Aviation Strategy

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Recovery patterns

The pattern of airline industry recovery is now becoming a bit clearer.

Traffic numbers are edging up, but the latest annual changes being reported are usually still negative. AEA intra-Europe and US domestic traffic was down by 9% and 11% respectively in April. As for the Asian/Pacific carriers (AAPA), their intra-region traffic in March, the latest available month, was actually up 5%.

It's the long-hauls that continue to disappoint. AEA transatlantic traffic was down 21% in April while that of the US majors showed a 16% decline. On the transpacific US carriers were down 16% while AAPA airlines reported a traffic fall of 5%. Europe-Asia routes are now positive, around 5%, for both European and Asian carriers.

What this seems to mean is that Asia/Pacific has returned to almost normal traffic levels, Europe is moving up slowly (and the AEA numbers do not show the impact of the low-costs) but US traffic, especially international, seems very depressed.

However, the US carriers are making a concerted effort to keep capacity down, push up load factors and improve yields. There is actually some evidence of yield recovery: in April average US domestic fares were down 12% compared to 25% in the latter months of last year. International fares were down only 2% in April.

Confidence is seeping back into the industry. It will be interesting to observe the psychological impact of the growth levels that will be reported after September this year. Pursuing current trends, we would expect monthly traffic growth to be reported at 20%-plus (against of course an extremely depressed base period).

It has become clear that there will not be a full-scale restructuring of the industry though we expect the Euro-rationalisation process to continue, with at least another two flag-carrier bankruptcies in the next six months or so.

In the US all aspects of the established airline model are now being re-examined. Don Carty, CEO of American, focused on two issues at a recent Merrill Lynch conference:

First, a legislative solution to impasses in union negotiations: a form of mandatory arbitration based on the "last best offer" approach. After a period of negotiation, management and labour would have to provide a last best offer to arbitrators, who would then choose one or the other. This, according to Carty, would force both sides to the centre, and avoid a scenario in which the bargaining leverage belongs to the party that can impose a strike.

Second, American is reconsidering the way its hub system works, specifically the trade-off between revenues and the relative inefficiencies that highly-peaked hub schedules tend to drive. The implication is that American may move back to more of a rolling hub concept in an effort to improve labour efficiency and aircraft utilisation at the expense of maximising connections.

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The potential value of the Euro-regionals

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Regional jet airlines in the US are proving very valuable to their mainline owners, as the spin-offs and flotations of ExpressJet and Pinnacle have demonstrated (see *Aviation Strategy*, May 2002). Could the same process be duplicated in Europe?

One of the first problems is that of scale. As the table opposite shows, there are about 680 regional jets in Europe as opposed to about 1,100 in the US. More importantly, the biggest and by far the most important European operator of regional jets is Lufthansa Cityline with 68 regional jets and a traffic base of 6m in 2001.This compares to 145 for Continental Express (ExpressJet), 122 for American Eagle, 104 for Comair, 93 for Atlantic Coast, 75 for Atlantic South East, 62 for Mesa, etc.

US regionals have managed to conclude generous agreements with their parents, the Majors, usually involving set payments per block hour designed to guarantee operating profit margins of 10%-plus. The parent normally provides handling and marketing services, access to cheaper financing or acts as lessor to the regional subsidiary.

This presents a unique proposition to investors. Operating profit margins are more or less guaranteed by the parent and traffic/revenues growth will increase rapidly, partly as a result of the transfer of mainline services from the parent to the regional subsidiary.

Where US regionals have blundered has usually been in operating their own point-to-point services. When they have come up against low-cost competition, dire consequences have followed. For example, Midway, which tried to compete with its relatively expensive RJ fleet against mainline services, ended up in bankruptcy.

The contrast between the regionals in Europe and in the US is marked. No European regional has been able to negotiate anywhere near as advantageous terms as its US counterpart. This is probably because, with the exception of KLM at Schiphol, no Euro-major is reliant for regional feed to make its hub work efficiently.

The logic of consolidating regionals

Indeed, the European trend in recent years has been to consolidate the regionals into the main airline group rather than spinning them off. Examples include: British Airways (BRAL and CityFlyer), Air France (Regional Airlines, Protéus and Flandre Air), SAS (Wideroe and Skyways) and Lufthansa (Eurowings).

This trend has largely been driven by concern over the loyalty of regionals and franchisees. BA's purchase of CityFlyer was at least influenced by the prospect of Virgin Atlantic taking over the regional airline and building a feeder operation at London Gatwick. At the time Air France bought out its financially troubled regional affiliates, it seemed likely that the French domestic market was being widely infiltrated by other Euro-Majors - by BA through Air Liberté, by KLM through Regional and by Swissair through Air Littoral. Lufthansa may have been worried about KLM controlling Eurowings. In retrospect, these concerns do not seem to have had much basis, but they were important considerations at the time.

The danger of consolidating regional subsidiaries into the mainline group is that the costs advantages of the subsidiary are eroded. Unions will naturally seek harmonisation on wage levels and productivity agreements between different parts of the same group. There may also be a tendency for other operating costs to drift up because of the new financial security (or delusion of security) offered by the parent.

Euro-regionals are probably about five years behind their US counterparts in that the bulk of their operations are still point-to-

EUROPEAN RJ OPERATORS

	Emb135	Emb 145	328JET	CRJ	BAe146	F100	F28	Total
Lufthansa Cityline				50	18			68
SWISS		22			19			41
Regional Airlines	9	25				2		36
Brit Air				26		8		34
British Airways Citiexpress		29			5			34
SN Brussels Airlines					32			32
Air Littoral				17		6		23
British European				4	16			20
Eurowings				9	10			19
KLM Cityhopper						17		17
Cityflyer Express					16			16
Tyrolean Airways				10		6		16
KLM						15		15
Air Nostrum				14				14
Lot Polish Airlines		14						14
PGA - Portugalia		8				6		14
Bmi Regional	2	9			2			13
Air Lib						9	3	12
Thy					12			12
City Jet					11			11
Malmo Aviation					11			11
Others (58 operators)	3	27	11	29	85	40	8	208
Total	**14**	**134**	**11**	**159**	**237**	**109**	**11**	**680**

Source: ACAS, April 2002 Note: Only RJs are shown; these airlines may also operate other jets and turboprops.

point services on thin routes rather than feeder operation to the major airline hubs. However, the industry is changing rapidly: as the Euro-majors have cut back capacity and downsized, the aligned regionals have been encouraged to fill the resulting network gaps.

Other opportunities will arise as the European flag-carrier rationalisation continues. For instance, SN Brussels Airlines appears to be attempting to build a Comair-type hub out the remnants of Sabena's intra-European network, but this is a very low-profile and undercapitalised operation at present.

CityLine might seem to offer the best European prospect of a European regional sell-off, and such a move might fit in with Lufthansa's strategy of maximising the values of the various segments of its total aviation company. CityLine is based at Cologne/Bonn and operates domestic and international service into the Lufthansa hubs at Frankfurt, Munich and Hamburg. Traffic grew by 5% last year as routes were transferred from Lufthansa.

