded as the norm - a compromise between France on the one side and the UK on the other. The UK government, however, has decided not to join EMU for four to five years. This could consolidate BA's, and the UK-based low cost carriers', cost advantage.

Star alliance - the vision

On May 14th the Star alliance was unveiled - an exercise in branding existing agreements between Lufthansa, United, SAS, Thai, Air Canada and Varig (which joined on October 1st). Lufthansa's strategic direction is dominated by this alliance.

Jürgen Weber describes airline alliances as the correct and natural response to changing demand patterns such as business and leisure passengers becoming more global in their thinking and choice. For example, Lufthansa's key accounts may still be German-headquartered companies but they have shifted production to lower cost countries and concentrated their sales efforts in overseas growth markets, and the executives of these global corporations demand efficient connections to all these points as well as

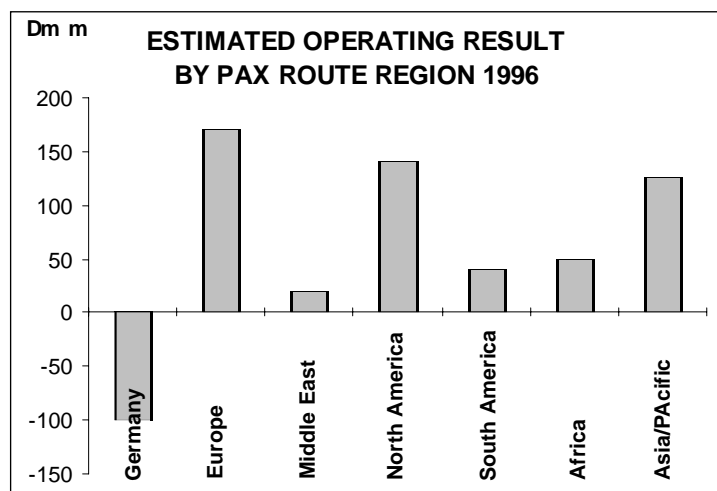
being assured of consistent quality service on their global travels. On the cargo side, a producer of micro-chips in Dresden is only one stage in a production process that encompasses Kuala Lumpur and Glasgow.

To meet this market demand, cross-border alliances were born, promising seamless travel and smooth connections with a trustworthy partner which is "the choice of the carrier of the passenger's carrier choice". Weber waxes almost lyrical on the subject of alliances, which is unusual for such an effective and pragmatic executive; his vision of the future has echoes of Jan Carlzon's 1980s tenet that the aviation world would reduce to five mega-carriers.

Weber proclaims: "Airline competition of the 21st century will be competition amongst airline alliances ... Strong competition between strong alliances is a prerequisite to secure Europe's position and to satisfy passengers and shippers".

The statement obviously alludes to the EC's investigation of the competitive implications of the BA/American alliance as well as the existing antitrust-immunised alliances of Swissair/Sabena/Delta and Lufthansa/United/SAS (that KLM/Northwest, the most comprehensive pool-sharing alliance, is not included in the investigation is illogical). The EC has committed to coming up with a report by the end of the year.

Lufthansa differentiates its alliance with United from BA's with American on the grounds that it does not involve the consolidation of routes; it claims that of the 5,000 LH/UA code-shared weekly flights only two, Frankfurt-Chicago and Frankfurt-Washington, are duplicatory. Also,



Aviation Strategy

Briefing

Lufthansa set the precedent for slot give-ups when it was asked to do so by the EC as a condition for the SAS agreement. Lufthansa probably needs the BA/AA alliance to go through in order to secure its ongoing relationship with United, but it also needs to reduce the competitive threat of the alliance through slot and schedule concessions, exactly the same aim as the EC's.

Lufthansa claims an operating benefit of Dm 240m (\$135m) from its Star alliance in 1996, presumably mostly from United. As with all the alliances it is very difficult to assess the significance of this claim especially as Lufthansa does not officially reveal results by region. However, we would guess that it means that Lufthansa went from breakeven to a profit of about \$80m on the Atlantic last year at the same time as United improved its Atlantic operating profit by \$76m to \$86m. BA and American, as yet unallied, increased their Atlantic profitability by \$79m to \$587m and \$53m to \$180m respectively.

These numbers indicate the different scales of the LH/UA and the potential BA/AA groupings. To close the gap Lufthansa needs to take advantage of the time lead it enjoys over BA/AA and exploit to the full the benefits it is currently reaping: Atlantic passengers were up 21% in the first half of this year and, equally significantly, Lufthansa has been picking up high yielding frequent fliers who previously flew on BA when its FFP was linked with United's.

Because regulatory approval for their alliance will not be given until January or February next year at the earliest, BA and American will not be able to provide a fully coordinated codeshare service until the summer season of 1999 (as the IATA scheduling committee which coordinates slots and schedules for 1998 meets this November). This means that LH/UA will be five years old, and all of the operational problems should have been ironed out by the time that BA/AA finally takes off. BA may be considering the kamikaze option: refuse point blank to compromise on the number of Heathrow slots to be given up, accepting that this intransigence will scupper its own plans for American, but hoping that it will also force the EC to insist on the dismantling or downgrading of the other alliances.

Assuming the regulators leave it alone, can the Star alliance fulfil the potential Weber claims for it?

Alliances are inherently unstable entities. They break up because a member comes to

believe that it is being exploited by the others; because a member decides that a rival partnership is more attractive; or because a member cannot accept a newcomer. Star attempts to minimise these risks through agreements which prevent codesharing with competitors to the alliance and through promoting the full integration of FFPs (members earn miles on all of the partners' flights, not just the codeshared ones, plus Lufthansa uniquely pays German taxes on FFP benefits accruing to its high-earning "Miles & More" members). The six airlines have also established 20 working groups on cost saving, service standards, etc., which sounds like a potential bureaucratic nightmare.

Nevertheless, as Lufthansa's sales prospectus points out, "the Star alliance has not yet been established on the basis of a firm and binding agreement ... the parties have signed a non-binding Memorandum of Intent encompassing the guidelines of a contemplated agreement to be entered into in due time". The first test of the alliance's internal bonding will come if or when an offer is made to Singapore Airlines plus Ansett, a move which has been widely speculated about but denied by Lufthansa. It would be very difficult to see Thai remaining in Star.

Then there is the question of the size of the alliance. Lufthansa wants to increase the global scope of Star by bringing in new members - SAA, British Midland, ANA perhaps. In the process Star risks turning into a Red Giant.

