

SAir's historic breakthrough

SAir Group is poised to make a historic breakthrough in the European aviation industry. By increasing its stake from 49.5% to 85% it will have effected the first take-over of one European flag-carrier by another.

The two airlines have been integrating their systems for some time, having pooled resources into a joint company, Airline Management Partnership. But now SAir has decided to go for a full legal merger of a type that most industry observers had assumed was impossible because of the nationality clauses in bilateral agreements.

Inside the European Economic Air Space there is no problem about Sabena's new Swiss nationality (assuming that the Switzerland-EU ATA agreement is approved in the referendum to be held there on May 21). Outside the EU the situation is more problematic.

However, as Andrew Lobbenberg, analyst at Flemings Bank, points out the clauses in ATAs allow - but do not oblige - one country to refuse commercial operation by any airline from the other country if that country's airline is not controlled by its nationals. In other words, it's up to the bilateral partner to make life easy or difficult for Swiss-owned Sabena.

In Sabena's case some 82% of its passengers are intra-Europe and another 8% are transatlantic. Just before the announcement that Swissair intended to take 85% of Sabena, the alliance between American, Swissair and Sabena received tentative approval from the US DoT for antitrust immunity. The DoT took the view that the connections offered by this new alliance would be similar to those offered in the previous alliance with Delta. It also stated that its approval was contingent on the two European airlines not joining oneworld.

So SAir seems to have covered most of the angles. And there does not seem to be any chance now of SAir getting into oneworld. Indeed, as an example of how solid that alliance is: BA has just decided that Amadeus will be its preferred IT partner for its distribution systems. Sabre lost out so there is now no coordinated oneworld CRS.

Meanwhile, the KLM/Alitalia alliance has officially collapsed over the vexed question of the development of the Malpensa hub, and KLM has asked for €100m back from Alitalia. Over the past decade KLM has entered into serious alliance negotiations with SAS, Sabena, Swissair and BA and failed in each case.

Two options now emerge for KLM. First, it could consider the Air France/Delta alliance, which will soon encompass Korean. A major problem would be the proximity of Schiphol and CDG and the consequent competition issues, and again commercial incompatibility. Also, Alitalia would probably now regard the Air France alliance as its best bet, especially if Continental could be brought in as well.

Second, KLM could embrace fully the BA-style strategy of downsizing, which it has already started to do, and focus totally on his most profitable sectors. For KLM this is an even more difficult strategy than it is for BA because its network is totally designed around its hub and spoke system.

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US revenue and cost trends: surprisingly upbeat

Sharply reduced earnings or losses reported by the US major carriers for the quarter ended March 31 give a rather misleading picture of the state of the industry and its prospects. This is because traffic, capacity, yield and non-fuel unit cost trends continue to be favourable - and fuel prices, too, are now moderating.

One Wall Street analyst described the \$354m industry aggregate net profit in the first quarter as an "amazing achievement" in light of a 61% average rise in fuel prices. The hike meant an additional \$1.2bn of fuel expenses. Excluding fuel, the industry's pre-tax profit margin rose by about three percentage points.

Unit revenue recovery

The first-quarter results were essentially rescued by a solid 4.3% increase in domestic unit revenues (RASM) in March, after just 0.9% growth in February and 2-3% declines in December and January. In fact, this was only the fourth time RASM has risen in the past 18 months.

There was a sudden dramatic surge in the last two weeks of March, driven by a rebound in leisure demand (partly representing a recovery from the Y2K effects), industry-wide fare increases and a fuel surcharge introduced in February. Another factor was coach class seat removals at American and United which, according to an estimate by PaineWebber, have reduced industry capacity by about 0.75%.

While some of those factors obviously have little lasting impact, there are signs that the unit revenue trend has turned positive at long last. This is because a combination of robust demand, moderating capacity expansion and continued fuel and labour cost pressures is likely to keep fares at a healthy level.

The US economy continues to grow strongly, but new worries about inflation are expected to lead to another hike in interest rates (this year's third) by June, which will slow the economy and traffic growth. But ATA, the industry association,

still expects 3.2% RPM growth in 2000, compared to 5% last year.

The chances of the fare hike labelled as "fuel surcharge" being reversed as fuel prices decline seem pretty remote at present. As Continental's CEO Gordon Bethune put it, "planes are full, so prices are not too high". In ATA's estimates, fares will increase by about 2.5% this year, after a 1.6% decline in 1999.

Analysts believe that April saw another strong 4.5-5% increase in domestic RASM but that growth will moderate to 3-4% in May and June, still leading to an improvement in industry unit revenues this year.

American's and United's respective "More Room Throughout Coach" and "Economy Plus" initiatives are expected to boost their RASM growth by as much as 2-3 percentage points in the current quarter and beyond. However, seat removals are not likely to become a trend as other carriers focus on alternative ways to improve passenger comfort.

Moderate capacity growth

ATA currently projects that industry capacity growth will decelerate from last year's 4.8% to 4-4.5% in 2000, reflecting recent downward adjustments by a number of carriers. This is very good news, though growth would still exceed the 3.2% projected increase in traffic, which could put some downward pressure on fares.

While capacity management continues to be the key concern of airline investors, substantial capacity addition is, of course, tolerated if the airline is Southwest or if growth takes place from underdeveloped hubs.

Southwest is now exceeding its earlier long-term planned growth rate of 10%. Its ASMs rose by 14.2% in the March quarter, which was amply exceeded by traffic growth. Despite some aircraft delivery delays, the airline believes that it can achieve 14% ASM growth in the current quarter and "at least 12%" for the year.

Continental's major growth phase is now winding down and has recently decelerated fur-

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ther. After 9% ASM growth in the first quarter, the carrier now expects 5% growth for the year and just 2-3% in 2001. The past few years' rapid expansion has been so profitable that Wall Street analysts sound rather disappointed that it is over. Salomon Smith Barney's Brian Harris wonders if Continental may have gone a little too far with the slow-down "given its underdeveloped hubs".

US Airways' immediate plans sound promising - four new transatlantic routes out of under-utilised hubs this spring and some smart restructuring of MetroJet flying, which is expected to add up to an 11% ASM increase in the current quarter. But there are concerns about the 2001 growth rate, which Harris estimates at 6-8% based on current fleet plans and considers aggressive in light of the major carriers' projected average rate of around 4% and intensifying competitive pressure from low-cost operators on the East Coast.

The worries also reflect dented management credibility. While there is unanimous agreement that US Airways' fleet renewal and growth strategy could be instrumental in reducing its extremely high unit costs and ensuring longer-term survival, the management's record in implementing the strategic plan has been dismal so far.

Impact of fuel prices

The US industry's unit costs rose by on average about 6% in the first quarter, which was almost entirely due to higher fuel prices as non-fuel unit costs inched up by a fraction of a percent. But there was considerable variation between carriers depending on their hedging policies.

At one extreme, Delta, which was extremely well-hedged, paid only 23% higher fuel prices (59.5 cents per gallon). At the other extreme, US Airways, Southwest, Continental and Alaska, which had no effective hedges in place, saw prices more than double to well over 80 cents per gallon.

In recent months just about all the previously unhedged carriers have hedged themselves to varying degrees, but in many cases there are no immediate benefits while the longer-term benefits are questionable now that fuel prices are on a downward track.

Labour vs. distribution costs

The flat first-quarter non-fuel unit costs were the result of substantial labour cost increases and

impressive commissions savings more or less offsetting one another. The indications are that these trends will continue, with labour cost increases possibly gaining a slight edge.

The worst-positioned carrier in that respect is United, which will see a significant rise in labour costs this year and next as its ESOP comes to a close. The process, which began in April, will account for the bulk of the 10% rise in unit costs projected for the current quarter (some is due to the seat removals). The ESOP cost impact for 2000 is estimated at \$750m (or \$1.3bn on a full 12-month basis, according to Merrill Lynch) and it is the main reason why UAL's earnings are expected to fall this year.

American also faces tricky labour issues, following the rejection of a tentative flight attendant contract last autumn (talks continue) and the recent breakdown of negotiations with its pilots over the use of RJs. And the issue of the \$45m sickout fine has still not been resolved with the pilots.

Labour cost pressures also continue at Delta, whose pilots are demanding industry-leading pay rates in talks on a contract that becomes amendable later this year. And the new flight attendant deals at US Airways (ratified May 1) and Northwest (tentative) both include big pay increases.

On the positive side, the hefty pay increases granted particularly by Delta and Continental in recent years are to a large extent offset by productivity gains. And at least Continental, US Airways and Alaska now have no new contracts coming up for renewal until 2002 or 2003.

The resolution of labour issues will enable US Airways at long last to focus properly on implementing its strategic plan. Some analysts believe that the current quarter will be the first to show a decline in unit costs stemming from past restructuring efforts.

One of the positive surprises this year is that commission expenses have continued to fall at a rapid rate. According to a research note from Merrill Lynch, the major carriers' commission costs declined by 12% in aggregate and by 16% per ASM in the March quarter.

This reflected a cut in travel agency commission rates from 8% to 5% and more direct sales - factors that will produce benefits also for the remainder of the year. In addition, American is now reaping extra benefits from a recent reduction in Latin America commission rates from 9-11% to 6%.

Internet prospects even brighter

Internet revenues in the US have typically tripled or even quadrupled over the past year, as the carriers have redesigned and improved their own web sites, announced new web-based ventures and forged alliances.

The industry leader is Southwest, which earned more than 25% of its revenues from bookings through its own web site in the March quarter (up 100%) and expects to exceed \$1bn in revenues in 2000. Merrill Lynch suggests that the site, which Southwest only spent \$5m to develop, is one of the most profitable airline B2C Internet sites.

For the hub-and-spoke carriers, Internet sales currently average 5-7% of revenues, with the airlines' own web sites accounting for 40-60% of the Internet total. Delta and Northwest led the pack in the first quarter with 10% Internet sales, followed by Alaska and US Airways with over 9%, Continental and American 5% and United 4%.

These percentages will continue to rise rapidly this year. For example, Continental expects to double its Internet sales to more than 10% of revenues by year-end as it can guarantee the lowest fares on its web site (something that is not yet possible for technical reasons). United expects its online bookings to rise to 20% by 2003. Delta has announced plans to save around \$50m over the next 12 months through the use of lower-cost distribution channels (mainly the Internet).

Excluding development costs, the Internet has offered immediate substantial cost savings,

but so far at least many have suspected that the revenue dilution impact may be offsetting the cost savings particularly for the major hub-and-spoke carriers. There is little empirical evidence to support arguments either way. But what seems clear is that low-fare domestic operators, including Southwest, have benefited the most.

However, a new study on airlines and the Internet by Salomons, based on an airline survey and follow-up interviews, suggests that the impact is just about to shift from a net revenue negative to a "net positive". Large airlines are expected to gain because of their promising third-party or industry-initiated ventures (such as Priceline and T2 respectively), the leveraging of their FFPs and increased focus on corporate travel products.

In one of the most notable recent initiatives, American has linked its FFP with AOL through a three-year exclusive alliance. Salomons believes that the deal could generate \$300-\$400m in annual incremental revenue to American in three years' time. The move is likely to be copied by others such as United, which has decided to split out its FFP as a separate division.

Online corporate travel products will be important as business travel represents 70-80% of a typical hub-and-spoke carrier's revenues. Southwest is on the verge of launching such a product, but Alaska appears to have stolen the show with a new online tool, "EasyBiz", aimed at small to mid-sized companies.