However, the question is whether CityLine's operations and markets are sufficiently differentiated from the low-cost carriers, which are now beginning to focus on the German market - Ryanair with its base at Frankfurt Hahn and easyJet through its potential take-over of Deutsche BA.

Regional/LCC economics

The economics of the Euro-regionals are interesting. Average flight times in Europe are 1.18 hours (about the same as the low-cost carriers). Their average load factor was 57% in 2001 (compared to 80%-plus for the low-cost carriers). Evidently, the costs/ASK of operating a 50-seater regional jet are considerably higher than the low-cost carriers' 737NGs, which also have much higher utilisation rates.

This implies that regional airlines' costs/ASK are on average four times higher those of a low-cost carrier. So, whereas easyJet can make a healthy margin on average one-way fares of € 60, Euro-regionals have to secure average fares (taking into account the lower load factor) of perhaps five times that level in order level to survive.

Brazil's airlines: a perpetual great future

Brazil has been considering the health of its airline industry post September 11. The Ministry of Development, Industry and Trade commissioned the Brazilian National Development Bank (BNDES) to examine the sector, and its findings were released in April.

The BNDES study, "The Brazilian Aviation Sector - Study and Preliminary Diagnosis" finds the airline sector at an all time low. Of the five largest carriers in the country, only VASP was able to report a profit in 2001, but that did not prevent it joining Transbrasil and Varig as being described in the report as being either "actually or technically insolvent". Only TAM and GOL escape this status.

The BNDES study was commissioned partly to answer demands from some airline officials that the industry should receive financial support from the Brazilian government post September 11 in the same way that the Bush administration has supported carriers. The Brazilian government has after all been down this road before when it bailed out the banking industry in the 1990s. As with airlines worldwide, Brazilian carriers were already having a poor 2001 prior to the terrorist attacks in the US. Factors such as the depreciation of the Real versus the Dollar, the electrical energy crisis and the cooling of the domestic economy were all negative for Brazilian carriers.

No rescue operation

Unfortunately for the ailing Brazilian airlines, the BNDES study concluded that a wholescale special rescue operation was inappropriate (it is interesting to note that despite September 11, domestic traffic grew at a respectable 6% in Brazil in 2001). Instead, BNDES proposed several fiscal relief measures, rather than direct official financial support for the sector. These relief measures include:

• Lowering of income tax rates for airlines;
• Lowering or curtailment of taxes on aviation fuel and on aircraft leases; and
• An improvement in the government's own bureaucratic procedures in regard to the import of aviation spares and components.

The report blames some of the sector's financial woes on poor airline management. Particularly, Brazilian airline managers are blamed for over-ambitious expansion plans putting too much financial strain on weak balance sheets. The BNDES study also encourages airlines to capture a greater market share of the air cargo market in the future.

However, the report singles out the main problem of the industry as an oversupply of airlines. The study suggests that given the size of the Brazilian market, there should only be room to accommodate two domestic airlines and a single flag carrier. As with the EU, the Brazilian government is encouraging consolidation among its own carriers.

Nevertheless, the BNDES study supports the attitude of the Brazilian government itself, and falls short of recommending direct interference in the rationalisation process. While state aid is definitely not on the agenda for "insolvent" Transbrasil, Varig or VASP, BNDES can provide new capital to airlines for "viable operational projects". Thus, as Brazilian carriers seek to find new financial investors, BNDES may choose to play an influential role regarding which airlines survive and which fail.

The government is setting up a new industry regulatory agency, the National Civil Aviation Agency (ANAC), which may be able to encourage consolidation. ANAC, unlike its predecessor the Civil Aviation Department (DAC) has no military input or interference. Also, ANAC is charged with monitoring the financial and economic health of the airlines, which hopefully will prevent a repetition of the chaos caused when Transbrasil collapsed in December 2001.

Brazil's five main players are profiled below.

Varig

The airline and its advisors (Banco Fator and Credit Lyonnais) are touting a business plan to investment banks, pension funds, institutional investors and to BNDES which aims to raise some $400m in fresh equity. The airlines largest shareholder, the Ruben Berta Foundation which owns 87.5% of the voting stock, has approved of the planned capital increase but declared it will not participate in it. It would appear that current plans call for a domestic flotation on the stock market with several "major investors already identified".

Consolidated losses of $203m were recorded in 2001, the worst in the airline's 74-year history. The size of the loss was reduced by the $370m sale and leaseback transaction carried out with Boeing, covering two MD11s and four 737 aircraft in December 2001.

The carrier's regional subsidiaries, Rio Sul and Nordeste also recorded losses in 2001. Varig is in the process of re-positioning these carriers in the marketplace as part of its strategy to combat the increasing threat posed by low-cost carrier Gol. These subsidiaries are losing their autonomy, as strategic decisions are now being taken at a Varig Group level.

In response to the threat of Gol, Varig is removing many of its fare restrictions and is also offering a range of lower fares where it faces direct competition. The full impact of these turf battles has yet to be felt in the airline's financial results. Lower fuel prices and a stabilisation of the Real saw Varig record a less than encouraging net loss of $ 57.3m in the first quarter of 2002, which at least was a 31% improvement on the same quarter in 2001.

VASP

The only Brazilian carrier to be in the black in 2001, VASP has adopted a strategy of closing its unprofitable international routes and concentrating its capacity on domestic routes. Net profits for 2001 of $15.6m were earned with the benefit of the sale of the carrier's 50% stake in Lloyd Aereo Boliviano for $9.8m. Despite a 9.5% increase in passengers carried, lower yields saw overall revenues fall by 2%.

The largest problem for VASP appears to be its aging fleet. With an average age of 25 years, VASP has no aircraft on order, and it is unclear as to whether it has a balance sheet that can support the major fleet renewal programme that is clearly necessary. Much may depend on the airline's majority shareholder, the VOE/Canhedo Group.

MAJOR BRAZILIAN CARRIERS' FLEETS

	Varig, Rio Sul & Nordeste	TAM	Gol	VASP
Turboprops	14	5		
Emb145	15			
727	6			3
737-200	6			22
737-3/4/500	62			4
737-7/800	8		16	
767	12			
777	2			
DC10	3			
MD11	15			
A300				3
A319/320		27		
A330		7		
Fokker 100		50		
Fleet total	**143**	**89**	**16**	**32**
Av. age (years)	10.4	8.3	2.0	25.0
Orders	14 x 737NGs 6 x 767s 4 x 777s	8 x A319s 16 x A320s 3 x A320s	None	None

TAM

TAM was able to grow its revenue line by 31.6% to a record $1.26bn on the back of a 25% increase in passenger traffic. However the growth was, perhaps inevitably, at a cost to the airlines' bottom line. Record losses for TAM of $24.0m were recorded in 2001 after the carrier had been able to record a profit of $0.2m in 2000.

TAM has embarked on a cost-cutting programme that has helped see a profitable first quarter in 2002 producing net profits of $ 6.4m (versus a net loss of $42.5m for the

APRIL 2002 MARKET SHARES OF BRAZILIAN CARRIERS

	Domestic	International
Varig & subsidiaries	38%	81%
TAM	24%	19%
Gol	12%	0%
VASP	12%	0%

same quarter in 2001).