Lufthansa regularly monitors the service standards of its competitors - if they are found lacking there is a problem, if they are found to be superior, there is a bigger problem. This quality control must inevitably break down as the alliance expands and as other alliances, using their own global connections, offer services to the same points. The danger is that the lowest common service denominator will rule or that the alliance will become indistinguishable from the old IATA interline system.

This represents the downside but overall the globalisation strategy must be the correct choice for Lufthansa. It should minimise Lufthansa's German cost disadvantage; broaden the geographical sources of profit (Lufthansa cannot hope to reach BA level of income on the Atlantic because the US-German market is so much more fragmented); and it fits in Lufthansa's restrained fleet growth plans.

Aviation Strategy

Briefing

Deutsche BA: turning the corner at last?

The next 12 months are likely to be crucial for Deutsche BA - British Airways' attempt to establish itself in the most important European market outside of the UK.

Ever since BA and three German banks bought Delta Air in 1992 and renamed it Deutsche BA, the airline has faced a series of problems. Most were of its own making. Deutsche BA was conceived as a low-cost, high quality airline, but although costs were indeed low relative to Lufthansa (DBA's employees, for example, account for just 12% of total costs), until 1996 the airline made three crucial mistakes - an over-complicated fleet, an over-ambitious route strategy, and a reliance on BA as DBA's sales channel within Germany. Inevitably, Lufthansa was provoked by DBA's decision to target business customers and expand rapidly both at home and internationally, and its response was predictable. Although Lufthansa's unit costs were an estimated 30% higher than DBA, the German flag carrier was quick to cut fares on routes it flew against DBA.

The effect on DBA was severe. BA reveals as little as possible about DBA's results, but the mere fact that it has never made a profit tells the whole story (DBA's declared target was break-even by the end of 1993). Passenger growth has been steady - in fact it has absorbed almost all the growth in the domestic market - but that has never translated itself into the bottom line.

Restructuring, combined with the weakness of the Deutschmark and the weak German economy, sent Deutsche BA to its biggest ever loss in 1996/97 (estimated to be around Dm60m, or \$35m).

Significantly, perhaps, the last time BA's quarterly report included any figures for DBA was for October-December 1996, when it claimed DBA's revenue increased by 21% compared to the previous year's corresponding quarter, due to a 13% increase in passenger numbers and a load factor up 3% to 50%. BA is usually not reticent in revealing success, so it is fair to assume that revenues and load factors have come under increasing pressure since then.

The inevitable refocus

Lufthansa's price-cutting forced BA to rethink its Deutsche BA strategy. Thus in 1996 DBA's management team was changed. In January 1997 a major refocus on the German domestic market was announced, with new routes from Munich to Hamburg and Cologne. All the remaining unprofitable international routes were dropped, leaving just the Hamburg, Munich and Berlin feeder routes to London Gatwick.

A decision was also made to sell the airline's turboprops and to concentrate on 737s. As recently as June 1996 DBA's fleet of 21 aircraft included just nine 737-300s, but the last of the Fokker 100s will go by the beginning of 1998, when DBA will have an 18-strong 737-300 fleet.

Also in January the two-class system was axed in favour of single class service, and a "transparent pricing service" was introduced, with three fare levels depending on how far in advance a ticket is purchased. Significantly, for the first time DBA created its own German domestic market salesforce (sending the total DBA workforce to 800 in the third quarter of 1997), and in June came a corporate design revamp. In July 1997 BA increased its stake in Deutsche BA from 49% to 65%.

Today Deutsche BA competes on most of the key German domestic routes, and according to Michel its share of passengers varies between 30-50% on each route. Until recently, the path towards further domestic expansion had appeared firmly blocked by Lufthansa, which kept a keen grip on Frankfurt, the key to the remaining city pairings that DBA would like to fly. DBA, ironically, has experienced the same slot problems at Frankfurt that other airlines experience at London Heathrow. And after Lufthansa withdrew from the Berlin-London Heathrow route at the end of October 1997,

PASSENGERS CARRIED (000s)

	Lufthansa dom	DBA dom	DBA intl
1992	11,456	460	120
1993	12,311	860	110
1994	12,270	1,200	410
1995	12,913	1,500	480
1996	12,696	1,600	440

Aviation Strategy

Briefing

citing "poor slot times at Heathrow", it seemed likely that Lufthansa would retaliate by continuing to keep Deutsche BA away from peak slots.

However, surprisingly, DBA has just started a Frankfurt-Munich service. DBA applied for slots both for this route and Frankfurt-Berlin, and, in the words of Carl Michel, the new CEO, it received an assorted "bagful" of slots. It was just enough to allow DBA to then "cobble together" an eight frequency a day service on Frankfurt-Munich. DBA will undoubtedly aim for its traditional target of 40% of route frequencies.

The winning of just enough slots at Frankfurt may be an indication that Lufthansa's grip on the airport may be lessening. Michel believes political and consumer pressure may be mounting on Lufthansa to at least allow some other carriers into Frankfurt at peak times of the day.

The future

The installation of a dedicated sales force, the axing of most international flights and the switch to just one aircraft type will help the airline reduce its losses. But will these measures alone be enough to drive the airline into profitability? DBA currently forecasts it will reach its first profit in 1998/99, which doesn't leave it with too much time to effect a successful turnaround.

As with the slot question, however, Michel is optimistic that Lufthansa may be coming under pressure to change its outlook on domestic routes. Up until now Lufthansa's pricing policy in Germany has been all over the place, claims Michel. On Frankfurt-Hamburg - a Lufthansa monopoly route - fares are high, but on routes where DBA competes, fares are low.

"Lufthansa reduces its fares when competition turns up," says Michel, "and that simply lacks credibility." Lufthansa also cuts prices across the board, claims Deutsche BA, even when 75% of its traffic is business, which is relatively price insensitive. Whether Lufthansa's new shareholders will agree with selective fare reductions remains to be seen, but Lufthansa cannot keep making losses domestically forever.

Michel does not believe that other low-cost competitors will have a significant effect on the German domestic market, for four reasons. First, there are the high infrastructure costs, as well as a lack of slots at Berlin Tegel, Frankfurt, and peak times at Munich. This would force low-cost carriers

into flying mainly to secondary airports in Germany. Second, many low-cost airlines depend on low-cost, "clapped-out" aircraft, which are unacceptable in safety-conscious Germany. Third, the low-cost carriers would need different distribution channels to those they are used to. Direct sales account for just 5% of Deutsche BA's tickets, and Germans are not used to booking over the telephone by quoting credit card number. And finally, the low-cost carriers need leisure traffic; they cannot survive on business traffic alone. Yet Germany is not an inward leisure destination.