Boeing, the A3XX and the WTO

The announcement at the end of April by Emirates Airlines that it will buy up to 12 examples of the proposed Airbus A3XX makes it all the more likely that when the Airbus Industrie board meets on May 26 the much-delayed project will receive the go-ahead. The decision the meeting must take is whether to allow Airbus director general Noel Forgeard to make legally binding offers to airlines interested in being launch customers for the new range of aircraft. It would become available to launch customers at the end of 2005.

Sir Richard Branson, has already let it be known that Virgin Atlantic and its 49% sharehold-

er, SIA, are interested in buying 16 A3XXs between them. Cathay Pacific and JAL are also likely launch customers. In addition, cargo carriers such as FedEx, Luxair and Atlas have expressed interest in the cargo variations of the new aircraft (unit operating savings of around 17% on the latest 747 are claimed).

British Airways, Lufthansa and Air France are clearly in less of a rush to sign up for the new aircraft. Nevertheless, they are understood to want to become "launch customers" on advantageous terms, while delaying their uptake of actual aircraft until 2007. With such a broad range of sup-

port, Airbus can be expected to proceed with signing formal deals in time for a launch of production by the end of the year. One way or another, the Airbus decision is likely to be clarified at the Farnborough Air Show this July.

Against this background Boeing is getting ready to launch a last-ditch attempt to prevent the A3XX going ahead. It has been busily updating its knowledge of European governments' industrial policies on support and subsidies which may be used to get the A3XX off the ground, at a cost of at least \$12bn before the first example flies. Boeing is also planning a big announcement for this summer's Farnborough, which could be its own product plans to update the 747 to frustrate the launch of the A3XX.

The lobbying message

For the past years or so Boeing marketing executives have been touring Europe lobbying prime ministers, legislators, airline executives and journalists with the message that this new Airbus project would be a disaster for the whole industry. Instead of a market for 1,200, they see sales of only 400 for such an aircraft. But this is pure spin: the Airbus estimate reasonably includes all aircraft above 400 seats, which means that it envisages eating into the market for the ageing 747, and even then getting only about half the total potential, because Boeing will find ways of stretching and updating their venerable jumbo, not least by cutting its price to improve its economics.

Rules governing government aid are enshrined in the Large Aircraft Agreement, a bilateral deal between the US and the EU signed in 1992. Broadly, this limits indirect aid to Boeing from the US government to 3% of turnover, while launch aid on the non-recurring costs of new projects in Europe is limited to 33%, with 25% at long-term government borrowing costs and a further 8% at government costs plus one percentage point. The deal struck between the British government and BAE Systems probably reflects a very low interest rate given the low yield on the British government's long-bond.

Knowing the difficulty of attacking the aid on that front, Boeing may take a much more aggressive approach to sabotaging the A3XX. Instead of using the Large Aircraft Agreement as a basis for their complaint Boeing may be prepared to take

Airbus to the World Trade Organisation (WTO). The WTO has just demanded that both Canada and Brazil amend and reduce their subsidies to Bombardier and Embraer. For Boeing there is a certain piquancy, in that it, like other US multinationals, has been hit by a WTO ruling banning the use of offshore export sales companies, costing it some \$130m a year.

Stung by the increase in Airbus's share of the overall market, its potential attack on the 747 and by the WTO ruling, Boeing president Harry Stonecipher is breathing fire. Having driven through the merger of Boeing and his old company McDonnell-Douglas in the past three years (in the process deposing Ron Woodard), he is determined to sort out Airbus before he retires next year.

Boeing chairman Phil Condit, has always insisted that Boeing prefers rules-based international trading in its competition with Airbus. Until now, that has seemed mere semantics. Now, it is a clear sign of the path Boeing is about to take in its battle to preserve its control of the top end of the jet market. Given that Boeing is America's biggest exporter, and that the jumbo is its biggest product in terms of export profits, past trade disputes about bananas and engine hush-kits are going to look very tame compared to this one.

Lessons from the last battle

How will it end? The last time there was such a row ten years ago, Boeing asked the White House to cool things once it realised it the trade hostilities were losing it business in Europe. That was the pressure behind the bilateral compromise. This time both rivals acknowledge that they each spend about \$5bn on suppliers in each other's continents, underpinning about 100,000 jobs apiece on both sides of the Atlantic.

Wise heads on both sides of the Atlantic wonder if, after a period of unproductive battling, there might not be a move for Boeing to join the A3XX programme. One way of this happening could be through the Americans' increasingly close association with British Aerospace in the defence aerospace business (80% of BAE Systems turnover). BAE is in the process of ring-fencing its Airbus business in a separate corporate entity. Mike Turner, the COO, insists this is a technicality, but it could come to mean much more 12 months or so from now.

European ATM: the final frontier

European air traffic management (ATM) is, as usual, in a state of crisis, as the widening gap between capacity and demand results in worsening flight delays. However, the European Commission has made ATM reform a priority and has called for the creation of a "Single European Sky". Finally, something may be changing.

A recent European Aviation Club meeting in Brussels provided a useful forum for reviewing the problems and elaborating the EC's solution.

The causes of the crisis are well documented:

- In the EU there are some 65 largely state-owned control centres with limited international co-operation;
- Very little system commonality exists between the centres;
- A shortage of over 1,000 air traffic controllers;
- ATC has been stressed by strong traffic growth and the move towards higher frequencies operated with smaller aircraft;
- Service provision has always been supply driven; and
- The residual tension between military and civil use of airspace.

Several attempts were made to define the costs caused by ATC delays. The costs to the airlines arise from additional fuel burned by re-routings, time spent in holding patterns, inefficient aircraft utilisation and additional staffing (for example Sabena employs eight people dedicated to adjusting flight plans to try and minimise the impact of ATC delays)

Furthermore, these problems are becoming more rather than less critical for airlines as they rely more and more on hub and spoke systems. An ATC delay for one or two aircraft has an impact on a whole wave of connecting flights.

The costs fall however not just for the airlines but also for the passengers. At the UK CAA rate of Euro 60 per minute, IATA estimates that the annual cost of delays in Europe to passengers is Euro 4.2bn. The EU's Ben Van Houtte estimated the total annual cost to airlines and passengers at between Euro 5-10bn. Importantly the EU argue that delays affects the credibility of its air transport liberalisation programme.

The way forward

The need for a body to implement the necessary structural reforms was recognised and that the EC as the body that should take up the challenge. The aim of the EU it seems is to move away from the current system of "soft laws" that encompass ATC provision.

To achieve an effective solution will require the EU to be granted the necessary powers to impose the changes to move from the current "legacy system" to the Single European Sky. This is being sought by Ben Van Houtte, as Head of Unit of the Single European Sky task force, who will present his report on ATC issues to the Commission in June.

The Commission has been frustrated for some time in its attempts to gain influence. The EU's attempts to become more closely aligned with Eurocontrol have been frustrated perversely by the UK and Spanish governments' dispute over Gibraltar. Once that issue has been resolved, or at least disengaged from the ATC debate, the EU will encourage Eurocontrol to act as an EU agency with rule-making powers.

Ben Van Houtte's report will recommend that the Commission produces legislation for:

- Delay reporting;
- Airspace design and management;
- EU membership of Eurocontrol;
- Establishment of the concept of free routing;
- Separation of roles between ATC regulators and service providers.

The separation of the public policy and regulatory functions from the service provider has almost universal approval. The regulator will be expected to have responsibility in four areas:

- Safety;
- Economic regulation, giving market discipline measured by targets set for quality and price;
- Airspace regulation, promoting maximum use of a scarce resource; and
- Setting technical standards and rules covering inter-operability.

This should provide the users with greater transparency and make the service providers more market responsive. The example of

Germany's Deutsche Flugsicherung GmbH (DFS) was instructive in this case. DFS was corporatised in 1993 and remains a non-profit making 100% government body. It has its own AAA credit-rating which has allowed it to be entirely self-financing. It has embarked on a simplification of ATC in Germany which will see the number of control centres being reduced from six to three. Despite being in one of the highest density traffic markets, the average delay per flight in DFS controlled airspace in 1999 was 1.5 minutes versus an European average of 5.3 minutes.

The UK ATC service provider, NATS, is being prepared for a form of semi-privatisation, called a Public Private Initiative (PPI) which will see some 50% of the shares in the corporatised entity sold to, most likely, a private consortium. Both NATS and DFS are keen to explore opportunities in the future that will see them acquiring equity stakes in other service providers.

It should be noted that there is strong political and union opposition to the PPI initiative in the UK. And in France there is a more general rejection to the concept of ATC commercialisation. At the Aviation Club meeting, Henri-Georges Baudry, Director of the French Direction de la Navigation Aérienne. He argued that ATC was a public service and not a commercial business and made the following points. His view was that there was no proof that the corporatisation of service providers has generated any benefits, and in any case airlines would not be willing to pay in advance for improvements in ATC capacity.

Quick fixes and long term problems

The EU has identified 30 control centres that need additional investment. These control centres are responsible for creating critical bottlenecks particularly over Switzerland and northern Italy. The fact that a small amount of additional spending can produce major improvements suggests a very high return on investment.

The introduction of commonality of licences for controllers would help prevent some of the current shortages experienced in some countries. As mobility of labour is an EU mantra this is expected to be given a high priority.

The Single European Sky will need the transition from national ATC centres to a system under one umbrella. As control centres handle military as well as civil traffic, national interest issues are an inevitable stumbling block. Delegation of the responsibility to run ATC to another country is a major issue (at present only Luxembourg does not have its own ATC system).

Some progress is however being made in this area. CEATS is a new control centre which is to be located in Vienna that will handle traffic over not only Austria but also Slovenia, Czech Republic and four other east European countries.

Technology may also prove a major stumbling block. Like buying a new phone or computer, there is always a temptation to wait awhile for new technology. The concept that airspace design should be a continuum is noble but with so many interested parties (governments, ICAO, IATA, AEA, airframe manufacturers and airlines, not to mention the makers of the control systems themselves) setting one standard is going to be hard to say the least.

One more problem is that the EC is also campaigning for authority to govern all air safety issues in the Community through its proposed European Air Safety Agency (EASA). Whereas it would appear that the EC has strong backing for its initiatives in the ATC arena, it is less clear whether governments will back the EASA initiative. A problem arises however if the EU links the two initiatives with a proposal to make a newly empowered Eurocontrol part of EASA.

Competition

Both NATS and DFS proposed that in due course airlines and passengers could benefit from the introduction of competition in the ATC arena. Dieter Kaden, Chairman and CEO of DFS envisaged competition in three areas:

- Control of aerodromes - where there was already competition through airport privatisations
- En-route control in lower airspace - where national governments might put out to tender the running of their control centres
- En-route control in upper airspace - where service providers could compete against each other. For example an airline flying across the Atlantic may be able to choose between a small number of service providers to control its flights.

Making airport assets work harder

The global trend towards the privatisation or at least the corporatisation of airports, plus in Europe the abolition of duty free sales, means that airport operators are having to make their property assets work harder to increase revenue from non-aeronautical activities.

Nowhere is this more evident than in the passenger terminals where many services are offered to a wide range of potential customers including airlines, passengers, staff, visitors, meeters and greeters and to a lesser extent, local residents and businesses. In the terminals, lucrative retail and catering outlets compete for floor space with less valuable operational passenger handling uses and familiar high street brand names are now common place.