The carrier has decided to scale back its international operations. During 2001, TAM dropped its services to Montevideo, Frankfurt and Zurich, and reduced its frequencies on Buenos Aires-Miami. The redeployment of capacity on domestic routes has consolidated the carrier's already strong position.

It is possible that TAM may join Varig in representing Brazilian carriers in the global alliance battle. Discussions are believed to have occurred with SkyTeam, TAM already has a code-share agreement with Air France on Rio de Janeiro-Paris. However it should be noted that the carrier also has links with oneworld through its code-share with Iberia on Rio de Janeiro - Madrid.

Gol

GOL is the newest kid on the block in Brazil and is modelled on the low-cost airlines of the US and Europe. The carrier is owned by Grupo Aurea, which also owns Brazil's largest long distance bus company. In its first year of operation, 2001, Gol recorded losses of $2.3m, which were within the carrier's expectations.

The airline operates a fleet of 737-700s and -800s, which are on seven-year operating leases. Plans are to grow the fleet to 19 aircraft this year, allowing the carrier to fly to some 20 destinations. The airlines' strategy calls for destinations to be served at least three times daily.

In March, Gol entered the prime Brazilian market operating between the two downtown airports serving Rio de Janeiro (Santos Dumont) and Sao Paulo (Congonhas). This city pair enjoys over a 100 daily frequencies with Varig and its subsidiaries offering 50 flights per day, TAM 35 flights, VASP 12 flights, and new entrant Gol 11 daily flights.

Transbrasil

Transbrasil suspended all operations in December 2001. A bankruptcy case brought by GE Capital, one of the airline's major creditors, has seen Brazilian judges vote two to one in favour of the aircraft lessor this April. The majority verdict has given Transbrasil some rights of appeal, and the case is likely to drag through the Brazilian courts for some time to come.

The airline, which is owned by the Fontana family, has some $400m of debt. Commentators believe that there is no prospect of the carrier re-emerging from bankruptcy, and that the Fontana family's prime concerns are to protect their non-airline assets.

The development of the airline sector in Brazil seems to depend on who is left standing. Varig is by far the largest carrier, enjoying dominance in the international market and a member of the Star alliance. If it can secure a stock market listing and a capital injection, then Varig should retain its position as the flag carrier for Brazil.

If the BNDES's supposition is that Brazil needs only two domestic carriers, and it is assumed that the domestic operations of Varig is one of these, then only one player out of VASP, TAM and Gol may ultimately survive. VASP would appear the weakest of the three. If Gol continues to receive support from its parent, and its low-cost model is adhered to and accepted by Brazilians, then it would perhaps appear to have the strongest business model. This of course leaves TAM perhaps as a merger candidate for either Varig or Gol. It will be interesting to see whether Brazil's politicians can resist interference in the consolidation process.

Article based on a special report presented by James Bruce at Aviation Latin America CEO conference, May 2002.
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Orbitz: regulating e-distribution

As the internet inexorably becomes the prime medium for gathering travel information and for booking tickets, concerns are being raised in the US about the competitive implications of Orbitz's strategy. Various government bodies are trying to find justification and the means to regulate e-distribution companies.

The progress of Orbitz.com (see *Aviation Strategy*, May 2001, for the original grand vision) has been steady rather than spectacular. Orbitz was founded by United, American, Delta, Northwest and Continental in 2000 with a $145m investment. It forms the model for e-distribution companies in other parts of the world.

Opodo began operating in Europe last year, backed by nine European flight operators: Aer Lingus, Air France, Alitalia, Austrian, BA, Finnair, Iberia and Lufthansa. Following the success of operations in the UK and Germany, the French site has just started up.

Serving the Asia-Pacific market, Zuji.com is scheduled for launch in the second quarter of 2002. A joint venture between Air New Zealand, Cathay, China Airlines, EVA, Garuda, Malaysia Airlines, Qantas, Royal Brunei, Silk Air, Singapore Airlines and Travelocity.com, Zuji will be launched in Singapore and Australia, followed by other Asia-Pacific countries.

In May Orbitz unveiled plans to launch an IPO of Class A common shares and filed its preliminary prospectus with the SEC. As yet details of the size or terms of the sale are unavailable, although the valuation will be tiny compared to the multi-billion dollar propositions of the dotcom era. The filing also reveals that Orbitz's founding partners will maintain a stake in the company and exercise voting rights.

Prior to Orbitz's launch, concerns were raised regarding the possible anti-competitive nature of the venture. Recently, a posse of Congress members has demanded an enquiry from the DoJ into possible antitrust concerns.

Antitrust concerns

The concerns fall into two areas. First, "Most-favoured nation clauses", whereby the Orbitz agreement requires that participating airlines provide Orbitz with all published fares available on the airlines' own websites and reservation systems as well as all fares offered to competing travel agencies. This ensures that Orbitz has access to the best available fares, and its competitors may have no opportunity to engage in exclusive promotional ventures with the major airline carriers. Basically, Orbitz's airline owners won't offer any fares to other ventures that aren't already being offered by Orbitz.

Second, "In-kind promotion", a clause in the Orbitz agreement induces carriers to provide Orbitz with exclusive web fares. This shuts out other independent agencies from the carrier's low fare inventory.

According to the 24 Congressmen who have made a complaint to the DoJ, "the major airline owners of Orbitz appear to be using this joint venture to restrict output of critical travel information, to shift the costs of online travel distribution to consumers, and to steer traffic away from the smaller carriers."

Southwest has refused to participate with Orbitz.com, which undermines Orbitz's original claim that it would be a truly comprehensive and universal online agency. It is unlikely that Southwest is deeply concerned about Orbitz but it has complained about "competitors getting together to combine to eliminate competition."

Cato praises

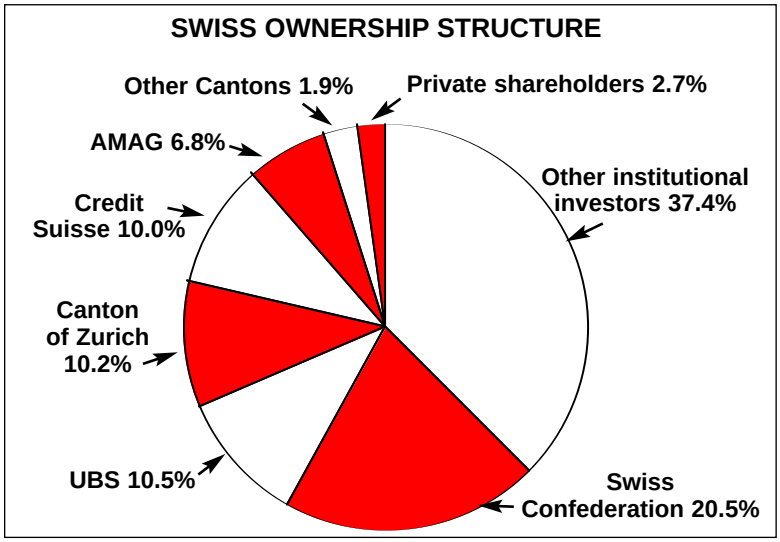
Recently, the Washington-based Cato Institute, known for its aggressive free-market economic stance, released a white paper praising Orbitz for its "comprehensive and unbiased information on schedules, fares and seat availability." This endorsement comes as the inspector general of the DoT reviews Orbitz's business practices -the second time the company has come under government scrutiny since its founding in 2000. The US DoT Inspector General Ken Meade and the Senate Commerce Committee determined last year that Orbitz did not violate antitrust regulations at the time, allowing the company to proceed with business plans. The inspector opened a second review in April, and he has 90 days to issue his own findings on whether Orbitz may be exploiting any unfair advantages.