From British Airways' point of view, it still claims that German market presence is required to be a successful pan-European airline. However, DBA's feed is into Gatwick, not Heathrow, so benefits of feed are reduced.

Far more realistic than feed to/from the UK is a vision Michel has of Germany and Deutsche BA being a stepping stone to the north, east and south via codesharing and alliances with other airlines. As Deutsche BA's core problem is that it makes plenty of profit on its peak business flights, but a loss on off-peak flights, one solution would be to provide feed throughout the day into international flights departing from the main German airports. Ideally these would be BA flights. Indeed, intercontinental flights from Germany would be very attractive for BA. At present, however, Deutsche BA would be happy to codeshare with any airline other than a main rival of BA. American Airlines, Qantas and Iberia are the most likely candidates. DBA is particularly keen to encourage long-haul routes into Munich, which would neatly fit into DBA's network. Deutsche BA claims that under an existing codeshare deal with USAirways on Munich-Philadelphia, up to half of that flight's passengers are generated by DBA.

Codesharing may just be enough to send DBA into profit by its target date of 1989/99. Michel claims DBA's direct operating costs are now as low as any of the new low-cost airlines, and that as long as this situation continues the airline will be relatively robust, whatever the external environment. And that too, is changing for the better, given that the German economy is gradually improving after five years of poor performance. The unknown factor is Lufthansa, currently losing an estimated Dm100m a year domestically. If it sticks to its low fare policy against DBA, the domestic market will continue to be marginal. If fares start to rise, then both airlines may benefit.

Aviation Strategy

Management

Brand line thinking inside the tubes

Brand line design and implementation is one of the few tools available to prevent the airline industry becoming another commodity-based business. Some radical thinking is needed in this area, insists **Louis Gialloredo**.

Airline services traditionally consists of three segments - pre-flight, in-flight and post-flight. But today there are two more segments - pre-pre, what drives a customer to one particular carrier rather than another; and post-post, what happens to a customer after leaving the airport and prior to returning for another flight.

For many airlines the pre-pre and post-post processes are divorced from the main sales and marketing effort. The acquisition and retention of passengers are seen as two different processes. In fact, airline managers simply fall into the trap of failing to look at service through the critical eyes of the customer, who sees these processes as a single continuum.

Bearing in mind this five-stage process we are focusing in this article on the evolution of the in-flight product, starting with some observations about the flying tube.

Stretching and shrinking are the watchwords of the 1990s and probably the 2000s; no major technological breakthroughs seem likely. Various iterations of the old 707 have now become a whole new family of 737s and 757s. No one is sure if the DC-9 tube will be around long enough to be an MD-90 variant of any significance. The A320 is being finely divided into 319 and 321 variants. The newly popular regional jet is succeeding in fitting 50 seats into a tube originally designed for 12.

As for widebodies, the 747 dominates with a double-decker version still an Airbus paper dream. We are losing the MD-11 (except for containers) and A330/340 tubes have replaced the comfortable L1011 tubes. The big new tube is the 777, which seems a modest replacement for the wider DC-10.

So what we have is various standard tubes with little new physical benefit for the passenger (although interior architecture attempts to widen the passenger's perception of the aircraft's dimensions). In fact, as tubes have been stretched to accommodate more passengers than the original design envisaged, we could well be regressing to the old DC-8-60/70 syndrome which minimised passenger appeal.

Tube stuffers

So what new things have we been putting in the tubes? How have we improved existing brands? What's really attractive about the classes of service we offer?

Up to the early 1980s cabins consisted of first class and "not-ready-for first" class, at which point long haul fliers demanded a hybrid, called, appropriately enough, Business class. This was designed to placate those airway warriors who felt that the full fare Economy experience was ruined by having to sit beside a backpacker travelling on a bucket shop ticket.

In the 1980s - the years of conspicuous consumption - the offer of more for the same price was the right package for the Business Traveller. Thus we moved to a three-class configuration in most medium and long haul markets. Some carriers - like Swissair and Lufthansa - had a serious disregard for economics, proudly advertising three-class everywhere, anytime.

In the 1990s airlines have evolved two main approaches to designing airline service:

- Complex brand lines. On short and some medium hauls, airlines operate a two-class line consisting of combinations of Business, Super Business, Economy and Super Economy, while selling a traditional three-class product or new two-class variations on long hauls.

Aviation Strategy

Management

- Simplified brand lines. For airlines to whom standardisation means everything, either a one-, two- or three-class is made to fit throughout the carrier's domestic and international network.

The complex approach is typified by British Airways, which has created a range of seven distinct products - Concorde, First, Club World, Club Europe, World Traveller, Euro Traveller and Super Shuttle. JAL and Swissair are also among the airline proponents of complex branding, with five lines each.

This enables the airline to segment in a way that fits in with corporate travel policies - different levels of executives are generally permitted to fly different classes depending on the length of haul.

The simplified approach, as adopted by airlines like Virgin Atlantic, Southwest and Canadian, aims to satisfy most of the passengers most of the time. By maintaining fleet configuration commonality, it should be a more cost-effective process.