But can the commercial success of the terminals be extended to other parts of the airport? Income from commercial sources falls into two categories: concession fees and rent.

Concession fees from retailers, caterers, hotel, car parking and car rentals generate the largest source of commercial income by allowing the airport operator to share in the turnover of the concessionaires' business. Concession opportunities are put out to tender at regular intervals, usually 3 to 5 years, to ensure that competition is maintained. The big revenue earners of retail and catering are usually terminal based although hotels and car parking uses are more flexible in terms of their possible location around the airport.

Rent premiums

Rents are the second most important source of commercial income and most airports have successfully created specialist property markets for airport-related organisations who are prepared to pay high rentals (relative to levels outside the airport) to reflect greater lease flexibility and

the benefit of being close to their core operation. At Heathrow, average office rents in the terminals are in the order of £45.00 per sq ft (Euros 780/sq. metre), and new high quality offices in Terminal 3 are attracting rents as high as £54.00 per sq ft. These compare to £33.00 per sq ft for similar quality offices located just outside the airport.

Apart from the spending power of the passengers, the key to commercial success outside the terminals is availability of land capable of being developed. However, even with an abundance of available land, airports face stiff competition from neighbouring landowner/developers to attract commercial occupiers for whom an on-airport location is attractive but not essential. Offices, hotels, car parks, flight kitchens, light industrial engineering, warehouses and distribution centres are all potentially lucrative airport tenants but which are often attracted to off-airport locations.

Property development at airports is usually complicated by safety zone restrictions, height limitations or planning conditions stipulating that only airport-related users may occupy property on airport land. For airports to maximise rental income from commercial occupiers, they must act like property developers to put in place a clear commercial property development strategy. Commercially successful airports already have detailed master plans in place.

Airside advantage

Airports have at least one major advantage over their competitive neighbours; airside access. This is a crucial requirement for properties such as maintenance hangars and air cargo warehouses, which serve the core activity of airports. These are operational properties for which an airport location is often essential.

Airports can also work in partnership with neighbouring landowners to accommodate operational properties. Coventry Airport is a good example where Parcellforce has recently built a 430,000 sq ft (40,000 sq m) national and international sorting facility on land immediately adjacent to the airport with direct access on to the apron.

Dramatic air cargo changes

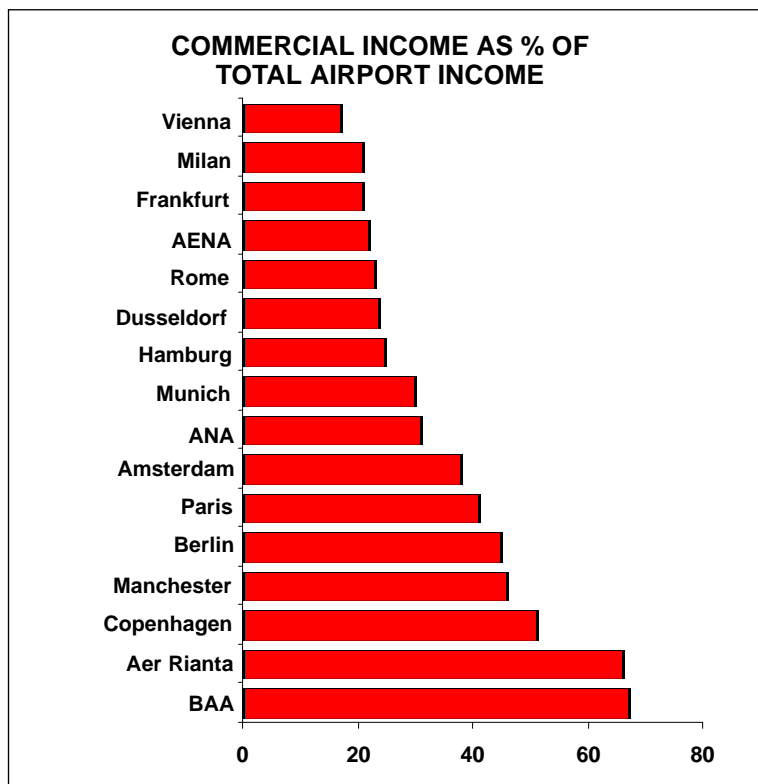
Air cargo operators are increasingly important airport tenants. E-commerce is transforming the way people buy, but a big barrier to growth in this sector is the quality of the logistics infrastructure to fulfill the sale, and this is driving rapid changes in terms of industry consolidation and operating methods.

With their need for fast delivery the e-tailers are looking to the integrator sector to perform. UPS and TNT have set up e-commerce subsidiaries to serve this growth sector. In addition, other air cargo carriers such as KLM, Alitalia and Lufthansa are now starting to offer time-definite products. From its new cargo hub at CDG2, Air France is also moving into the fast delivery sector and has recently launched a range of time definite services.

At the moment, the overnight logistics market within Europe relies extensively on the integrators and air transportation for high-value, time-sensitive deliveries. This may change if the European Directives which provide for open access to rail infrastructure lead to the break-down of national barriers in the rail sector to provide a viable alternative transport mode.

What do these proposed industry changes mean for airport property? Larger, modern sorting and distribution warehouses will be needed to meet expected growth and accommodate new operators to the fast delivery sector. Frankfurt airport already operates an air/rail cargo hub and this type of facility may be necessary at other key European airports to provide transfer points for air to rail modes.

For this type of operational property to be developed, a sound freight strategy is need-



ed to demonstrate the capabilities of the airport and create demand by attracting the operators to use it as a base.

In the UK, for example, DHL has recently developed a 400,000 sq ft (37,000 sq m) sorting facility at East Midlands airport which will allow its cargo throughput to triple from the current level of 400 tonnes per day to 1,200 tonnes per day.

Master planning

Airports with valuable land assets must undertake a master planning exercise to properly assess the appropriate mix of operational and commercial uses and the phasing of their implementation. Where on-airport land is in short supply, partnerships with adjacent landowners can be the key to success.

Equally as important, is the financing of any future development, which will need to be planned to take account of acceptable levels of risk. In this way, the commercial success of the terminals can indeed be extended to other parts of the airport.

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Lufthansa: not just an airline but a true aviation company

Over the past few years Lufthansa has established itself as the leading Euro-major in terms of size, profitability and alliance development. It has achieved a complete turn-around from the early 90s when it was, for a while, Europe's most unprofitable airline, and now aims to evolve from an airline into a true aviation group.

Yet Lufthansa's success is relative: the airline has been flattered by comparisons with BA whose star has waned so badly in recent years. For 1999 Lufthansa is expected to report operating profits in the order of Dm1.3bn (\$600m), but this represents just half of the 1998 result, Dm2.48bn, and is also well below the Dm1.65bn reported in 1997. Pre-tax profits will be around the Dm1.9bn (\$880) mark, boosted by income from the stockmarket listing of Amadeus. Final results will be published on May 4.

Lufthansa has gone for growth, adding capacity at a faster rate than almost all the other Euro-majors. In 1999 total ASKs were increased by 13.7% with most of the increase concentrated on long-haul routes. Capacity on Atlantic routes surged by 19.7% while intra-European growth was kept to 7.2%.

Remarkably, the increase in RPKs almost equalled that of ASKs will the result that the passenger load factor was down only marginally, from 72.9% to 72.6%.

This, however, has been at the expense of yields, which in the first nine months of 1999 fell by 9.5% on average. Yield trends

on the North Atlantic were particularly alarming - a decline of over 12% was recorded in the first nine months of 1999. With this rate of capacity growth a decline in unit costs is inevitable, but they only fell by an estimated 5% - hence the halving in operating profit.

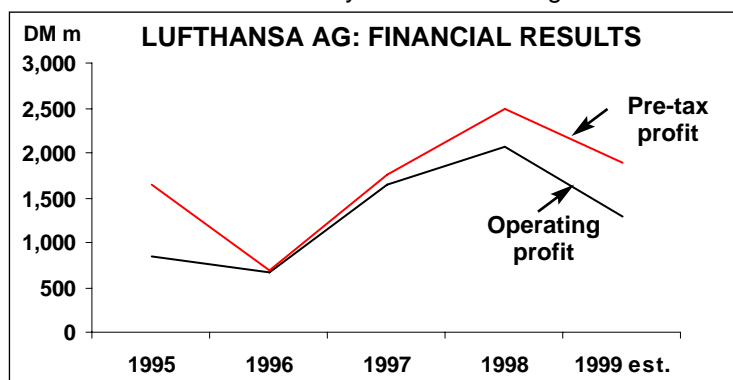
This year Lufthansa is moderating its capacity growth to around 7% but that is still above the forecast AEA average of 4.5% and among the Euro-majors is only exceeded by Air France. However, most of the growth in 2000 will be concentrated on the rapidly recovering Asia/Pacific routes while North Atlantic increases will be restrained to 4-5%.

Although Lufthansa faces growing capacity constraints at Frankfurt, it is able to alleviate this problem by diversifying to other German cities. The German market is geographically dispersed into medium sized conglomerations, enabling Lufthansa to build secondary hubs at Munich, Berlin and Leipzig, all of which are new airports. As the EU expands eastwards through the inclusion of former Soviet Block states, so the value of Lufthansa's hubs will be enhanced. Frankfurt itself is now likely to be allowed to expand after a mediation process involving Lufthansa, local industry and environmentalists.

Lufthansa's strategy is in some ways the opposite of BA's although they both rely on the same market for their profitability - the long haul business traveller. Lufthansa's ability to offer an increasing number of connections has undoubtedly won business from BA, but Lufthansa also competes on price. According to a survey by American Express, a UK based company can expect to pay 76% more for 200 business-class trips to New York than its German equivalent.

The strength of the Euro accounts for a large part of this advantage. Since Germany tied its currency to the Euro in early 1999, the common currency has fallen by almost 25% against sterling and the dollar.

A recovery in the Euro is one of the threats facing Lufthansa. This development



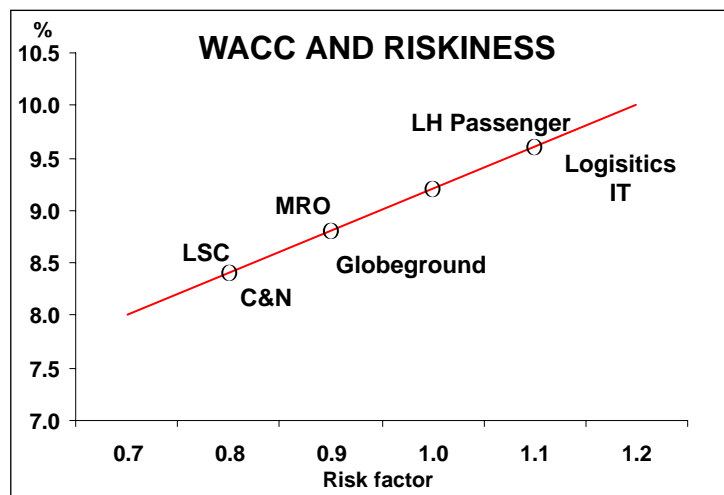
could erode some of the airline's pricing advantage as well as undermining its cost competitiveness. Ironically, a recovery is possible because of the increasing strength of the European peripheral economies and convergence between the three main continental economies - Germany France and Italy.