SWISS: New airline, old problems, different fate?

SWISS - to be known as Swiss International Air Lines from July 2002 - is attempting the difficult task of combining short-haul specialist Crossair and large parts of the collapsed Swissair into Switzerland's new flag carrier in a matter of months. Whatever its name, can a viable, profitable international airline survive long-term in Switzerland, or is the attempt doomed due to a combination of high structural costs and the country's geopolitical isolation?

The demise of Swissair is well-documented, but it's instructive to recap the main reasons for its failure, to see which were specific to the airline and which were more structural, and thus relevant to the future of SWISS.

The SAir Group now owes SFr24bn ($14.8bn) to creditors - the exact amount is disputed - but it looks as if those creditors will be fortunate to retrieve more than 10%. The fundamental cause of SAir's spectacular demise was the disastrous "Hunter" strategy - the acquisition of stakes in other airlines and aviation service companies in an attempt to gain scale. As those companies failed to perform and no synergies were uncovered, SAir's balance sheet was destroyed (see *Aviation Strategy,* February and April 2001, for example). It tried to keep going under new management, but was forced into bankruptcy last October. It then revealed an audacious rescue plan whereby Crossair would purchase the worthwhile assets, Swiss banks and other institutions would supply new capital and the creditors would be left suing a shell company (*Aviation Strategy,* October 2001).



The Hunter strategy was presented as a solution to the classic problem of Europe's mid-sized airlines. Swissair's management didn't want Swissair to settle for being a niche carrier, yet the airline was not large enough to be considered one of Europe's major players, let alone a global force. The strategy was also seen as a response to two specific problems facing Swissair.

First, Switzerland was isolated politically. As a non-member of the EU, Swissair could only gain access to EU markets via a range of alliance deals, which were both difficult to negotiate and a serious distraction to management. Partly as a result of this Swissair was more reliant on long-haul routes than most other European airlines. Yet Zurich was not a first choice entry point into Europe for North American passengers, and Swissair's position in the Asia/Pacific market was undermined after SIA withdrew from the Global Excellence alliance in the late 1990s.

Second, Swissair also faced very high costs, from ground handling to labour. Despite management's constant onslaught on costs in the late-1990s, through everything from job cuts to fleet harmonisation, Swissair's unit costs always appeared towards the top of the European airline league.

The rebirth

Crossair took over Swissair's short-haul routes after the latter's financial collapse, although Swissair continued to operate long-haul flights for Crossair until March 31 this year, when SWISS was launched officially.

Financially, the emergence of the new airline from the ashes of Swissair was not

straightforward and needed a large bridging loan from the Swiss government. The rescue plan, agreed last October, envisaged two-thirds of the new airline being owned by "corporate" investors and one-third by a combination of the Swiss Confederation (i.e. the Swiss state), local Cantons and City authorities. This was achieved in two steps. First, at the end of last year UBS and Credit Suisse acquired 70.35% of Crossair from SAirGroup for SFr259m ($160m). Then earlier this year these institutions as well as other, new investors (such as Swiss Cantons and Cities) participated in a substantial capital increase in SWISS, at a total capitalisation of SFr3bn.

However, this process did face one upset when at the end of March the general public in Zurich voted against the City becoming a shareholder in the new SWISS, a shareholding that other SWISS shareholders assumed would be automatic. Although the majority was wafer-thin (51.8% against in a turnout of just 24% of the eligible electorate), an opposition of right-wing and left-wing parties successfully argued that the local authorities should not invest in a pure commercial enterprise - and in particular in a very risky one.

The other parties - including the Social Democratic Party and the Christian Democratic Party - argued that many jobs depended on a successful national airline. However, the Canton of Zurich (as opposed to the City) had already invested SFr300m in SWISS for a 10% stake, and local voters saw a SFr50m ($31m) investment, this time made by the City, as being one investment too many. In cash terms, the absence of the City of Zurich's SFr50m was not a great concern for SWISS, but the decision of the City's voters was embarrassing and begs the question: are the majority of Zurich's citizens correct in believing an investment in SWISS is too risky in the long-term?

The strategy

Under André Dosé as its CEO, SWISS aims to fly 9.8m passengers in 2002, rising to 15m passengers in 2003 and making it one of Europe's top-four airlines in terms of passengers carried.

Presently the airline serves 128 destinations in 59 countries, with 88 of those destinations being in Europe, 14 in Africa, 10 in the Americas, 9 in Asia and 7 in the Middle East.

SWISS FLEET

	Fleet	Orders	Notes
A319	7		
A320	11		
A321	8		
A330	13		
A340		13	Delivery in 2003-04
MD11	13		To be replaced by A340s
MD83	9		
RJ85	4		To be replaced by Embs
RJ100	15		To be replaced by Embs
Emb145	25		
Emb170		30	Delivery in 2002-05
Emb190		30	Delivery in 2004-06
Saab 2000	**28**		To be replaced by Embs
TOTAL	**133**	**73**	

Swiss has a fleet of 133 aircraft, 26 of which are for long-haul (MD-11s and A330s, all coming from Swissair) and the rest for short-haul (of which 26 A319/20/21s came from Swissair).

For such a comparatively small airline there are too many aircraft types, although this is primarily the legacy of merging the Crossair/Swissair fleets. Fleet types will be reduced by the replacement of RJs and Saabs by Embraer 170s and 195s by 2006. The MD-11s, all leased-in, will also be replaced by A340-300s by August 2004, an order announced in March this year. The future of the airline's A330s is uncertain, as some SWISS executives are believed to be unhappy with the economics of the aircraft.

SWISS has more than 10,000 staff, of which 1,800 are pilots and 3,500 cabin attendants. But half of these came from Swissair, so the inevitable question is: will Crossair's lower cost base gradually be eroded?

The first point to make is that although Crossair's cost base was lower than Swissair's, by no means could Crossair be regarded as a low-cost airline similar to easyJet or Go, simply due to Switzerland's higher labour costs compared with much of the rest of Europe.

Second - and unsurprisingly - the ex-Swissair unions are wary of the new working conditions in SWISS. Ominously, at the end of 2001 Crossair and Swissair pilots argued about the integration of the Swissair pilots into the new airline, specifically the issue of seniority. The matter was not helped by the Swissair pilots' union doubting whether Crossair should

be the heir of the Swissair legacy given "recent events which have occurred in terms of safety" - an unsubtle and uncalled for reference to the Crossair crash in Zurich in November 2001.