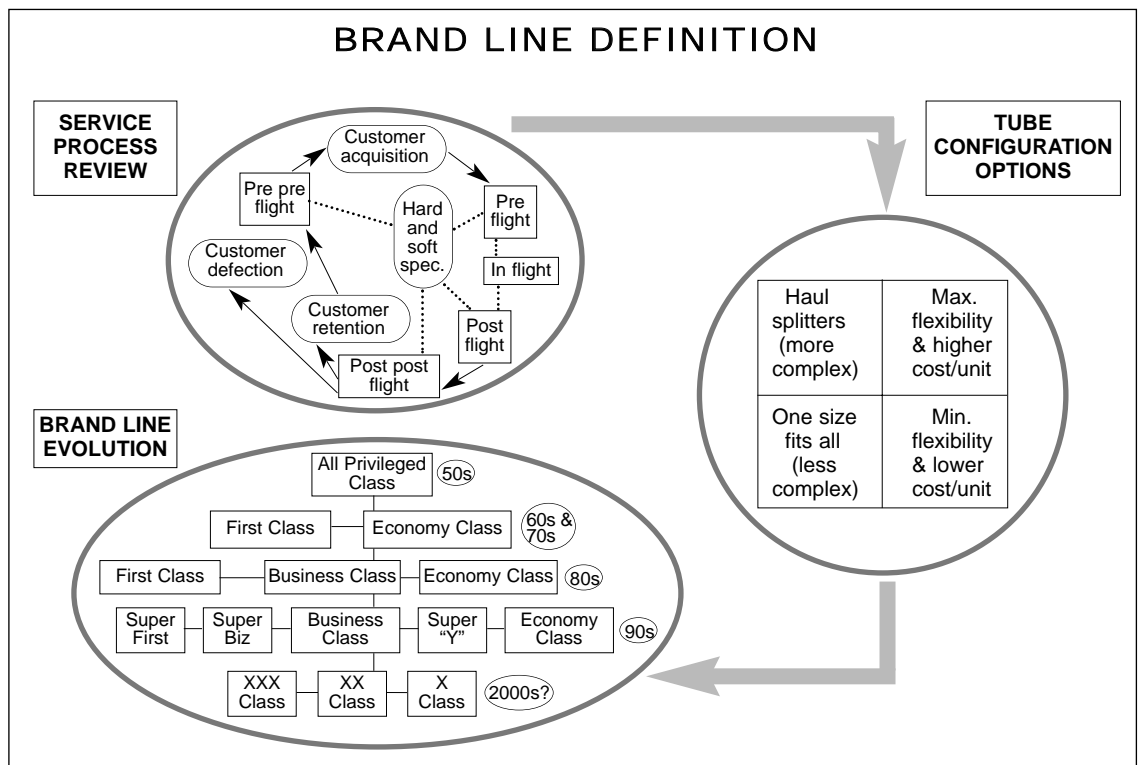
Whichever basic approach is taken some key competitive questions have to be addressed.

Super-First and Super-Business strategies

Virgin Atlantic's innovative Upper Class concept has now been copied by other carriers (Continental, Canadian, etc). BA has responded by raising First class standards through the introduction of beds, a move followed by Air France and JAL.

In short, old First is being squeezed out by Super Business and Super First, leaving some carriers - which traditionally have promoted themselves as quality airlines - floundering. Swissair has proudly announced a 47" pitch in its long-haul Business class whereas the benchmark is now 52-55". It is trying to manage a three-class product with both the First and the Business class spec now being off benchmark. Similarly, KLM has undershot the standard in its own operations and in the KLM/Northwest version. And BA's message about Superior seat ergonomics (the cradled Business baby) may not suppress passengers' suspicions about the actual seat pitch.

Given that it is very difficult, if not impossible, to be a player in both Super First and



Aviation Strategy

Management

Super Business and have room left over for Economy, which strategy looks like the better bet?

Even in today's buoyant market corporations are less willing to provide First class travel than they were in the 1980s boom, and in any case seasoned premium flyers are finding most of what they need in Super Business. It also seems that significantly more traditional First class travellers are retiring than those who are moving up to First for the first time.

A new development affecting the First class is the growing popularity of leasing corporate jets or buying into timeshare programmes. Suddenly many more First class passengers are able to make the economics of corporate jet operation work. American Airlines has seized on this trend through its affiliation with Jet Solutions, although at the risk of eroding its own premium travel base.

Nevertheless, BA, by being the innovator in the Super First class, has put itself in a strong position at present. BA launched its product at the beginning of the strong upturn in intercontinental travel, but airlines wanting to develop such a product now are likely to have much less time before the next downturn in which to make a return on their investment.

BA appears to be aiming to increase its share of First passengers in a market that is at best stable or more probably declining. BA may also have calculated that Super First would have the effect of pushing competitors out of this market altogether.

While this is an effective strategy in an upturn, it could cause problems in the next downturn, especially if those carriers which are being pushed out of the First Class market segment - the US Majors, Lufthansa, Qantas, KLM for example - succeed in redefining their Business product to Super spec and are able to compete much more effectively for that segment.

Other carriers which try to project a premium image - SIA, Cathay Pacific, Thai International, Emirates - are also going to have to revise their class strategy: they fly three classes but none them is now in the Super category. The choice is whether to upgrade First or Business, but, given the

recent economic uncertainty afflicting the Asian markets, the Super Business option would seem more promising.

The need for Super-Y

While airlines agonise over their premium class strategies, they seem to be largely ignoring Economy class, which is very foolish. Most hard specs have remained unchanged over the past cycle or they have actually declined; US domestic passengers are now well advised to bring their own food, such is the quality of airline and airport fare. TWA's experiment with "Comfort Class" was positive but failed to stimulate extra traffic, probably because of poor overall brand.

Again Virgin Atlantic emerges as a market leader with its Premium Economy class catering for the valuable and growing group of passengers in the hunt for a better class of value for money travel. In the next slump airlines that are able to offer this combination will be able to capture a disproportionate share of the "not ready for Business class" segment plus those passengers whose companies are no longer willing to pay Business class fares (with the development of Super Business the fare differential between Business and Economy is certain to widen).

Airlines are resisting developing a Super Economy product because it would require 33-34" pitches which would in turn knock out a couple of Economy class rows. This is a genuine concern for carriers that are trying to keep capacity tight, but in reality many airlines are now overproviding capacity which should allow some manipulation of seating. The next downturn will certainly give airlines the opportunity to experiment with new segments in emptier Economy classes.

One final point: airlines persist in defining their competitive advantage by describing hard specs - meals, seat pitches, IFE and so on. Customers, on the other hand, expect the best hard spec but tend to focus on the soft spec (human behaviour) as the key differentiator. Few carriers base their service line on soft spec but those that do - Southwest and Virgin again - are among the most successful.