Lufthansa appears to have overcome or at least suppressed the inherent cost disadvantage of operating from a country noted for efficiency but where high wages and inflexible practices are the norm. The company has tackled labour costs through pay freezes and hiring freezes rather than large-scale redundancies. As a result it has not experienced the same degree of industrial discontent as BA, and it has been able to incentivise the staff through profit-related bonuses. Its Program 15 launched in June 1996 with the aim of cutting costs to 15 pfennigs per passenger-kilometre reached its target by the end of 1999, two years ahead of schedule.

But again there are concerns about whether apparent efficiency improvements at Lufthansa (and in the rest of German economy) are simply the result of a temporary export boom generated by currency depreciation. Lufthansa has in the recent past complained about the problems that a very strong Deutschmark has caused. Now, operating with a very soft currency, it managed to achieve double digit traffic growth last year while German GDP grew by a mere 1.4%.

The aviation group concept

A key element of Lufthansa's turn-around in the mid 90s was the airline into separate business units each with its own profit targets and each encouraged to trade resources with other members of the group. Since 1998 this strategy has been evolving further - as Jurgen Weber puts it, "from being an airline group to an aviation group offering a range of air transport services in seven fields of business - passenger airline [Lufthansa and Cityline], logistics [Lufthansa Cargo], maintenance and overhaul [MRO], ground handling [Globeground], catering



[LSC], IT services [Lufthansa Systems and Amadeus], and leisure travel [C&N].

Each of these segments has different characteristics in terms of maturity, potential riskiness and profitability. The graph above illustrates how Lufthansa has analysed the riskiness of each segment against the weighted average cost of capital employed by each segment. The next step for Lufthansa is to define target rates of return for the segments.

By having this range of services Lufthansa aims to reduce its exposure to the cyclicity of the airline business. In the longer term, for instance, Lufthansa will be looking for major returns from its IT operation where it is trying to set itself up as a European rival to Sabre Technologies. It has also set up an autonomous subsidiary, Lufthansa E-commerce, with the intention of creating a new virtual travel agency and "Infogate" which will sell Lufthansa services through integration with other websites.

The strategy also means that the company has a portfolio of assets that it can trade to raise cash for purchases or simply to crystallise value. Lufthansa is a bit sensitive about asset sales, having reacted angrily to reports in the Frankfurt edition of the *Financial Times* that it would have to sell off subsidiaries to meet its 2000 profit projections.

Without asset sales Lufthansa could see the strength of its balance sheet weakened. According to an analysis by Goldman Sachs in

February, capital expenditure in 2000 is expected to be Dm 4.5bn in 2000, up from Dm4bn in 1999. But this year the group is only expected to generate cashflow of Dm2.6bn, which means that after several years of free cashflow generation net debt will rise again - to about Dm 4.8bn by the end of 2000.

LSC, the catering unit, will probably be spun off in an IPO next year and Lufthansa Cargo will also floated in some form. In April Lufthansa entered into a strategic alliance with Deutsche Post, which involves the establishment of a company, called Aerologic, to coordinate their interests in DHL (Lufthansa and Deutsche Post both own 25% of the integrator).

Ultimately, a more ambitious project is envisaged, in effect a merger that would bring together Lufthansa Cargo, DHL and Danzas (Deutsche Post's airfreight subsidiary). The idea is to create an integrated express freight/air cargo operation, which would offer the opportunity of rationalising costs, improving the utilisation of the Lufthansa Cargo fleet and broadening market power. Lufthansa has suggested that this merger has just been postponed to 2001 for tax-related reasons

In the charter/inclusive tour sector C&N Touistic, which is 50% owned by Lufthansa and 50% by the retailer Karstadt Quelle, is bidding for Thomson/Britannia. This would create a third major force in the European tour operating business alongside Pressag/TUI and Airtours. It would also open up the possibility of reducing the cost of charter flying operations from German towards British levels. But Thomson's management has so far rejected the bid of £1.45bn (\$2.4bn) on the grounds that its current share price (which has halved since flotation in early 1998) greatly undervalues the potential of the company. There are signs that Thomson is becoming less hostile to C&N, and the deal may still go through.

Although Star is in some ways a very democratic alliance - with the various committees and working groups set up to oversee interlining, marketing, cargo, etc being headed by representatives from all the member airlines - Lufthansa is the driving force

behind the alliance. Its commitment to Star is total whereas United's strategy briefings to analysts scarcely mention Star, and Singapore Airlines has its own agenda and global ambitions (*Briefing*, February 2000).

It is Lufthansa's intention to extend the aviation group concept to the whole Star alliance. This would involve, for example, the formation of an IT unit for the 14 airlines, a joint purchasing company for supplies, parts and ultimately aircraft. It is likely that Star will soon hire its own employees in addition to those seconded from the member airlines.

This policy is evolving through a series of joint ventures among the Star airlines and other companies. For example, Lufthansa has pressed ahead with a "New Global Cargo Agreement" with SIA and SAS which "will offer a portfolio of harmonised air cargo products, synchronised sales and customer service activities". The aim for all the Star members is that all the main cargo centres will be shared within the next ten years.

Probably the biggest challenge now for Lufthansa is to increase the synergistic benefits of the Star alliance in the mainstream passenger business. A joint venture could be developed by around British Midland's route network and would also include SAS. The concept, as *Aviation Strategy* understands it, will involve combining or pooling the assets of British Midland (excluding the British Midland commuter division), the SAS assets used on Scandinavian-UK routes and the Lufthansa assets used on Germany-UK routes.

Route rationalisation will be important - British Midland has announced that it will be dropping its six daily flights on Heathrow-Frankfurt, leaving this for Lufthansa, and has also terminated its services to Warsaw and Prague. British Midland may then operate the thinner German and Scandinavian routes on behalf of the other Star airlines, exploiting its lower cost structure.

SAS had for many years been frustrated by the lack of progress it has made with British Midland, but now it has sold half its 40% shareholding to Lufthansa, this appears to be a catalyst for change. British Midland's decision to join Star is also a signal of commitment which means that both SAS and

Lufthansa can now drive some value out of their cross-shareholding in British Midland.

One area of saving that joint venturing can have is in terms of management headcount. It is assumed that the joint venture would have one management team, one sales force etc. Subject to any regulatory restrictions one management team rather than a committee (with representatives from three different airlines) could then make decisions on fares, capacity, and scheduling. One hurdle to such an arrangement is overcoming objections from the unions.

Having once rejected the idea of equity stakes as a means of cementing Star, Lufthansa has evidently revised its opinion. It has been willing to inject capital when it sees a part of Star underperforming or under threat from a rival alliance. It made a major contribution to the \$600m rescue capital for Air Canada, along with United and a financial consortium, to prevent Onex/American getting control. It seems willing to participate in the Thai privatisation, presumably along with other Star airlines. It intends to buy out SAir's 10% of Austrian, and it will probably be a trade investor in Malev. Could Varig also attract much needed funding from Lufthansa?

Dominance and networks

Lufthansa's aim is to dominate all the markets it is in. As a network carrier it regards scales in the same way as a telecoms company - each new Star member or each new route creates a huge number of potential new connections. But when does this strategy risk provoking a reaction from the anti-trust authorities. Indeed, a more aggressive body than the Kartelampt might have questioned more thoroughly Lufthansa's dominance of the German domestic market and its reactions to new entrants. (In fact, Go has complained to the EC about Lufthansa forcing it off the Stansted-Munich route by matching capacity, frequencies and fares until Go was forced to retreat.)

Lufthansa's position is that its strategy is essentially consumer-led, that if flyers don't appreciate the benefits of an alliance then that alliance will fail. Inter-airline competition on

LUFTHANSA FLEET PLANS			
	Current fleet	Orders (options)	Remarks
737	77	0	
747	44	4	
A300-600	13	0	
A310	5	0	
A319	20	0	
A320	33	3	
A321	22	4	
A340	24	24(6)	Delivery 2000-2004
MD-11F	9	5	
BAe146	18	0	
CRJ	35	19(10)	Delivery 2000-2002
728JET	0	60(60)	Delivery 2000-2006
Total	300	119(76)	

Source: ACAS Note; Includes Lufthansa Cargo and Lufthansa CityLine.

long haul routes has evolved into inter-alliance competition, with each alliance each battling to route passengers over its own hubs.

Lufthansa believes that the regulatory authorities have not appreciated the global changes that have taken place. Jurgen Weber has called for a single competition authority with global jurisdiction, which seems a bit ambitious at the moment. Still, the TCAA may provide an opportunity for the US and EU to harmonise their competition rules.

Occasionally, unguarded remarks from Lufthansa executive raise eyebrows, as the strategy seems to entail a good deal of old-fashioned collusion. For example, Karl-Friedrich Rausch, the COO, was recently quoted in Singapore as describing the working in Star in these terms:

"It won't be the survival of the fittest ... Let's say we are sharing costs and revenues on particular routes. So, we have the same fares; we have just one sales force... On some routes, one partner has a better outcome from the cooperation than the other partner.. .But in the end, if both have profits, it's a win-win situation, a multiple-win situation".

With regard to the regulators, Star may become a victim of its own success. There isn't as yet a number of global alliances competing vigorously; there is Star, the first in the game and by far the most coherent, and three others which are either stumbling to find an identity or are self-destructing.

AirTran: reinvented as a high quality low cost carrier

With five consecutive profitable quarters under its belt, AirTran Airways has at last re-established itself as a viable, high-quality low fare carrier - now the largest of the 1990s US start-ups in terms of passenger numbers. It has reported a respectable \$2.9m net profit and a 9% operating margin for the quarter ended March 31, following \$30m earned before special items in 1999. It is now outperforming much of the rest of the US industry, particularly in terms of unit revenue growth.

The turnaround came after \$80m of losses before special charges in 1997-1998 when the carrier, formerly known as ValuJet, rebuilt operations and restructured itself after the 1996 crash and three-month grounding. Under the guidance of former CEO Joseph Corr, ValuJet acquired and merged with AirTran, changed its name and put in place strategies to improve its image. The current CEO Joseph Leonard, who took office in January 1999, has focused on cost controls and refining revenue strategies. Leonard and his management team are very highly regarded by Wall Street analysts.

Profitability was restored as unit costs were reduced and yields and load factors recovered substantially. Costs per ASM fell from 9.40 cents in 1997 to 8.19 cents in 1999. Passenger yield improved from 12.60 to 14 cents per RPM in the same period, while the load factor rose by more than ten

points.

The unit cost figure may not look impressive compared to ValuJet's 6.8 cents in 1995, but 8 cents in 1999 was a real achievement given AirTran's more conventional organisational structure, maintenance and compensation methods and its new focus on the business segment. The level gives it a major competitive advantage - SunTrust Equitable Securities analyst James Parker bravely estimates that Delta's unit costs at a similar average stage length were about 11 cents.

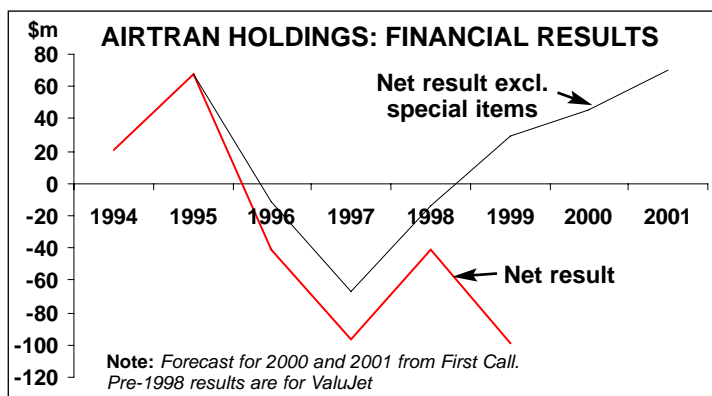
The 8.6% hike in AirTran's first-quarter unit costs to 9 cents (due to fuel) looks likely to have been a temporary setback. Ex-fuel unit costs actually fell by 6%. And fleet renewal and other strategies offer good potential for further cost reduction.