Aeropers, the unions representing ex-Swissair pilots, eventually agreed to new terms with SWISS in late May 2002. The deal included a 35% reduction in salary compared with Swissair pay levels, although that may not be the end of pilot worries at the new airline as management wants to introduce one, unified set of conditions for all pilots. Crossair pilots are unhappy at this prospect and their union - Crossair Cockpit Personnel - insists the Aeropers/SWISS agreement has nothing to do with them.

Meanwhile in April ex-Swissair cabin crew rejected the initial collective working agreement offered by SWISS, while the flight attendants' union similarly rejected the terms proposed by the new airline, which included a 10% salary reduction. However, despite genuine worries about inferior conditions, militancy by the ex-Swissair workforce does not appear to be an issue and union members have agreed to keep working for SWISS until new agreements are finally agreed.

Overall, SWISS executives claim that costs are under control, and that losses for the first few months of the year are smaller than expected. Last year Crossair reported a loss of SFr314m ($194m), significantly worse than the SFr25m loss of 2000. Of the 2001 loss, more than 90% was due to the Swissair situation - specifically "debtor losses on credits with Swissair, obligations under the Qualiflyer frequent flyer programmes, reserves for outstanding legal actions and the loss of wet-lease revenues from 19 aircraft wet-leased to Swissair". Crossair's first quarter 2002 results are shown below, the last financials released under the Crossair name, although like the full-year 2001 results they are not a particularly relevant guide to SWISS's prospects going forward, this time due to the substantial costs involved in integrating Swissair's long-haul routes though the period.

CROSSAIR RESULTS
1ST QUARTER 2002 (SFr m)

Revenue from scheduled pax.	446
Other operating revenue	71
Operating revenue	517
Operating expenditure	-699
EBIT	-182
Financial items	-5
Tax	-3
Consolidated loss	**-190**

The first full quarter results for SWISS - April to June 2002 - are expected to show a large loss, due to the costs of transferring long-haul routes from Swissair. Given these "start-up" costs, the airline forecasts its loss for 2002 to be around SFr1.1bn, based on revenues of SFr3.2bn. Turnover should hit the SFr5bn mark in 2003, the airline believes, allowing break-even that year. Since fuel and currency risks have been hedged - according to management - the main remaining external risk to recording a profit in 2003 would be another terrorist incident along the lines of September 11.

Is break-even achievable in 2003? SWISS's strategy of consolidation rather than expansion for the short- and medium-term is sensible, and the focus has to be on integrating the ex-Swissair long-haul routes and making them profitable again. Of great assistance here will be pruning of capacity - at the moment SWISS's ex-Swissair routes have 30% less capacity than Swissair operated - as well as the alliance with American announced at the end of March. SWISS now has an AA code on transatlantic flights from Zurich to New York JFK, Newark, Boston, Washington, Chicago, Los Angeles and Miami.

This may be the first step towards SWISS joining oneworld - although this will require bilateral alliances with all oneworld members. And if specific long-haul routes do not hold out the prospect of breaking even within a reasonable period then SWISS's management needs to be ruthless and cut them - the type of difficult decision that Swissair's executives were incapable of making.

Cash is king

However, in the short-term it is the availability of cash that will be the key determinant of how well SWISS will fare. At the start of 2002 Crossair/SWISS had SFr700m in cash, which was boosted by another SFr1.9bn from the share capital increase earlier this year.

SWISS forecasts a year-end cash position

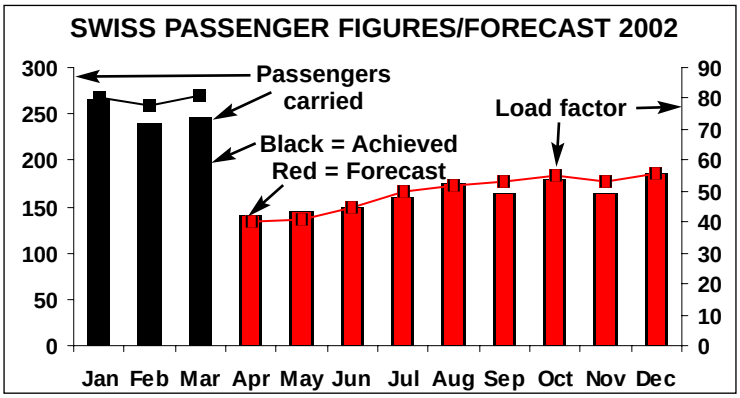
of SFr500m after aircraft purchases and other investments that are expected to drain SFr1bn from cash reserves through 2002. Comparing the year-end and start of year cash figures, this means the airline will have a hefty SFr92m ($57m) net cash outflow each month in 2002, due largely to operating losses and changes in working capital.

Although the cash burn will not be linear, at this rate Swiss would run out of cash sometime in June 2003. That's just 12 months from now, which means that there is little room for error in SWISS's strategy - unless, of course, management believes that investors will dip into their pockets again when needed, as they did for Swissair?

Assuming that's not the case, the survival of SWISS will depend on its quality of management. Interestingly, Moritz Suter - the founder of Crossair - resigned as head of airline operations at SAirGroup in early 2001 due to resistance to his ideas for transforming the airline from SAirGroup and Swissair executives. Suter is reported to have been dismayed by poor management at Swissair and decisions such as making major investments into carriers such as Sabena and various French regional airlines. Yet Suter was denied a seat on SWISS's board as he was regarded as being unpalatable for many of SWISS's new investors - a decision that hopefully is a one-off political expedient rather than an indication of a long-term drift towards the type of safe, "conservative" management that got Swissair into such trouble.

More encouraging is the fact that not many ex-Swissair managers have been taken on by SWISS as the new airline attempts to establish a culture and level of professionalism of its own.

As for the SWISS brand, the new airline is undoubtedly seen by many passengers as being Swissair under a slightly different name and livery, so SWISS will get all the positive (and negative) brand attributes that previously belonged to Swissair. How much damage the Swissair brand in 2001 suffered as the airline collapsed is a matter of opinion, but at the very least passengers will assume that the new SWISS is similar to Swissair in that it is a major airline offering short- and long-haul routes, and is associated with "quality" service and products. Since SWISS is aiming to win a large



slice of the point-to-point European business travel market, brand crossover from Swissair is valuable, and a completely "new" start-up airline would have had to spend considerable amounts of money on establishing an image.

The future

So will the airline survive? In the short-term, sensible operational and financial targets (such as a forecast 48% load factor for 2002 - a target that SWISS will beat comfortably) will keep investors onside, but long-term success will depend on how management reacts once the consolidation period is over.

The temptation to expand routes and services will be hard to resist, particularly if management believes another slice of cash will always be available from investors if forecast profitability in 2003 proves elusive. It would be all too easy to be panicked by an inevitable increase in competition - easyJet Switzerland, for example, is increasing frequencies and routes - but SWISS's stranglehold on slots at Zurich airport is a substantial advantage.

The key period for the airline is likely to be towards the end of 2002. That's when management will have a reasonable run of data on which ex-Swissair routes are profitable and which are not. If management takes some tough decisions at that point, so that cautious route expansion is also accompanied by selective pruning of the timetable, then long-term survival is possible. But if SWISS hopes to gloss over continuing core losses by aggressive expansion accompanied by another capital expansion, then a fate similar to that of Swissair may await.