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Aviation Strategy

Macro-trends

EUROPEAN SCHEDULED TRAFFIC															
	Europe (int.only)			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 (%)
1990	113.4	70.9	62.5%	128.8	89.7	69.6%	80.5	57.6	71.6%	272.6	191.7	70.3%	405.8	274.9	67.7%
1991	114.8	65.2	56.8%	120.9	84.3	69.7%	80	53.1	66.4%	267.6	182	68.0%	397.8	257.4	64.7%
1992	129.6	73.5	56.7%	134.5	95	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	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%
Aug-97	16.2	11.4	70.2%	17.2	14.5	84.3%	11.5	9.1	78.7%	38.9	31.7	81.6%	57.7	45.0	78.0%
Ann. chng	4.8%	11.6%	4.3	9.6%	8.1%	-1.2	10.2%	11.0%	0.6	8.6%	9.7%	0.8	7.5%	10.0%	1.7
Jan-Aug 97	115.8	73.6	63.6%	117	92.6	79.1%	85.4	64.3	75.3%	276.3	213.1	77.1%	410.5	299.3	72.9%
Ann. chng	5.5%	9.8%	5.5	10.2%	8.4%	1.2	6.9%	10.5%	2.4	6.8%	10.4%	6.8	6.4%	10.2%	6.4

Source: AEA Notes: Scheduled traffic for all AEA members

US MAJORS' 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%
Aug-97	83.6	63.1	75.4%										30.1	24.3	80.7%
Ann. chng	2.5%	3.1%	0.4										3.0%	3.2%	0.5
Jan-Aug 97	636.6	450.8	70.9%										135.7	102.1	75.2%
Ann. chng	3.4%	0.1%	1.4										3.7%	5.2%	1.1

Source: US DOT

ASIAN TRAFFIC under construction

ICAO WORLD TRAFFIC AND ESG FORECAST

	Domestic			International			Total			Domestic growth rate		Int. growth rates		Total growth rates	
	ASK (bn)	RPK (bn)	LF (%)	ASK (bn)	RPK (bn)	LF (%)	ASK (bn)	RPK (bn)	LF (%)	ASK (bn)	RPK (bn)	ASK (bn)	RPK (bn)	ASK (bn)	RPK (bn)
1990	1,270	795	62.6%	1,527	1,062	69.5%	2,797	1,857	66.4%	5.8%	5%	9.4	8.9	7.8%	7.0%
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*	1,587	1,110	70.0%	2,290	1,661	72.5%	3,877	2,771	71.5%	4.0%	6.2%	5.9%	8.1%	5.1%	7.3%
1998*	1,667	1,167	70.0%	2,462	1,773	72.0%	4,129	2,940	71.2%	5.1%	5.1%	7.5%	6.8%	6.5%	6.1%
1999*	1,751	1,221	69.8%	2,630	1,889	71.8%	4,381	3,111	71.0%	5.0%	4.7%	6.8%	6.5%	6.1%	5.8%
2000*	1,839	1,271	69.1%	2,807	2,002	71.3%	4,646	3,273	70.5%	5.1%	4.1%	6.7%	6.0%	6.1%	5.2%
2001*	1,910	1,304	68.2%	2,960	2,082	70.4%	4,870	3,386	69.5%	4.8%	2.5%	5.4%	4.0%	4.8%	3.4%
2002*	1,928	1,295	67.2%	3,027	2,099	69.3%	4,955	3,394	68.5%	1.8%	-0.6%	2.3%	0.8%	1.8%	0.2%

Source: Airline Monitor, July 1997. Note: * = forecast; Historical ICAO traffic includes charters

DEMAND TRENDS (1990=100)

	Real GDP					Real exports					Real imports				
	US	UK	Gmny	France	Japan	US	UK	Gmny	France	Japan	US	UK	Gmny	France	Japan
1990	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
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	113	108	107	107	111	146	134	128	128	126	150	123	127	116	132
1997*	117	111	110	110	114	160	142	138	138	140	166	132	134	122	137
1998*	120	114	113	113	117	170	150	149	148	155	178	141	142	130	148

Source: OECD Economic Outlook, July 1997. Note: * = forecast; "Real" = adjusted for inflation

Aviation Strategy

Macro-trends

COST INDICES (1990=100)												
	Europe						US					
	Unit rev	Unit op cost	Unit lab cost	Efficiency	Av. lab cost	Unit fuel cost	Unit rev	Unit op cost	Unit lab cost	Efficiency	Av. lab cost	Unit fuel cost
1990	100	100	100	100	100	100	100	100	100	100	100	100
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

Notes: European indices = weighted average of BA, Lufthansa and KLM; US indices from American, United and Southwest.
 Unit rev. is airline revenue per ATK. Unit op. cost is cost per ASK. Unit labour is salary, social charges, pension costs per ASK.
 Labour eff. is ATKs per emp. Av. lab cost is salary, social costs, pension per emp. Unit fuel cost is fuel exp. & taxes per ATK.

FINANCIAL TRENDS												
	Inflation					Exchange rates (against \$)					LIBOR	
	US	UK	Germany	France	Japan	UK	Germany	France	Japan	6 month Euro-dollar		
1990	100	100	100	100	100	1990	0.56	1.62	5.45	145	8.27%	
1991	104	106	104	103	103	1991	0.57	1.66	5.64	135	5.91%	
1992	107	107	109	106	105	1992	0.57	1.56	5.29	127	3.84%	
1993	111	109	114	108	106	1993	0.67	1.65	5.66	111	3.36%	
1994	113	109	117	110	107	1994	0.65	1.62	5.55	102	5.06%	
1995	117	112	119	112	107	1995	0.63	1.43	4.99	94	6.12%	
1996	120	114	121	114	107	1996	0.64	1.51	5.12	109	4.48%	
1997*	122	116	122	116	108	1997 Oct	0.62	1.78	5.97	121	5.91%	
1998*	125	119	124	117	109							

Note: * = forecast,

AIRCRAFT VALUE TRENDS									
	New narrowbody prices (\$m)				Narrowbody index (1990 = 100)	New widebody prices (\$m)			Widebody index (1990 = 100)
	A320-200	737-400	757-200	200		A340	747-400	767-300ER	
	1990	35.0	28.0	49.0	200	100	132.0	65.0	100
1991	32.0	28.5	47.0	200	96	132.0	68.0	100	
1992	32.0	29.5	43.5	200	93	135.0	70.0	102	
1993	35.5	30.0	43.0	200	96	98.0	130.0	72.0	98
1994	36.1	31.0	44.0	200	98	100.0	134.0	73.0	102
1995	37.5	31.5	44.5	200	100	105.0	145.0	75.0	110
1996	38.0	34.5	47.0	200	106	105.0	145.0	76.5	110
1997	40.0	38.0	49.5	200	113	110.0	160.0	79.0	121

Notes: Estimates of actual prices paid by medium size airlines. Indices constructed as weighted averages of individual types.