While low-fare carriers generally experienced exceptionally strong unit revenue growth last year, AirTran led the pack with a 15% increase. In the March quarter, its revenue per ASM surged by another 11.6%, helped by a 5.3% increase in average fares, which more than compensated for the hike in fuel prices. Although continued double-digit unit revenue growth is unlikely, strong growth is still expected for the summer.

As a result, AirTran's earnings are expected to surge over the next couple of years. The First Call consensus estimate is a net profit of around \$45m for 2000, which would represent a 54% increase. The \$70m profit currently projected for 2001 would, for the first time, slightly exceed the record profit earned by ValuJet in 1995.

Little surprise, therefore, that AirTran is now ready to start growing. When announcing the latest earnings mid-April, Leonard indicated that capacity growth will accelerate towards a 15% annual rate in the second half of this year and stay at that level for the foreseeable future.

Previously the company had envisaged more moderate 7-10% annual growth over



AIRTRAN HOLDINGS BALANCE SHEET \$million

	Total assets	Long-term debt	Shareholders funds
1995	347	88	162
1996	417	193	123
1997	434	241	94
1998	376	237	56
1999	467	396	(40)

Note: Pre-1998 figures refer to ValuJet.

the next couple of years, after virtually no overall ASM increase in 1999. But the 717 programme, which includes 50 firm deliveries by the end of 2002 plus 50 options, can obviously accommodate faster expansion, even though the aircraft was essentially meant for replacement purposes. Much of the growth is in the options, which do not have to be confirmed until early next year.

Despite the expectations of sharply higher earnings and a low current valuation, four of the seven analysts covering AirTran continue to rate it as a "hold" and only two recommend it as a "strong buy". And even the most bullish of the analysts, James Parker, considers the shares only "appropriate for aggressive accounts".

There are two main risk factors. First, AirTran's presence on the East Coast exposes it to intense competition from much larger and financially stronger carriers. In particular, Delta is an ever-present threat at Atlanta, where AirTran produces 93% of its ASMs.

Second, AirTran faces a massive \$230m debt payment in April 2001, which it will need to restructure. That should be possible but acceptable terms cannot be guaranteed. The airline is looking into the possibility of a private or public placement. Even if all goes well, the refinancing is expected to be at a much higher interest rate than the current average of 10.35%. This and the additional 717 financings will add to interest costs.

AirTran's balance sheet has already been weakened by a string of substantial restructuring charges - related to ValuJet's shutdown, rebranding and accelerated aircraft retirements - that led to net losses in each of the past four years. Most recently, a \$148m

non-cash pretax charge related to DC-9 retirements resulted in the company reporting a \$99m net loss for 1999.

Long-term debt surged from \$88m in 1995 to \$396m at the end of 1999, while total assets rose from \$347m to \$467m. The latest fleet disposition charge gave the company a negative net worth of \$40m at the end of 1999, compared to stockholders' equity of \$162m in 1995.

The only bright spot on the balance sheet is the recent dramatic improvement in cash position. After steadily dwindling from \$254m in April 1996 (the month before the crash) to just \$24.4m at the end of 1998, unrestricted cash rose to \$76.2m at the end of last year. (AirTran was very fortunate in having so much cash to start with.)

But in order to secure the refinancings, AirTran will need to continue building up its cash reserves. Its future seems rather critically dependent on the continuation of a favourable economic and fare environment this year (which seems likely) and on attaining its cost and revenue targets.

Benefits of 717 introduction

Not so long ago, the massive 717 order-book, which dates from the pre-1996 days, seemed extravagant for a struggling low fare carrier, but now that brand new aircraft are becoming a norm for new entrants everywhere and AirTran has become profitable, the strategy seems unbeatable.

AirTran may have paid as little as \$20m per aircraft, for which it was the launch customer (the current list price is \$33m). It got a major say in the design specifications. The

AIRTRAN FLEET PLANS

	Current fleet	Orders (options)	Remarks
DC-9-30	35	0	10 to be retired in 2001, 15 in 2002 and 10 in 2003
737-200	4	0	3 to be retired in 2001 and 1 in 2003
717-200	10	40(50)	6 more in 2000, 16 in 2001 and 18 in 2002
Total	49	40(50)	

Source: ACAS

aircraft is ideally suited to its short haul, high-frequency markets. AirTran operates it in 117-seat, two-class configuration, gaining a useful 11 extra seats or 8% more capacity over the DC-9.

But, most significantly, the 717 offers a major reduction in maintenance and fuel costs and improved operational reliability over the late 1960s and early 1970s-vintage DC-9s. Those benefits are expected to more than compensate for the higher ownership costs, leading to a net reduction in overall costs per ASM. The DC-9s and the 737s are due to be phased out by the end of 2003.

Initial experience with the 717, which was introduced in October, has been good, with only "some normal new aircraft glitches". Fuel performance is exceeding expectations - a 24% improvement over the old aircraft.

Although the fleet renewal programme has only just got under way, there are some immediate major cost savings. First, the late 1999 DC-9 write-down has reduced depreciation costs by about \$24m annually. Second, ten of the oldest aircraft were retired at the end of 1999, which could lead to a similar saving in maintenance costs. Third, as the structural life improvement programme and Stage 3 modifications on the DC-9s are wrapped up by the summer, maintenance costs will fall. Fourth, there are fewer C-checks this year and engine reliability has improved.

The ten 717s already in the fleet were financed through a \$178.8m private placement of enhanced equipment pass-through certificates (EETCs) in November. Two of those aircraft were recently sold and leased

back under a leveraged lease agreement. EETCs are likely to be the preferred method also for the future 717 financings, which Boeing has guaranteed.

Distribution, fuel and labour costs

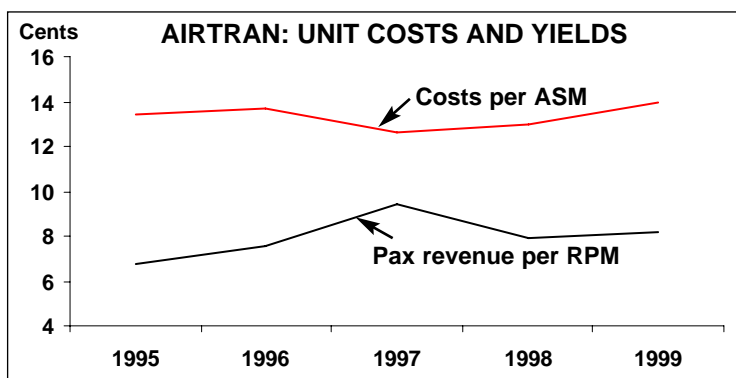
AirTran is already an industry leader in Internet bookings. After expanding its own web site, which has won awards for user-friendliness, the carrier raised its total online bookings from 8% at the end of 1998 to around 17% of passenger revenue last autumn - way above competitors' levels. Savings in distribution costs have been substantial as an Internet booking costs about 30 cents, compared to \$9.50 if made through travel agents.

It is hard to predict how much higher the Internet percentage can rise - the airline says that the volume is now again picking up. But a recent reduction in the travel agency commission rate from 8% to 5% will lead to distribution cost savings this year.

After being extremely well hedged for fuel last year, AirTran entered 2000 with a hedge covering only 11% of its fuel requirements. As a result, the price it paid for fuel more than doubled in the first quarter. In late March a new agreement was signed covering about 15% of fuel consumption through September 2004 at a rate below \$22 per barrel.

Judging by the 16.4% increase in labour costs in the first quarter, AirTran remains under pressure on that front. The hike was attributed to contractual and seniority pay increases last year, increased block hours and more pilots moving to the 717 training programme. New contracts signed in recent years have included competitive wages and annual pay increases.

Contracts with the pilots and the mechanics become amendable in March and August 2001 respectively. Talks with the dispatchers, which joined TWU last year, are under way for a first contract. But, on the bright side, customer service, ramp and reservation agents recently overwhelmingly rejected an IAM vote.



The biggest labour issue seems to be staff turnover as AirTran's wages, which it describes as "slightly higher than market for most categories", are extremely low compared to those of the major carriers. The airline loses about 15% of its pilots each year but "stays well ahead of it". Only ramp workers and agents have an unacceptably high turnover. The solution has been to move two thirds of reservations to Savannah (Georgia), where the company is apparently a desired employer.

Yield prospects

AirTran has staged an amazing transformation from a "penny-pinching" operator into an up-market carrier with an enhanced quality image. Its attractively-priced "no-frills" business class and innovative "A-Plus Rewards" FFP have been instrumental in pulling in higher-yield traffic.

The business passenger component (defined as those booking within seven days of travel) has increased steadily to account for 42-43% of total traffic and almost 60% of revenues. In the March quarter, the average load factor in business class was almost 60%, compared to 30% a year earlier.

Business mix, yields and load factors should continue to improve as the 717s replace the older aircraft in more markets. A new yield management system, expected to be in place by mid-summer, will have a major positive impact as the airline currently has no such system. The management estimates that the revenue-boosting impact could be as much as \$30m annually.

Economic conditions and the pricing environment have been so strong that AirTran, like some other low-fare carriers, has initiated several fare increases in the past six months (which the major carriers have obviously very happily matched).

Growth strategy and competitive risk

AirTran has established a very successful hubbing operation at Atlanta, which has a large local traffic base and is ideally located

for attracting connecting passengers. Local traffic growth there has averaged 10% annually since the early 1990s, compared to 4% nationally.

The markets served are generally within 1,000 miles of Atlanta and include all the key business centres in the Northeast, as well as Chicago, Houston and Dallas, and various leisure markets in Florida. Frequencies range from two to 15 per day.

While key business markets like LaGuardia have been successful, the initial strategy of operating some nonstop flights between Orlando and the Northeast was scrapped in 1998. Over the past year, the connecting component at Atlanta has grown from 55% to 60% of total traffic.

But AirTran is now again ready to experiment with nonstop flights that bypass Atlanta. It recently linked Philadelphia with Orlando and Fort Lauderdale and is pleased with the initial results. In June it will start serving Minneapolis as an extension of its Chicago (Midway) flights. The strategy is described as "some kind of diversification, on a gradual basis".

Analysts like James Parker believe that, while Delta poses a risk, the two can co-exist in Atlanta. In a February report, he suggested that this would be because of AirTran's lower costs and modest capacity expansion, increased scrutiny by the regulators and business traveller resistance to the major carriers' high fares. Indeed, Frontier appears to have survived competition with United in Denver for those very reasons.

But since then AirTran has announced its intention to ramp up capacity growth to 15%, which would be twice as high as the 7% annual local traffic growth projected for the Atlanta markets over the next few years.

Some of the expansion will obviously be in markets that Delta would not want to serve anyway. Joe Leonard said that "with our cost structure, there are lots of places we can put our aircraft where our competitors cannot". But since AirTran is unlikely to abandon its focus on business-oriented markets, fierce competitive clashes with Delta seem inevitable.