United: in gradual recovery mode

In recent months the stock market has treated United Airlines as if it was a failing carrier rather than one in a gradual recovery mode. After all, UAL's unprecedented 2001 financial losses, dismal employee relations, high labour costs and continued leadership uncertainty have made it look like a potential Chapter 11 candidate.

While most other US major airline stocks have recaptured typically 20-30% of their pre-September 11 value, UAL's shares have languished at the post-attack lows. The shares recently dipped close to the record low of $9.40 recorded in November and have since settled in the $10-12 range - a level that represents less than one third of their pre-September 11 value.

However, at least two Wall Street analysts - Glenn Engel of Goldman Sachs and Jamie Baker of JP Morgan Securities - recently decided that the stock had been punished enough and that UAL's recovery prospects might in fact be quite reasonable. Both analysts upgraded UAL to a "buy" and issued surprisingly upbeat reports on the company. Engel - the first to move in mid-May - set a nine-month share price target of $20, while Baker initiated UAL coverage for JP Morgan with a two-year price target of $24.

The analysts cited UAL's strong liquidity position, substantial unencumbered assets, attractive route network, gradually recovering market share, vastly improved operating performance and recent success in clinching the final open labour contract.

Interestingly, the analysts also took the view that United's losses or recovery prospects were not materially worse than American's. Baker pointed out that, in absolute terms, United's net losses were actually lower than American's in the past two quarters, yet since September 11 UAL's shares have seen a 62% correction, compared to AMR's 31%. According to his prediction, the largest major airline was likely to lose only $130m less than United in 2003.

While this may simply imply that American is now also on the endangered carriers list (as the industry recovery trends have slowed), what the analysts are saying is that United's recovery prospects no longer seem more uncertain than those of the rest of the industry. Based on the share prices, Engel subsequently recommended that investors switch their holdings from AMR to UAL.

Equally controversially, Baker argued that United needs labour concessions to thrive but not necessarily to survive. He envisages a net profit of $2-3 per share in 2004 even without any help from labour.

Of course, UAL's chairman and CEO Jack Creighton told shareholders at the company's annual general meeting that UAL was in a "fight for its future" and had a "long way to go in our climb back to financial stability". As *Aviation Strategy* went to press, the airline was still trying to ascertain what, if any, financial concessions its employees and business partners might be willing to make, so that it could decide whether or not to apply for federal loan guarantees (the deadline for submitting applications is June 28).

Why the investor concerns?

One thing that differentiates United from most of its competitors is that its financial problems began long before September 11. The troubles started with the ending of the ESOP in 2000, when wages snapped back to the pre-1994 levels and all of the labour contracts became amendable (employees originally secured 55% of UAL's stock in exchange for a 15% wage cut). United subsequently became the first major airline to grant hefty pay increases to its pilots which, in combination with the wage snap-backs, led to a sharp hike in labour costs.

As a result of unprecedented cost pres-

sures, UAL posted a $124m loss for the fourth quarter of 2000 and another $604m loss for the first half of last year. Even before the terrorist attacks, the company was headed for a $1bn net loss in 2001.

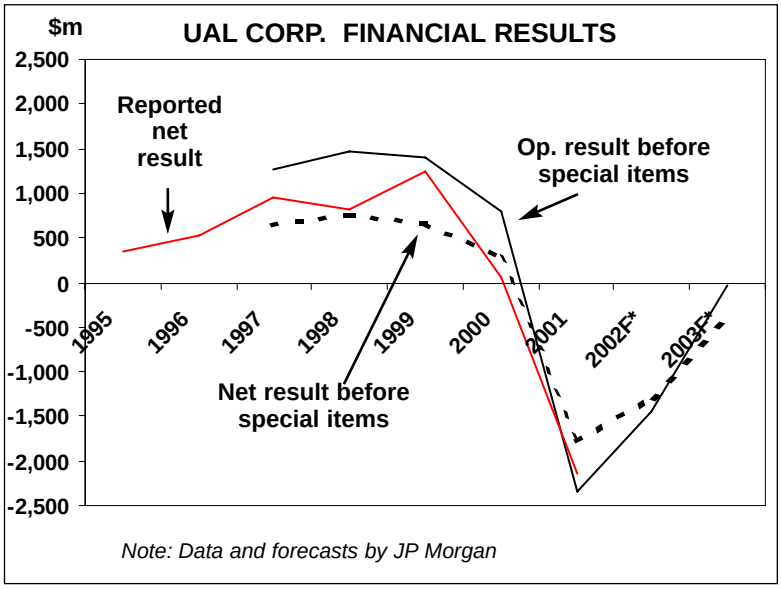
As things turned out, UAL reported a net loss of $2.1bn (or $1.8bn before special items) for 2001 - the largest annual loss ever recorded by any airline - and a $510m net loss for the first quarter of 2002. The latest pretax loss margin of 23% before special items was the industry's second worst (after US Airways).

While United has implemented impressive cost cuts since September 11, its revenue decline has been the industry's sharpest primarily because of its high business traffic content.

United was also plagued by labour strife over the winter, because all of its IAM-represented workers were still without new contracts and at 1994 wage levels. The airline averted a mechanics' strike at year-end only because of the intervention of a Presidential Emergency Board. A rescheduled strike was averted in early March when the mechanics ratified a new five-year contract that will make them the highest paid in the industry.

Another strike threat was averted in late April when a tentative four-year contract was reached with IAM-represented public contact, ramp service and related employees. Its ratification in mid-May was an important milestone, because it was United's last remaining open contract. Completing that process enabled the airline to finally focus properly on concessions talks with all of its unions.

However, that piece of good news went unnoticed by the market. Instead, attention was diverted to an unusually stormy AGM, during which UAL's leadership was subjected to a barrage of criticism from angry shareholders and employees. The shareholders passed three proposals against the board's recommendation, namely linking executive pay to the company's recovery, separating the positions of chairman and CEO, and requiring shareholder approval for any airline acquisitions. These were dubbed as "wake-up call" resolutions, but the debacle only really served to reinforce the perception of a dysfunctional organisation.



Note: Data and forecasts by JP Morgan

Among other things, United's employees are still angry about two costly projects that the previous leadership embarked on in 2001 - the proposed $4.3bn acquisition of US Airways and the launch of Avolar business jet subsidiary. The merger proposal stumbled on antitrust issues and was terminated in July 2001, while Avolar's closure was announced in March 2002. The business jet venture seemed to be a bright idea, but it was not able to attract outside investors - and it was just too much of a distraction for UAL.

Also, there continues to be uncertainty about the CEO's office. The previous CEO, James Goodwin, was forced to resign in October 2001 after losing the confidence of employees. The current CEO Jack Creighton, who stepped in on an interim basis after being a board member since 1998, recently announced his intention to step down as soon as a successor is found. Creighton is generally considered to have done a reasonable job under difficult circumstances, but he is 69 and wants to retire.