JET ORDERS	Date	Buyer	Order	Price	Engines	Delivery date	Other info
Airbus	Oct 14	Tunisair	3 A319s, 4 A320s				2Q 99+
	Oct 8	Finnair	5 A319s, 3 A320s, 4 A321s		CFM56-5	1Q 99+	+12 options
	Oct 7	TAM	5 A320-200s		PW4068A	4Q 98+	+5 options
Boeing	Oct 23	Qantas	3 747-400s	\$475m		99-00	
	Oct 19	Eastwind AL	2 737-700s			2Q 98	
	Oct 15	Lufthansa	2 747-400Fs	\$330m			
	Oct 7	Turkish AL	26 737-800s	\$1.3bn	CFM56-7		From options
Bombardier	Oct 2	Cargolux AL	5 747-400Fs	\$825m		4Q 98-4Q 01	+2 options
	Oct 8	Midway AL	10 CRJ-200ERs	\$207m		4Q 97-4Q 98	+20 options
	Oct 7	Brit Air	2 CRJ-100s			1Q 98	From options
Embraer	Oct 9	British Regional AL	12 Emb-145s				+3 options
	Oct 2	Luxair	2 Emb-145s	\$40m	3Q98+		+2 options

Aviation Strategy

Micro-trends

	Airline revenue	Airline costs	Airline op. profit	Group net profit	Sched ASK	Sched RPK	Load factor	Airline rev per schd ASK	Airline costs per schd ASK	Psgrs	ATK	RTK	Load factor	Airline emp
	US\$m	US\$m	US\$m	US\$m	m	m	%	Cents	Cents	000s	m	m	%	
American														
Jan-Mar 96	3,614	3,389	225	157	60,283.7	39,518.5	65.6	5.99	5.62	18,751	9,311.4	4,766.7	51.2	92,656
Apr-Jun 96	3,865	3,418	447	293	61,724.2	42,826.5	69.4	6.26	5.54	20,200	9,539.9	5,128.8	53.8	92,316
Jul-Sep 96	3,890	3,446	444	282	62,922.5	44,722.1	71.1	6.18	5.48	20,806	9,726.6	5,265.6	54.1	91,476
Oct-Dec 96	3,640	3,441	200	284	60,677.9	41,138.5	67.8	6.00	5.67	19,528	9,366.1	4,969.5	53.1	91,476
Jan-Mar 97	3,683	3,484	199	152	60,301.3	40,659.1	67.4	6.11	5.78	19,363	9,283.2	4,848.4	52.2	93,246
Apr-Jun 97	4,011	3,556	445	302	62,278.9	43,935.6	70.5	6.44	5.71					
Jul-Sep 97				323										
America West														
Jan-Mar 96	413	379	34	14	7,949.0	5,631.6	70.8	5.20	4.77	4,299	1,000.2	604.3	60.4	10,331
Apr-Jun 96	464	402	62	28	8,540.1	6,175.7	72.3	5.43	4.71	4,569	1,079.0	659.2	61.1	10,553
Jul-Sep 96	423	476	-53	-46	8,842.6	6,391.2	72.3	4.78	5.38	4,655	1,119.4	682.3	61.0	10,617
Oct-Dec 96	440	415	25	12	9,213.7	6,385.1	69.3	4.77	4.50	4,607	1,162.4	688.1	59.2	10,866
Jan-Mar 97	462	429	33	14	9,292.5	6,399.7	68.9	4.97	4.61	4,584	1,168.8	686.7	58.8	11,442
Apr-Jun 97	478	427	51	23	9,385.3	6,657.0	70.9	5.09	4.55					
Jul-Sep 97	462	425	37	18										11,335
Continental														
Jan-Mar 96	1,225	1,136	89	88	20,469.3	13,718.2	67.0	5.98	5.55	8,384	2,515.5	1,563.0	62.1	32,657
Apr-Jun 96	1,379	1,190	189	166	21,723.5	15,204.7	70.0	6.35	5.48	9,183	2,647.0	1,723.7	65.1	31,891
Jul-Sep 96	1,385	1,360	25	18	23,110.8	16,210.3	70.1	5.99	5.89	9,296	2,785.9	1,830.0	65.7	32,706
Oct-Dec 96	1,323	1,231	91	47	22,718.2	14,964.7	65.9	5.82	5.42	8,879	2,803.4	1,732.3	61.8	33,468
Jan-Mar 97	1,436	1,308	127	74	22,782.9	15,698.9	68.9	6.30	5.74	9,081	2,820.6	1,790.5	63.5	33,766
Apr-Jun 97	1,522	1,325	197	128	23,930.8	17,456.7	72.9	6.36	5.54					34,000
Jul-Sep 97				110										
Delta														
Jan-Mar 96	2,964	3,350	-386	-276	50,883.0	33,736.6	66.3	5.82	6.58	22,439	7,008.3	3,906.1	55.7	61,110
Apr-Jun 96	3,360	3,069	291	161	53,879.8	38,863.5	72.1	6.24	5.70	24,896	7,460.1	4,439.4	59.5	61,771
Jul-Sep 96	3,432	2,990	442	238	55,273.7	40,838.2	73.9	6.21	5.41	25,242	7,677.8	4,623.5	60.2	63,862
Oct-Dec 96	3,197	2,973	224	125	54,982.5	37,638.0	68.5	5.81	5.41	24,625	7,606.7	4,421.2	58.1	63,862
Jan-Mar 97	3,420	3,077	343	189	54,175.8	37,317.3	68.9	6.31	5.68	24,573	7,489.7	4,354.8	58.1	67,851
Apr-Jun 97	3,541	3,022	519	301	55,566.9	41,436.1	74.6	6.37	5.44					64,980
Jul-Sep 97				254										
Northwest														
Jan-Mar 96	2,178	2,036	142	53	35,696.2	25,062.6	70.2	6.10	5.70	12,036	5,641.9	3,295.5	58.4	45,587
Apr-Jun 96	2,489	2,100	389	203	37,746.8	28,256.9	74.9	6.59	5.56	13,556	6,033.6	3,722.2	61.7	46,184