By Heini Nuutinen

Airline consultancy: advice for the advisors

Twenty years ago airline expertise in branding, revenue management, customer service, supply chain management, and training was eagerly sought by others either directly or through the consultants they used. Today there are still significant skills in airline management but other industries have developed faster and further, most notably in financial services, telecommunications, distribution, and retail. More recently, few airlines have delivered consistent profits. Yet the consulting business, meanwhile, has continued to aim at double-digit growth and high stakeholder returns, but without airline experience being so highly prized by other clients.

The theme of this article is the impact of airline industry changes on the need for general management consultants. Of necessity the article is subjective and selective, but it postulates that the expertise now required by airlines demands skills and resources that consultants may not be able to provide easily or economically.

The five challenges

The current context of civil aviation is still one of most airlines competing within very defined markets. Whether because of regulation, history, limited capital, or choice, many airlines still limit their activities to operating scheduled passenger business (or charter or freight transport business) mainly from national bases with strong home demand. The creation of a genuinely global market is slow, led mainly by one or two of the major partners in the new alliances. Most other airlines seem to be concentrating on incremental improvements to networks, route management, brand alignment and cost sharing - looking to survive until the market stabilises.

Similarly, there is still a tendency by some airlines to regard agents, hotels, resorts, airports, information providers, distributors and surface travel providers as suppliers to airlines. In other industries it may be salutary to remember that the true competitive predators often came from other players in the supply chain, and probably only the last remnants of state control in protecting nation-

al ownership and bilaterals prevents many airlines from being in open play as takeover targets.

The first challenge for a consultant in this environment is therefore to be able to view aviation from the outside of an industry and challenge established thinking while being accepted within it.

Airline managers do recognise, however, the need to compete globally - currently mainly through alliances, aligning and integrating brands, products, networks, and therefore fleets, suppliers and systems - whilst retaining sufficient independence of action to satisfy anti-trust regulators, and shareholders. They face, however, stronger low cost entrants, renewed growth by integrated travel companies, diverging priorities by CRS providers, and, increasingly, new distribution and product offerings by web based providers.

They face these challenges, moreover, at a time when prolonged and successive downsizing has reduced both the width and the depth of their management teams. The width has been reduced by the progressive outsourcing of activities such as ground handling, catering, maintenance, and IT and latterly the merging of activities such as sales and marketing with partner airlines. This leaves fewer positions in which airline managers may gain a variety of experiences, especially close to the operation or customer.

The depth of management skill and time available meanwhile has been reduced by the de-layering of management structures, reduction in the use of expatriate staff, and the transfer of many staff functions such as personnel or planning into the line. All this just at the time when alliances, regulators, and service partners demand increased management participation on both broad and detailed issues, and globalization demands a combination of international business skills and highly sensitive cultural awareness.

The second challenge for the consultant is therefore to be able to integrate all the relevant functions, balanced with insight and experience in the need to achieve this alignment across national and cultural boundaries.

Airline managers, however, are increasingly better prepared in terms of business skills, and are well able to complete analytical activities which previously they contracted to consultants. Confident managers now look for consulting advice which is not only knowledgeable about their business and the entire value chain, but is conversant with the impact of convergent technologies, of globalising markets, of changing buying patterns, and the relative attraction and flows of international capital. They demand the demonstration of knowledge and expertise beyond that based upon past airline experience.

So a third challenge is how to generate and maintain the width of insight required by this generation of airline managers and work enough in other industries to offer advice for the future rather than judgements based upon the past.

To underline this the international aviation market is probably moving faster than at any time in the last thirty years and there is a divergence between advising on maintaining best practice at economic cost and guiding airlines into new ventures or skills. Consultants active in the technical and safety areas for example are increasingly becoming auditors with specialist expertise based upon an ethic of prevention and protection rather than commercial success.

Such an approach needs a sharing of technical knowledge and best practice, and the self-belief to confront poor management practice. This can make a difficult fit with commercial advice where planning in secrecy and being first in the market may be crucial.

A fourth challenge is then to recognise this divergence of consulting needs, especially between industry and commercial practice, and to build practices which are ethically and commercially secure.

Meanwhile, user and public perceptions of airlines are changing. Airline product differentiation is increasingly hard to maintain and integrators, agents and airports increasingly regard users as their customers, and the airlines as suppliers for whom they will set the standards. At the same time airlines are finding that safeguarding the environment, and safeguarding the health of passengers are of increasing interest to more people.

These, and other user-driven factors, are reflected in two developments. First, a perceptible weakening in the public support for airlines being

national entities has developed over the last decade similar to the disinterest in national ownership of utilities, financial institutions, computers, or motor manufacture.

Second, an increasing lack of tolerance of airline performance by passengers and shippers, and increasingly critical media coverage of this and financial performance. Crucially many journalists are no longer only aviation buffs but spend time with financiers, regulators, and lawyers and are well able to look at issues of competitiveness, profitability and service delivery and reflect this in their commentaries.

The fifth challenge is to understand rapidly changing political and user perceptions and the likely impact of these on the structure and performance of the industry, and to be able to advise accordingly.

General management consultants therefore need to be familiar with aviation, but expert outside aviation. They need to be able to align and integrate the management of the different airline functions and they need to be able to challenge performance from user and market perspectives. They also need to work with internal resources and reduce their client lists to protect commercial confidentiality. As a result there will be probably be fewer large aviation consulting practices - the market will not support many - and these may well become tied to one of the major alliances for reasons of commercial confidentiality.

There will probably be an increasing distinction between consultants who are advisers and consultants who are contractors. The latter will deliver specified products and will probably move away from a fee based approach into partnership or investment based methods of charging as a way of maintaining adequate returns and the relationships necessary for the lucrative follow-on assignments. The former will probably look to develop relationships where they increasingly operate as coaches or guides to in-house teams, with continuing assignments enabling them to increase revenues through personal utilization, rather than the deployment of teams of junior staff.

Finally, there will probably be an increased blurring of the demarcation between consultants and other advisers such as lawyers and accountants - could one really advise on slots or market entry without all three skills? Perhaps it will be easier to consult elsewhere.

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Aviation Strategy

Macro-trends

EUROPEAN SCHEDULED TRAFFIC

	Intra-Europe			North Atlantic			Europe-Far East			Total long-haul			Total international		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
1992	129.6	73.5	56.7	134.5	95.0	70.6	89.4	61.6	68.9	296.8	207.1	69.8	445.8	293.4	65.8
1993	137.8	79.8	57.9	145.1	102.0	70.3	96.3	68.1	70.7	319.1	223.7	70.1	479.7	318.0	66.3
1994	144.7	87.7	60.6	150.3	108.8	72.4	102.8	76.1	74.0	334.0	243.6	72.9	503.7	346.7	68.8
1995	154.8	94.9	61.3	154.1	117.6	76.3	111.1	81.1	73.0	362.6	269.5	74.3	532.8	373.7	70.1
1996	165.1	100.8	61.1	163.9	126.4	77.1	121.1	88.8	73.3	391.9	292.8	74.7	583.5	410.9	70.4
1997	174.8	110.9	63.4	176.5	138.2	78.3	130.4	96.9	74.3	419.0	320.5	76.5	621.9	450.2	72.4
1998	188.3	120.3	63.9	194.2	149.7	77.1	135.4	100.6	74.3	453.6	344.2	75.9	673.2	484.8	72.0
1999	200.0	124.9	62.5	218.9	166.5	76.1	134.5	103.1	76.7	492.3	371.0	75.4	727.2	519.5	71.4
Feb 00	15.7	8.4	54.0	16.3	10.4	64.0	10.9	8.4	77.0	38.5	27.4	71.3	56.8	37.7	66.3
Ann. chng	12.6%	7.3%	-2.7	14.1%	12.4%	-0.9	6.9%	9.3%	1.6	10.0%	11.3%	0.8	10.9%	10.7%	-0.1
Jan-Feb 00	31.7	16.6	52.2	33.1	21.4	64.6	22.3	16.7	74.7	79.0	55.8	70.6	116.5	76.1	65.3
Ann. chng	9.4%	5.6%	-1.9	9.7%	9.0%	-0.4	3.6%	3.5%	-0.1	6.8%	7.0%	0.1	7.7%	7.1%	-0.4

Source: AEA.

US MAJORS' SCHEDULED TRAFFIC

	Domestic			North Atlantic			Pacific			Latin America			Total international		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
1992	857.8	536.9	62.6	134.4	92.4	68.7	123.1	85.0	69.0	48.0	27.4	57.0	305.4	204.7	67.0
1993	867.7	538.5	62.1	140.3	97.0	69.2	112.5	79.7	70.8	55.8	32.5	58.2	308.7	209.2	67.8
1994	886.9	575.6	64.9	136.1	99.5	73.0	107.3	78.2	72.9	56.8	35.2	62.0	300.3	212.9	70.9
1995	900.4	591.4	65.7	130.4	98.5	75.6	114.3	83.7	73.2	62.1	39.1	63.0	306.7	221.3	72.1
1996	925.7	634.4	68.5	132.6	101.9	76.8	118.0	89.2	75.6	66.1	42.3	64.0	316.7	233.3	73.7
1997	953.3	663.7	69.6	138.1	108.9	78.9	122.0	91.2	74.7	71.3	46.4	65.1	331.2	246.5	74.4
1998	961.0	679.1	70.7	150.3	118.5	78.8	112.1	81.6	72.8	84.0	52.3	62.3	346.4	252.4	72.9
1999	1,008.6	708.3	70.2										358.6	267.1	74.5
Feb 00	80.8	53.8	66.5										27.9	18.9	67.7
Ann. chng	9.1%	8.4%	-0.5										7.3%	10.0%	0.0
Jan-Feb 00	164.5	105.8	64.3										56.8	38.9	68.5
Ann. chng	6.8%	4.8%	-1.3										4.2%	5.2%	0.8

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

ICAO WORLD TRAFFIC AND ESG FORECAST

	Domestic			International			Total			Domestic growth rate		International growth rate		Total growth rate	
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK %	RPK %	ASK %	RPK %	ASK %	RPK %
1992	1,305	837	64.2	1,711	1,151	67.3	3,016	1,987	65.9	3.0	4.6	15.1	15.3	9.5	10.5
1993	1,349	855	63.3	1,785	1,205	67.5	3,135	2,060	65.7	3.4	2.0	4.4	4.8	3.9	3.6
1994	1,410	922	65.3	1,909	1,320	69.1	3,318	2,240	67.5	4.6	7.9	6.9	9.4	5.9	8.8
1995	1,468	970	66.1	2,070	1,444	69.8	3,537	2,414	68.3	4.1	5.4	8.5	9.4	6.6	7.8
1996	1,540	1,043	67.7	2,211	1,559	70.5	3,751	2,602	70.4	4.9	7.4	8.8	10.0	7.3	8.6
1997	1,584	1,089	68.8	2,346	1,672	71.3	3,930	2,763	70.3	2.9	4.5	6.1	7.2	4.8	6.1
1998	1,638	1,147	70.0	2,428	1,709	70.4	4,067	2,856	70.3	3.4	5.2	3.5	2.2	3.4	3.4
*1999	1,733	1,196	69.0	2,557	1,814	71.0	4,290	3,009	70.2	5.9	4.3	5.3	6.1	5.5	5.4
*2000	1,810	1,244	68.7	2,715	1,922	70.8	4,525	3,165	70.0	4.4	4.0	6.2	5.9	5.5	5.2
*2001	1,868	1,273	68.1	2,837	1,992	70.2	4,706	3,265	69.4	3.3	2.3	4.5	3.7	4.0	3.2
*2002	1,923	1,291	67.1	2,961	2,049	69.2	4,883	3,339	68.4	2.9	1.4	4.3	2.8	3.8	2.3
*2003	1,973	1,353	68.6	3,093	2,187	70.7	5,066	3,540	69.9	2.6	4.8	4.5	6.7	3.7	6.0

Note: * = Forecast; ICAO traffic includes charters. Source: Airline Monitor, July 1999.