While Creighton is determined to ensure a smooth transition and is known to be keen to complete the concessions talks before his retirement, there is real concern about United's ability to attract strong outside candidates. Given the unusual governance structure and the challenges involved, there

may not be much interest in what is regarded as the toughest US airline CEO's job. One of the top candidates, former Continental president Greg Brenneman, has to be out of the running now that he has accepted the position of CEO of PricewaterhouseCoopers Consulting (or Monday, as it has bizarrely rebranded itself).

Investor confidence has not been helped by the fact that United has released little detail of its financial recovery plan. The airline has been understandably hesitant to disclose the amount of concessions sought, for fear of jeopardising dealings with the unions, and it first needed to complete all the contract talks - a process that Creighton has conceded took much longer than he had anticipated. However, in comparison, US Airways did release its overall cost savings and revenue enhancement targets, which helped reassure investors that there was a plan.

Strong liquidity

Unlike US Airways, however, United has little risk of running into a liquidity crisis in the foreseeable future, and its financial flexibility remains good. The company had a healthy $2.9bn cash balance at the end of March and, significantly, $3.5bn of unencumbered aircraft and engines.

Despite its heavy financial losses, United has succeeded in raising some $2.5bn through secured long-term financings over the past 12 months. First, it raised $1.5bn in a EETC transaction in August 2001 - luckily three weeks before September 11. This and another $300m long-term debt financing last summer meant that the airline entered the industry crisis with strong liquidity.

The public EETC offering was several times oversubscribed and incorporated a record-low effective interest rate of 6.59%. At that time investors already knew that United was headed for a $1bn loss in 2001, but it evidently did not matter because the Section 1110 repossession provisions and liquidity facilities in EETCs provide what are generally regarded as adequate protections to investors.

Second, United closed a $775m long-term debt financing, albeit in the private market, in late January - the same week that it reported the 2001 losses. That transaction refinanced a large obligation on existing aircraft that had come due and raised $250m in cash. Of course, United has also collected about $650m in government cash grants and $600m in federal income tax refunds since September 11.

The airline's contractual cash obligations add up to a substantial $4.4bn in 2002, though that includes just $1.2bn of long-term debt maturities. The most significant obligations for the remainder of the year are $300m of bank revolver debt coming due in the autumn and a final $500m payment on 1997 EETCs in December. This year's capital spending was earlier slashed by 50% to $1.2bn, but the cash requirements are just $400m because all of the 24 new aircraft taken in 2002 have financing in place. The rest of this year's cash obligations consist of operating lease payments ($1.6bn) and capital lease obligations ($413m). As a result of order deferrals, there will be no new aircraft deliveries in 2003.

On the basis of its market share, United could apply for up to about $2bn of federal loan guarantees, though something closer to $1bn might be more appropriate. The airline's top executives have suggested that the June 28 deadline could be helpful in putting pressure on the unions and business partners to grant concessions but, realistically, it may not make any difference.

The loan guarantee guidelines require applicants to be carriers for whom "credit is not otherwise reasonably available". Even if United gets its unions and partners to cooperate, it is hard to see how it could convince the ATSB of need because of its strong cash position and likely ability to borrow through normal commercial channels.

The airline is expected to refinance the bulk of the debt obligations due in the remainder of this year. While it has continued to deny that any specific transactions are in the works, JP Morgan's Baker suggested in late May that it was close to refinancing nearly $900m of obligations. The real issue for United may be a growing debt burden, rather than ability to borrow.

Quest for labour concessions

United's unit labour costs have been running 5-10% higher than the industry average since 2000, when the new pilot contract was signed, and this year's two new IAM contracts have added to the pressures. Baker calculated that this puts United at a $450-600m deficit to the industry average labour CASM. Clearly, to return to better than marginal profitability from 2004 onwards, the airline needs to reduce labour costs.

United is believed to be seeking several billion dollars of labour concessions, spread over several years. Formal meetings with union leaders began in late April. As a major breakthrough, the pilots agreed to talks on the subject. The IAM-represented workers will also be attending the meetings, because their new contracts require them to do so.

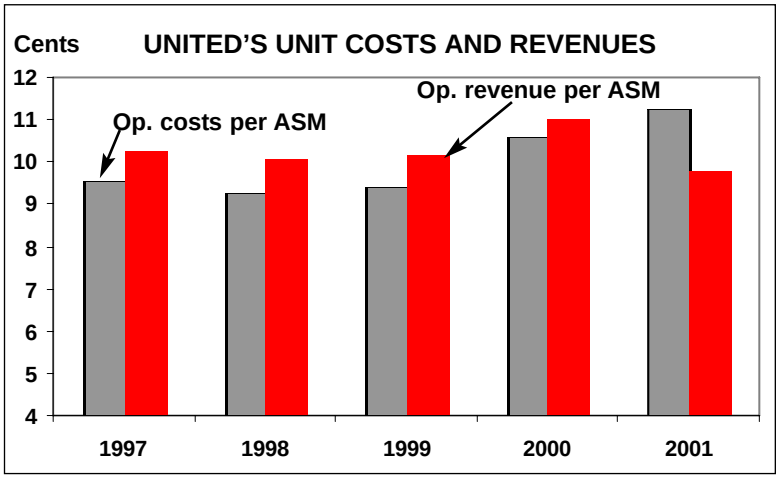
However, the flight attendants have refused to participate in any talks about wage concessions. They are in a unique situation in that, unlike the other key unions at United that have industry-leading wages, their pay is pegged to the average of four other top airlines.

Also, the pilots have made clear that they are willing to help out only if all other employee groups join in and if the plan provides them "real financial returns".

So the prospects for securing concessions do not look promising at present. Some analysts suggested earlier that a Chapter 11 visit might be the only way for United to get meaningful labour concessions, but that seems a very unlikely scenario in light of the company's strong liquidity position.

As a result, United is likely to continue to post losses longer than most of its competitors. The current First Call consensus estimate is a net loss before special items of about $1.2bn in 2002, followed by a loss of $462m in 2003.

On the positive side, the airline's prospects have improved gradually in recent months, both in absolute terms and relative to the rest of the industry. Most significantly, it has steadily narrowed (and by now possibly even closed) the unit revenue (RASM) gap with competitors, after trailing the industry



average by five points in the fourth quarter of last year.

The positive RASM trend may be largely due to vastly improved operational performance. United achieved all-time records in flight completion and on-time performance in May. The airline said that it was meeting all the new security checks with line waits almost back to normal. This is particularly important as surveys have shown that long check-in lines and airport hassles in general are discouraging potential business travellers more than fears about terrorism.

In the absence of labour cost savings, United has continued to press on with cost reductions in other areas. Most recently, it has closed 23 more ticket offices in and west of Denver, after already closing 35 offices across the country since September 11.

At the same time, however, United is adding flights in key business markets and hubs, particularly Chicago, which is seeing a 15% schedule expansion this month. It has an unbeatable route network and is determined not to lose market share to competitors, even though its system capacity will still be 16-17% below the year-earlier level in the current quarter.