Jul-Sep 96	2,688	2,203	485	254	40,452.8	31,071.2	76.8	6.65	5.45	14,368	6,445.2	4,045.4	62.8	46,994
Oct-Dec 96	2,296	2,204	92	26	37,209.8	26,050.1	70.0	6.17	5.92	12,723	5,965.7	3,566.9	59.8	47,631
Jan-Mar 97	2,290	2,144	146	65	37,094.7	26,697.3	72.0	6.17	5.78	12,661	5,800.7	3,471.3	59.8	47,628
Apr-Jun 97	2,467	2,167	300	136	38,974.8	29,189.2	74.9	6.33	5.56					48,197
Jul-Sep 97				290										
Southwest														
Jan-Mar 96	770	714	56	33	15,512.2	9,394.6	60.6	4.96	4.60	12,595	1,982.2	974.3	49.2	21,130
Apr-Jun 96	908	765	142	85	16,357.6	10,959.3	67.0	5.55	4.68	14,014	2,099.4	1,137.8	54.2	21,559
Jul-Sep 96	889	785	103	61	16,863.5	11,802.9	70.0	5.27	4.66	14,478	2,164.7	1,224.4	56.6	22,844
Oct-Dec 96	829	780	49	28	16,776.0	11,431.8	68.1	4.94	4.65	14,285	2,148.9	1,188.4	55.3	23,395
Jan-Mar 97	884	797	87	51	16,923.1	10,515.0	62.1	5.22	4.71	13,329	2,163.7	1,097.2	50.7	23,980
Apr-Jun 97	957	801	156	94	17,671.9	11,289.6	63.9	5.41	4.53					23,777
Jul-Sep 97				93										
TWA														
Jan-Mar 96	757	811	-54	-37	14,786.2	9,410.1	63.6	5.12	5.49	5,338	2,052.8	1,119.6	54.5	24,900
Apr-Jun 96	925	863	62	25	16,204.8	11,315.6	69.8	5.71	5.33	6,046	2,239.5	1,310.4	58.5	25,194
Jul-Sep 96	952	926	26	-14	18,426.6	12,918.4	70.1	5.16	5.02	6,381	2,550.6	1,476.5	57.9	26,332
Oct-Dec 96	771	1,005	-233	-259	15,909.2	9,985.2	62.8	4.85	6.31	5,517	2,201.5	1,195.1	54.3	26,578
Jan-Mar 97	744	844	-100	-70	13,769.7	9,129.7	66.3	5.41	6.13	5,345	1,898.2	1,054.3	55.5	25,662
Apr-Jun 97	804	799	6	-14	14,740.1	10,272.2	69.7	5.46	5.42					25,800
Jul-Sep 97														
United														
Jan-Mar 96	3,598	3,534	64	-23	62,536.8	42,939.5	68.7	5.75	5.65	18,937	8,960.3	5,175.0	57.8	83,141
Apr-Jun 96	4,023	3,623	400	196	64,851.6	47,405.6	73.1	6.20	5.59	20,736	9,330.4	5,696.9	61.1	83,347
Jul-Sep 96	4,344	3,731	613	340	68,560.8	51,669.2	75.4	6.34	5.44	22,241	9,868.5	6,134.8	62.2	84,579
Oct-Dec 96	3,817	3,764	54	19	65,806.0	45,557.2	69.2	5.80	5.72	19,948	9,505.3	5,615.2	59.1	86,008
Jan-Mar 97					64,828.6	45,292.9	69.9			19,683	9,386.1	5,530.0	58.9	86,443
Apr-Jun 97					67,458.3	48,894.6	72.5							89,000
Jul-Sep 97														
USAirways														
Jan-Mar 96	1,676	1,685	-9	-32	21,713.3	14,015.9	64.5	7.72	7.76	12,938	2,914.6	1,520.6	52.2	41,981
Apr-Jun 96	1,933	1,726	207	201	22,728.0	16,163.4	71.1	8.50	7.59	14,961	3,067.2	1,744.6	56.9	41,864
Jul-Sep 96	1,866	1,769	97	68	23,510.7	16,416.8	69.8	7.94	7.53	14,329	3,297.6	1,806.1	54.8	42,192
Oct-Dec 96	1,898	1,823	74	27	23,591.5	16,074.3	68.1	8.04	7.73	14,412	3,182.8	1,755.7	55.2	43,144
Jan-Mar 97	1,923	1,749	174	153	23,304.6	15,931.4	68.4	8.25	7.50	13,733	3,141.2	1,734.3	55.2	42,225
Apr-Jun 97	2,031	1,772	259	206	23,921.3	17,625.5	73.7	8.49	7.41					42,160
Jul-Sep 97														
ANA														
Jan-Mar 96	3,792	3,759	33	-142	34,478.4	22,337.5	64.8	11.00	10.90	16,580				15,832
Apr-Jun 96	SIX MONTH FIGURES													
Jul-Sep 96	4,060	3,846	214	75	36,248.3	23,421.2	64.6	11.20	10.61	20,104				15,914
Oct-Dec 96	SIX MONTH FIGURES													
Jan-Mar 97	3,090	3,160	-69	-40	41,442.7	26,945.8	65.0	7.46	7.62	24,721				15,996
Apr-Jun 97														
Jul-Sep 97														
JAL														
Jan-Mar 96	5,214	5,305	-91	-172	59,066.0	40,637.4	68.8	8.83	8.98	18,027	8,402.0	5,789.0	68.9	21,000
Apr-Jun 96	SIX MONTH FIGURES													
Jul-Sep 96	5,406	5,269	137	24	54,783.8	38,491.2	70.3	9.87	9.62	15,046	8,254.3	5,406.0	65.5	19,046
Oct-Dec 96	SIX MONTH FIGURES													
Jan-Mar 97	4,797	4,882	-86	-138	61,639.1	43,455.6	70.5	7.78	7.92	18,890	8,868.0	6,225.0	70.2	19,046
Apr-Jun 97														
Jul-Sep 97														