DEMAND TRENDS (1990=100)

	Real GDP					Real exports					Real imports				
	US	UK	Germany	France	Japan	US	UK	Germany	France	Japan	US	UK	Germany	France	Japan
1992	102	98	102	102	105	113	103	112	109	110	107	101	115	104	96
1993	105	100	100	101	105	117	107	106	109	112	117	104	108	101	96
1994	109	103	103	104	106	126	117	115	115	117	131	110	117	107	104
1995	111	106	105	106	107	137	126	122	123	123	141	115	124	113	119
1996	114	108	107	107	111	152	135	128	128	126	155	124	127	116	132
1997	118	112	110	109	112	172	146	142	142	138	177	135	136	123	132
1998	122	115	113	112	109	173	150	152	150	135	196	144	147	133	121
1999	127	117	114	115	111	179	150	155	153	135	220	151	152	136	122
*2000	131	120	117	118	112	191	156	164	162	142	239	158	159	143	126

Note: * = Forecast; Real = inflation adjusted. Source: OECD Economic Outlook, December 1999.

Aviation Strategy

Macro-trends

COST INDICES (1990=100)

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

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

FINANCIAL TRENDS (1990=100)

	Inflation (1990=100)					Exchange rates (against US\$)						LIBOR 6 month Euro-\$	
	US	UK	Germany	France	Japan	UK	Germ.	France	Switz.	Euro**	Japan		
1991	104	106	104	103	103	1991	0.567	1.659	5.641	1.434	0.809	134.5	5.91%
1992	107	107	109	106	105	1992	0.570	1.562	5.294	1.406	0.773	126.7	3.84%
1993	111	109	114	108	106	1993	0.666	1.653	5.662	1.477	0.854	111.2	3.36%
1994	113	109	117	110	107	1994	0.653	1.623	5.552	1.367	0.843	102.2	5.06%
1995	117	112	119	112	107	1995	0.634	1.433	4.991	1.182	0.765	94.1	6.12%
1996	120	114	121	113	107	1996	0.641	1.505	5.116	1.236	0.788	108.8	4.48%
1997	122	117	123	114	108	1997	0.611	1.734	5.836	1.451	0.884	121.1	5.85%
1998	123	120	124	115	109	1998	0.603	1.759	5.898	1.450	0.896	130.8	5.51%***
1999	125	122	126	116	108	1999	0.621	1.938	6.498	1.587	1.010	103.3	5.92%***
*2000	127	126	127	117	108	Apr 2000	0.633	2.082	6.981	1.671	0.940	105.4	6.46%***

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

JET AND TURBOPROP ORDERS

	Date	Buyer	Order	Price	Delivery	Other information/engines
ATR	Apr 19	Air New Zealand	1 ATR 72-500			For use by Mount Cook
	Apr 30	Emirates	5 A3XX-100s		2006	Launch order. + 5 options
Airbus	Apr 27	GECAS	16 A330-200s, 10 A320/A321s		Q2 2002	CF6-80E1 and CFM 56-5B/P
	Apr 11	SAS	6 A330-300s, 4A340-300s		01-04	767 replacement
	Apr 4	SAPO Int.	1 ACJ (Corporate Jetliner)		4Q00	IAE U2527
BAE Systems	Apr 3	Druk Air	2 Avro RJX-85s		4Q01-1Q02	Honeywell AS 977 engines
Boeing	Mar 31	Japan Airlines	8 777-300s		4Q03+	Launch customer for long-range version. GE90-115B
	Mar 30	easyJet	17 737-700s		3Q01+	
Bombardier	Mar 28	China Xinjiang AL	3 757-200s		2Q01+	Replaces existing 737-700 order
Embraer	Apr 5	Solitair	15 ERJ145s			For use by Chautauque Airlines
Fairchild	May 1	Skyway Airlines	5 328 Jets, 5 428 Jets		01 & 03	Plus options on 3 328 Jets
	May 1	Gandalf Airlines	5 328 Jets		2Q00	
	May 1	Shell Petroleum	2 328 Jets		4Q00	

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

Aviation Strategy

Micro-trends

	Group revenue	Group costs	Group operating profit	Group net profit	Total ASK	Total RPK	Load factor	Group rev. per total ASK	Group costs per total ASK	Total pax.	Total ATK	Total RTK	Load factor	Group employees
	US\$m	US\$m	US\$m	US\$m	m	m	%	Cents	Cents	000s	m	m	%	
American*														
Jul-Sep 98	4,583	3,958	625	433	65,920.1	48,093.9	73.0	6.95	6.00	21,457	9,739.3	5,466.1	56.1	89,078
Oct-Dec 98	4,152	3,857	295	182	64,317.3	43,811.6	68.1	6.46	6.00	19,805	9,526.7	5,060.1	53.1	90,460
Jan-Mar 99	3,991	3,954	37	158	62,624.3	41,835.4	66.8	6.37	6.31					
Apr-Jun 99	4,528	4,120	408	268	67,313.8	47,945.9	71.2	6.73	6.12					
Jul-Sep 99	4,629	4,603	547	279	67,972.2	48,792.9	71.8	6.88	6.26					98,700
Oct-Dec 99	4,477	4,206	271	280	65,751.2	44,328.2	67.4	6.81	6.41					104,500
Jan-Mar 00	4,577	4,365	212	132	64,392.8	43,478.4	67.5	7.11	6.78					
America West														
Jul-Sep 98	499	453	46	22	9,884.3	7,108.3	71.9	5.05	4.58	4,665	1,240.4	746.9	60.2	11,600
Oct-Dec 98	507	470	37	20	10,037.2	6,491.9	64.7	5.05	4.68	4,335	1,261.2	688.1	54.6	11,687
Jan-Mar 99	520	469	51	26	10,135.4	6,485.5	64.0	5.13	4.63	4,263				
Apr-Jun 99	570	494	76	42	10,446.0	7,204.8	69.0	5.46	4.73	4,724				
Jul-Sep 99	553	511	41	22	10,522.9	7,502.8	71.3	5.26	4.86	4,896				
Oct-Dec 99	569	532	37	29	10,594.0	7,307.8	69.0	5.37	5.02	4,822				11,575
Jan-Mar 00	563	552	11	15	10,440.8	6,960.5	66.7	5.39	5.29	4,612				12,024
Continental														
Jul-Sep 98	2,116	1,973	143	73	31,609.9	24,049.4	76.1	6.69	6.24	11,655	3,801.8	2,542.9	66.9	40,082
Oct-Dec 98	1,945	1,817	128	66	30,557.4	21,273.3	69.6	6.37	5.95	10,637	3,664.5	2,339.0	63.8	41,118
Jan-Mar 99	2,056	1,896	160	84	30,938.8	22,107.0	71.5	6.65	6.13	12,174				
Apr-Jun 99	2,198	1,942	256	137	32,448.3	24,009.1	74.0	6.77	5.98	11,493				
Jul-Sep 99	2,283	2,071	21	110	34,711.0	26,380.3	76.0	6.58	5.97	11,922				
Oct-Dec 99	2,158	2,073	85	33	33,771.2	24,094.4	71.3	6.39	6.14	11,347				
Jan-Mar 00	2,277	2,223	54	14	33,710.2	24,143.0	71.6	6.75	6.59	11,201				
Delta														
Jul-Sep 98	3,802	3,250	552	327	59,017.9	45,242.3	76.7	6.44	5.51	27,575	8,486.8	5,196.9	61.2	75,722
Oct-Dec 98	3,448	3,128	320	194	57,810.9	39,947.7	69.1	5.96	5.41	25,531	8,244.1	4,699.3	57.0	76,649
Jan-Mar 99	3,504	3,148	356	216	56,050.3	39,163.9	69.9	6.25	5.62					
Apr-Jun 99	3,957	3,315	642	364	57,957.3	43,422.1	74.9	6.83	5.72					
Jul-Sep 99	3,877	3,527	350	352	60,710.8	45,528.3	75.0	6.39	5.81	27,183		5,258.2		72,300
Oct-Dec 99	3,713	3,705	8	352	58,265.1	40,495.3	69.5	6.37	6.36	25,739				
Jan-Mar 00	3,960	3,605	355	223	57,093.8	39,404.4	69.0	6.94	6.31	25,093				72,300
Northwest														
Jul-Sep 98	1,928	2,204	-276	-224	32,406.3	24,295.8	75.0	5.95	6.80	11,148	5,107.4	3,058.6	59.9	50,654
Oct-Dec 98	2,212	2,404	-192	-181	37,947.0	26,534.3	69.9	5.83	6.34	12,962	6,125.2	3,588.9	58.6	50,503
Jan-Mar 99	2,281	2,295	-14	-29	37,041.3	26,271.8	70.9	6.16	6.20					
Apr-Jun 99	2,597	2,333	264	120	40,541.5	30,900.2	76.2	6.41	5.75					
Jul-Sep 99	2,843	2,472	370	180	43,194.5	33,562.1	77.7	6.58	5.73					
Oct-Dec 99	2,555	2,461	94	29	39,228.3	28,618.2	73.0	6.51	6.27					
Jan-Mar 00	2,570	2,573	-3	3	39,486.0	28,627.4	72.5	6.51	6.52					
Southwest														
Jul-Sep 98	1,095	891	204	130	19,762.1	13,620.3	68.9	5.54	4.51	13,681	2,519.0	1,420.4	56.4	25,428
Oct-Dec 98	1,047	888	159	100	19,763.0	12,603.4	63.8	5.30	4.49	13,291	2,504.1	1,317.4	52.6	26,296
Jan-Mar 99	1,076	909	167	96	19,944.0	12,949.2	64.9	5.40	4.56	12,934				
Apr-Jun 99	1,220	966	254	158	20,836.9	15,241.7	73.1	5.85	4.64	14,817				
Jul-Sep 99	1,235	1,029	206	127	21,903.8	15,464.0	70.6	5.64	4.70	14,932				
Oct-Dec 99	1,204	1,050	154	94	22,360.7	15,047.8	67.3	5.38	4.70	14,818				27,653
Jan-Mar 00	1,243	1,057	155	74	22,773.8	15,210.2	66.8	5.46	4.77	14,389				27,911
TWA														
Jul-Sep 98	863	839	24	-5	14,293.8	10,531.3	73.7	6.04	5.87	6,273	1,999.7	1,150.0	57.5	21,848
Oct-Dec 98	747	813	-66	-79	13,452.4	8,731.6	64.9	5.55	6.04	5,574	1,863.7	982.8	52.7	21,321
Jan-Mar 99	764	802	-38	-22	13,352.4	9,205.2	68.9	5.72	6.01					
Apr-Jun 99	866	848	18	-6	14,274.4	11,130.9	78.0	6.07	5.94					
Jul-Sep 99	876	935	-59	-54	15,188.0	11,524.3	75.9	5.76	6.16	6,928	1,957.0	1,248.6	63.8	20,982
Oct-Dec 99	809	913	-104	-76	14,501.6	9,687.1	66.8	5.58	6.30	6,038				
Jan-Mar 00														
United														
Jul-Sep 98	4,783	4,088	695	425	73,913.5	56,283.7	76.1	6.47	5.53	23,933	11,255.3	6,847.4	60.8	94,270
Oct-Dec 98	4,281	4,090	191	54	70,620.9	49,484.4	70.1	6.06	5.79	21,616	10,774.4	6,182.8	57.4	94,903
Jan-Mar 99	4,160	4,014	146	78	67,994.5	46,899.8	69.0	6.12	5.90					
Apr-Jun 99	4,541	4,108	433	669	71,573.6	50,198.9	70.1	6.34	5.74					
Jul-Sep 99	4,845	4,226	619	359	74,043.0	55,628.0	75.1	6.54	5.71	23,765				96,700
Oct-Dec 99	4,480	4,286	194	129	70,715.9	49,172.2	69.5	6.34	6.06	21,536				96,600
Jan-Mar 00	4,546	4,294	252	-99	68,421.1	46,683.5	68.2	6.64	6.28	20,141				96,100
US Airways														
Jul-Sep 98	2,208	1,938	270	142	23,267.3	17,639.5	75.8	9.49	8.33	15,290	3,166.1	1,898.2	60.0	40,660
Oct-Dec 98	2,121	1,943	178	104	23,318.8	16,112.3	69.1	9.10	8.33	14,202	3,171.1	1,754.5	55.3	40,664
Jan-Mar 99	2,072	1,983	89	46	22,745.8	15,405.8	67.7	9.11	8.72					
Apr-Jun 99	2,286	2,007	279	317	23,891.7	17,557.5	73.5	9.57	8.40					
Jul-Sep 99	2,102	2,213	-111	-85	23,006.6	17,205.6	71.7	8.76	9.22	13,984				40,613
Oct-Dec 99	2,135	2,256	-121	-81	24,705.9	16,714.2	67.6	8.64	9.13	14,075				41,636
Jan-Mar 00	2,098	2,237	-139	-218	24,250.3	15,568.7	64.2	8.65	9.22	12,804				42,727
ANA														
Jul-Sep 98	3,399	3,355	44	73	42,415.9	27,404.4	64.6	8.01	7.91	21,449				
Oct-Dec 98														
Jan-Mar 99														
Apr-Jun 99														
Jul-Sep 99	SIX MONTH FIGURES													
Oct-Dec 99	4,541	4,329	212	146	44,156	29,032	65.7	10.28	9.80	21,970				
Jan-Mar 00														
Cathay Pacific														
Jul-Sep 98	SIX MONTH FIGURES													
Oct-Dec 98	1,769	1,713	56	-45	31,367.0	21,173.0	67.5	5.64	5.46	5,649.0	3,847.0	68.1		
Jan-Mar 99	SIX MONTH FIGURES													
Apr-Jun 99	1,695	1,664	31	17	28,801.0	19,325.5	67.1	5.89	5.78	5,267.0	3,581.6	68.0		
Jul-Sep 99	SIX MONTH FIGURES													
Oct-Dec 99	1,989	1,658	331	133	29,313.0	22,167.9	75.6	6.79	5.66	5,600.0				
Jan-Mar 00														
JAL														
Jul-Sep 98	4,463	4,262	201	133	58,439.5	40,413.9	69.2	7.64	7.29	16,008	8,959.7	5,725.4	63.9	
Oct-Dec 98														
Jan-Mar 99														
Apr-Jun 99														
Jul-Sep 99														
Oct-Dec 99														
Jan-Mar 00														