Aviation Strategy

Micro-trends

	A irline revenue	A irline costs	A irline op. profit	Group net profit	Sched ASK	Sched RPK	Load factor	A irline rev per sched ASK	A irline costs per sched ASK	Pegrs	ATK	RTK	Load factor	A irline emp
	US\$m	US\$m	US\$m	US\$m	m	m	%	Cents	Cents	000s	m	m	%	
Korean Air														
Jan-M ar 96														
Apr-Jun 96														
Jul-Sep 96	TWELVE MONTH FIGURES													
Oct-Dec 96	4,341	4,314	27	-249	52,982.2	37,700.0	71.2	8.19	8.14	23,553	10,953.3	8,253.2	75.3	15,511
Jan-M ar 97														
Apr-Jun 97														
Jul-Sep 97														
Malaysian														
Jan-M ar 96	2,218	2,128	90	92	35,161.4	24,565.8	69.9	6.31	6.05	14,311	5,381.9	3,354.7	62.3	17,766
Apr-Jun 96														
Jul-Sep 96	TWELVE MONTH FIGURES													
Oct-Dec 96	2,398	2,282	116	135	40,096.9	27,903.7	69.6	5.98	5.69	15,371	5,246.4	3,212.4	61.2	15,230
Jan-M ar 97														
Apr-Jun 97														
Jul-Sep 97														
Singapore														
Jan-M ar 96	2,280	2,032	248	360	34,976.5	25,607.4	73.2	6.52	5.81	5,675	6,500.7	4,498.4	69.2	13,209
Apr-Jun 96	SIX MONTH FIGURES													
Jul-Sep 96	2,263	2,037	226	398	36,152.9	27,202.4	75.2	6.26	5.64	5,930	6,599.8	4,632.9	70.2	13,376
Oct-Dec 96	SIX MONTH FIGURES													
Jan-M ar 97	2,249	2,022	227	316	37,354.4	27,490.1	73.6	6.02	5.41	6,092	6,901.3	4,879.1	70.7	13,307
Apr-Jun 97	SIX MONTH FIGURES													
Jul-Sep 97	2,298	2,010	288	402	38,125.4	28,216.7	74.0	6.03	5.27	6,135	7,231.0	5,091.5	70.4	13,365
Air France														
Jan-M ar 96														
Apr-Jun 96														
Jul-Sep 96	TWELVE MONTH FIGURES													
Oct-Dec 96					75,800.1	57,471.2	75.8			16,397	14,771.8	10,746.7	72.8	
Jan-M ar 97														
Apr-Jun 97														
Jul-Sep 97														
Alitalia														
Jan-M ar 96														
Apr-Jun 96														
Jul-Sep 96	TWELVE MONTH FIGURES													
Oct-Dec 96	5,064	0	0	780	50,136.8	34,556.2	68.9	10.10	0.00	23,138	8,167.7	5,674.0	69.5	16,507
Jan-M ar 97														
Apr-Jun 97														
Jul-Sep 97														
BA														
Jan-M ar 96	2,810	2,729	81	95	31,526.0	22,210.0	70.4	8.91	8.66	7,378	4,478.0	3,075.0	68.7	57,674
Apr-Jun 96	3,206	2,908	297	175	34,949.0	25,261.0	72.3	9.17	8.32	8,494	4,989.0	3,463.0	69.4	58,578
Jul-Sep 96	3,560	3,068	493	427	36,262.0	28,322.0	78.1	9.82	8.46	9,264	5,150.0	3,773.0	73.3	59,160
Oct-Dec 96	3,301	3,087	215	154	34,795.0	24,761.0	71.2	9.49	8.87	8,034	4,931.0	3,435.0	69.7	58,911
Jan-M ar 97	3,179	3,130	49	113	33,783.0	23,960.0	70.9	9.41	9.27	7,648	4,837.0	3,333.0	68.9	60,188
Apr-Jun 97	3,624	3,395	229	260	37,298.0	27,242.0	73.0	9.72	9.10	8,948	5,358.0	3,742.0	69.8	60,083
Jul-Sep 97														
Iberia														
Jan-M ar 96														
Apr-Jun 96														
Jul-Sep 96	TWELVE MONTH FIGURES													
Oct-Dec 96	3,770	3,500	270	28	36,959.0	25,900.9	70.1	10.20	9.47	15,278	5,252.3	3,216.3	61.2	22,455
Jan-M ar 97														
Apr-Jun 97														
Jul-Sep 97														
KLM														
Jan-M ar 96	1,363	1,424	-61	5	15,037.0	10,979.0	73.0	9.07	9.47		2,782.0	1,975.0	71.0	25,528
Apr-Jun 96	1,441	1,394	47	159	15,980.0	11,729.0	73.4	9.02	8.72		2,892.0	2,045.0	70.7	25,969
Jul-Sep 96	1,680	1,571	108	154	17,296.0	13,820.0	79.9	9.71	9.09		3,095.0	2,291.0	74.0	26,278
Oct-Dec 96	1,483	1,494	-11	-4	16,806.0	12,346.0	73.5	8.82	8.89		3,010.0	2,203.0	73.2	26,353
Jan-M ar 97	1,361	1,444	-83	-153	16,279.0	12,455.0	76.5	8.36	8.87		2,838.0	2,090.0	73.6	26,385
Apr-Jun 97	1,692	1,566	126	99	17,310.0	13,663.0	78.9	9.77	9.05		2,999.0	2,338.0	78.0	26,620
Jul-Sep 97														
Lufthansa														
Jan-M ar 96														
Apr-Jun 96														
Jul-Sep 96	TWELVE MONTH FIGURES													
Oct-Dec 96	9,052	8,780	272	371	91,998.2	63,260.2	68.8	9.84	9.54	33,118	17,888.3	12,523.7	70.0	28,224
Jan-M ar 97														
Apr-Jun 97														
Jul-Sep 97														
SAS														
Jan-M ar 96	1,157	1,108	50	46	7,256.0	4,320.0	59.5	15.95	15.27	4,541				20,155
Apr-Jun 96	1,313	1,189	124	129	7,585.0	5,046.0	66.5	17.31	15.67	5,198				20,727
Jul-Sep 96	1,239	1,211	28	32	8,084.0	5,390.0	66.7	15.32	14.97	5,111	Twelve month figures			21,389
Oct-Dec 96	1,122	1,080	43	64	7,678.0	4,688.0	61.1	14.62	14.06	4,948	4,084.6	2,423.1	59.3	23,121
Jan-M ar 97	1,076	1,109	-34	-36	7,443.0	4,335.0	58.2	14.45	14.91	4,551				21,251
Apr-Jun 97	1,310	1,141	168	178	7,962.0	5,392.0	67.7	16.45	14.33	5,617				21,515
Jul-Sep 97					8,084.0	5,598.0	69.2							
Swissair														
Jan-M ar 96	SIX MONTH FIGURES													
Apr-Jun 96	2,257	2,128	130	-42	16,439.3	10,155.0	61.8	13.73	12.94	4,227	2,810.0	1,882.0	67.0	10,202
Jul-Sep 96	SIX MONTH FIGURES													
Oct-Dec 96	1,285	1,348	-63	-355	16,372.6	11,074.0	64.4	7.85	8.23	4,506	3,027.0	2,113.9	69.8	10,202
Jan-M ar 97	SIX MONTH FIGURES													
Apr-Jun 97	1,787	1,724	63	76	17,464.4	11,880.7	68.0	10.23	9.87	5,019	3,029.0	2,136.5	70.5	10,163
Jul-Sep 97														

November 1997

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