Note: Figures may not add up due to rounding. 1 ASM = 1.6093 AS

Aviation Strategy

Micro-trends

	Group revenue	Group costs	Group operating profit	Group net profit	Total ASK	Total RPK	Load factor	Group rev. per total ASK	Group costs per total ASK	Total pax.	Total ATK	Total RTK	Load factor	Group employees
	US\$m	US\$m	US\$m	US\$m	m	m	%	Cents	Cents	000s	m	m	%	
Korean Air														
Jul-Sep 98	TWELVE MONTH FIGURES													
Oct-Dec 98	3,283	3,063	219	212	58,246.4	40,190.3	69.0	5.64	5.26	25,557		9,480.0		17,050
Jan-Mar 99														
Apr-Jun 99														
Jul-Sep 99														
Oct-Dec 99														
Jan-Mar 00														
Malaysian														
Jul-Sep 98														
Oct-Dec 98														
Jan-Mar 99														
Apr-Jun 99														
Jul-Sep 99														
Oct-Dec 99														
Jan-Mar 00														
Singapore														
Jul-Sep 98	2,232	2,013	219	278	41,466.2	29,456.2	71.0	5.38	4.86	6,240	7,693.4	5,225.2	67.9	
Oct-Dec 98	SIX MONTH FIGURES													
Jan-Mar 99	2,421	2,130	291	341	41,725.5	30,843.7	74.9	5.80	5.10	6,537	7,958.5	5,540.3	69.6	
Apr-Jun 99	SIX MONTH FIGURES													
Jul-Sep 99	2,577	2,259	317	346	43,145.7	32,288.3	74.8	5.97	5.24	6,752	8,251.9	5,852.7	70.9	
Oct-Dec 99														
Jan-Mar 00														
Thai Airways														
Jul-Sep 98	629	584	45	176	12,118.0	8,769.0	72.4	5.19	4.82					
Oct-Dec 98	727	647	80	170	12,599.0	9,195.0	73.0	5.77	5.14					
Jan-Mar 99	675			125										
Apr-Jun 99	651			93										
Jul-Sep 99														
Oct-Dec 99														
Jan-Mar 00														
Air France														
Jul-Sep 98	5,088	4,894	194	228	49,724.0	38,070.0	76.6	10.23	9.84					
Oct-Dec 98	SIX MONTH FIGURES													
Jan-Mar 99	5,550	5,552	-2	56	51,394.0	38,242.0	74.4	10.80	10.80					
Apr-Jun 99	SIX MONTH FIGURES													
Jul-Sep 99	5,249	4,889	360	316										
Oct-Dec 99														
Jan-Mar 00														
Alitalia														
Jul-Sep 98	TWELVE MONTHS FIGURES													
Oct-Dec 98	5,152	4,432	720	235	51,638.4	35,427.2	68.8	9.98	6.86	24,103			18,825	
Jan-Mar 99														
Apr-Jun 99														
Jul-Sep 99														
Oct-Dec 99														
Jan-Mar 00														
BA														
Jul-Sep 98	4,034	3,601	433	357	46,792.0	35,543.0	76.0	8.62	7.70	12,608	6,533.0	4,630.0	70.9	64,106
Oct-Dec 98	3,585	3,431	154	-114	44,454.0	29,736.0	66.9	8.06	7.72	10,747	6,277.0	4,111.0	65.5	64,608
Jan-Mar 99	3,343	3,481	-138	-119	43,544.0	29,537.8	67.8	7.68	7.99	10,285	6,130.0	3,933.0	64.2	64,366
Apr-Jun 99	3,527	3,378	149	302	45,813.0	32,032.0	69.9	7.70	7.37	11,733	6,437.0	4,215.0	65.5	65,179
Jul-Sep 99	3,933	3,742	191	49	47,465.0	35,873.0	75.6	8.29	7.88	12,983	6,690.0	4,689.0	70.1	65,607
Oct-Dec 99	3,473	3,476	-3	-112	45,347.0	30,192.0	66.6	7.66	7.67		6,469.0	4,270.0	66.1	65,800
Jan-Mar 00														
Iberia														
Jul-Sep 98	TWELVE MONTH FIGURES													
Oct-Dec 98	4,451	4,100	351	356	45,041.6	32,520.0	72.2	9.88	9.10	21,753		3,740.0		22,065
Jan-Mar 99														
Apr-Jun 99														
Jul-Sep 99														
Oct-Dec 99														
Jan-Mar 00														
KLM														
Jul-Sep 98	1,865	1,675	190	121	19,363.0	15,984.0	82.6	9.63	8.65		3,359.0	2,583.0	76.9	33,586
Oct-Dec 98	1,673	1,661	12	-15	18,476.0	13,767.0	74.5	9.05	8.99		3,214.0	2,415.0	75.1	33,761
Jan-Mar 99	1,550	1,670	-120	-45	17,716.0	13,294.0	75.0	8.75	9.43		3,088.0	2,284.0	74.0	33,892
Apr-Jun 99	1,626	1,547	79	37	18,778.0	14,302.0	76.2	8.66	8.24		3,253.0	2,427.0	74.6	34,980
Jul-Sep 99	1,731	1,596	135	32	19,630.0	16,083.0	81.9	8.81	8.13		3,352.0	2,640.0	78.8	35,226
Oct-Dec 99	1,450	1,479	-29	-17	19,014.0	14,434.0	75.9	7.63	7.78		3,280.0	2,550.0	77.7	35,128
Jan-Mar 00														
Lufthansa***														
Jul-Sep 98	3,528	3,167	361	198	26,929.0	20,681.0	76.8	13.10	11.76	11,198	5,231.0	3,748.0	71.6	54,695
Oct-Dec 98	2,929	2,106	823	96	25,530.0	18,259.0	71.5	11.47	8.25	9,819	5,204.0	3,676.0	70.6	55,368
Jan-Mar 99	3,301	3,210	91	64	25,445.0	17,942.0	70.5	12.97	12.62	9,658	4,972.0	3,435.0	69.1	56,420
Apr-Jun 99	3,322	3,012	310	97	30,500.0	22,279.0	73.0	10.89	9.86	11,444	5,626.0	3,993	71.0	53,854
Jul-Sep 99	4,049	3,677	382	184	31,335.0	23,866.0	76.2	12.92	11.73	11,891	5,699.0	4,142.0	72.7	
Oct-Dec 99														
Jan-Mar 00														
SAS														
Jul-Sep 98	1,283	1,152	131	127*	8,283.0	5,843.0	70.5	15.49	13.91	5,714				26,553
Oct-Dec 98	1,368	1,266	102	46*	8,116.0	5,089.0	62.7	16.86	15.60	5,431				27,071
Jan-Mar 99	1,203	1,227	-24	-3*	8,062.0	4,713.0	58.5	14.92	15.22	5,017				27,110
Apr-Jun 99	1,357	1,294	63	60*	8,466.0	5,571.0	65.8	16.03	15.28	5,580				27,706
Jul-Sep 99	1,173	1,150	23	12*	8,450.0	5,667.0	67.1	13.88	13.61	5,589				27,589
Oct-Dec 99														
Jan-Mar 00														
Swissair**														
Jul-Sep 98	SIX MONTH FIGURES													
Oct-Dec 98	2,187	2,070	117	165	20,476.8	15,391.3	75.2	10.68	10.11	5,277				10,396
Jan-Mar 99	SIX MONTH FIGURES													
Apr-Jun 99	1,932	1,877	55	57	23,411.0	16,130.0	68.9	8.25	8.02	7,784				10,715
Jul-Sep 99														
Oct-Dec 99														
Jan-Mar 00														

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

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