United is taking a close look at whether the pre-September 11 business models still work in this new environment, particularly in view of a potential permanent reduction in business travel. A major effort is under way, under president Rono Dutta, to study possible changes in strategy, including seating configuration, legroom and possibly eliminating First or Economy Plus classes.

By Heini Nuutinen

McKinsey on LCCs: a European gold rush?

In this article consultants from McKinsey challenge the "conventional wisdom" surrounding European low-cost carriers.

"The potential for low-cost carrier growth in Europe is enormous"

The analysis usually used to explain why so much low-cost carrier growth can be expected in Europe is a comparison between low-cost penetration in the US (25-30%) and in Europe (10%). The problem is that this neglects the fact that Europe has a very large, low-price charter airline industry, which currently accounts for 35% of intra-European air transport. From this perspective, low-cost penetration is already higher in Europe than in the US.

Given the fleet orders already placed, there is no doubt that the European scheduled low-cost market will continue to see high growth, which should give this niche market a 15% share of the overall intra-European air travel market in 2004/5. Together with the charter market, the total European low-cost segment will then have achieved 45-50% of intra-European air travel. However, there are several open questions concerning future growth.

• **What will be the impact of competition between low-cost carriers?** Competition between low-cost carriers in Europe is still fairly limited: there are now 17 routes (compared to 8 in 1999) where two low-cost carriers compete, against 111 destinations with only one low-cost carrier. While a low-cost entrant can count on a substantial traffic stimulation effect, creating new demand among the most price-sensitive segments, a second low-cost entrant is not likely to generate further additional traffic. Inevitably, this will result in competition between low-cost carriers for market share in their segment (normally not good news for profitability). Consolidation among low-cost carriers will limit this effect, especially if the remaining players have slightly different strategies (lowest cost and market creation in the case of Ryanair, low cost and alternative to traditional carriers in the case of Easyjet).

• **How attractive are large domestic markets?** The domestic markets in France, Italy and Germany may not represent the ideal platform for low-cost entrants. Flag carriers' domestic unit costs are on average 25% lower than their international unit costs, due to lower product specifications (higher seat density, reduced in-flight service, one class only, higher direct sales penetration, etc.) (Exhibit 1- see below). In the case of Air France and Alitalia, the unit cost difference can reach 35%. This leaves a unit cost differential of 20-30% for most low-cost carriers, which might not be enough to undercut current prices enough to generate additional substantial traffic.

So new entrants are going to be getting into markets that are already quite efficient, with yields below international levels (on the French trunk routes, the lowest Y-class fare is € 70 round trip). On routes with high-speed trains it will be even tougher for low-cost carriers to gain a foothold. Only Ryanair seems to have the cost structure to successfully enter large domestic markets, with an average unit cost differential of 50% (which is the unit cost difference enjoyed by Southwest against US major carriers in US domestic markets), but that would require operating from secondary airports, which would not appeal to business passengers.

• **Are there enough non-served markets with latent demand?** Low-cost carriers are increasingly entering non-served markets: the share of routes where a low-cost carrier is the only airline has increased from 22% of all operated routes in 1999 to 33% in 2002. The incumbents' current networks are largely based on network feeding logic and need a minimum share of business traffic. Point-to-point leisure markets with potentially high latent demand have obviously been neglected and are currently being developed by low-cost carriers. However, some schedule changes suggest that it is becoming increasingly difficult to select sustainable routes: as an example, Buzz withdrew from Oslo, Milan and Vienna, Go from Zurich, Madrid, Lisbon, and Ryanair from Rimini and Lubeck.

All in all, low-cost carriers withdrew from 31 routes over the past four years, representing a surprisingly high 24% of total 130 routes (in 2002), a sign that it is getting increasingly difficult to find viable routes out from the existing bases.

•**How competitive are low-cost carriers against charter carriers for pure leisure destinations?**

By Urs Binggeli, Practice Specialist, and Lucio Pompeo, Associate Principal, at McKinsey Travel & Logistics Practice
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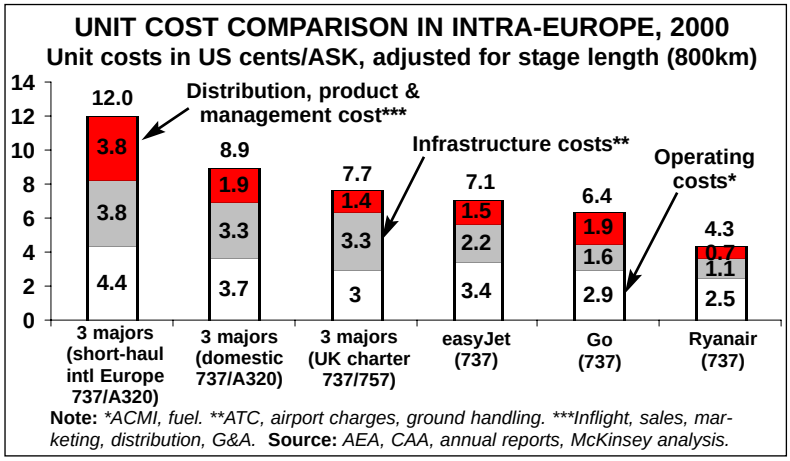
There are significant product similarities between the charter and the low-cost models, and charter airlines are increasingly offering seat-only sales for individual travellers, especially during the mid and low seasons. However, most charter capacity is marketed through integrated tour operating companies and forms an integral part of a package deal with the traveller.

So a significant part of this leisure market, at least to the traditional leisure destinations, cannot be captured by the low-cost airlines. With a high share of leisure passengers booking a package tour, this portion remains the domain of the large travel groups (in addition, the key players control key hotel/resort assets in privileged beach locations that cannot be booked anywhere else). Furthermore, leisure groups have already consolidated heavily and integrated vertically: the top four leisure groups control two-thirds of the European tour operating market revenue, and 63% of the total charter capacity in Europe is controlled by six leisure groups (TUI, MyTravel, Thomas Cook, REWE, Nouvelles Frontieres, First Choice).

• How will traditional carriers' international products develop over time? The unit cost gap between the international and domestic products of traditional carriers shows what "slim down" improvements can be made on international routes. The lower the unit cost differential between incumbents and low-cost carriers, the lower the growth opportunity for the latter. Thus, much of the room for further low-cost growth is in the hands of traditional carriers. Increased seat density (possibly one class of service), increased aircraft utilisation, reduced fleet complexity, reduced crew complement, and in-flight/ground service, and more direct sales: this is the recipe for 20-30% lower unit costs on international flights, depending on the starting point (as an example, Easyjet and Go have 35% more seats in their 737-300s than KLM). The announcement by BA of a lower-cost short-haul offering from Gatwick and SAS's decision to switch to one class of service on all intra-Scandinavian markets are steps in this direction.

"Low-cost carriers have a superior business model, financially highly attractive and robust"

The low-cost business model is fundamentally the same as any traditional carrier's: capacity is bought or leased medium to long-term, a schedule is put together, and revenue (the passengers and the average price they pay) must exceed costs. Low-cost carriers have to manage capacity, costs, load factors, and yields to be successful, just like any other scheduled airline. As an example, wet-lease operators, charter airlines and fractionally-owned business jets do have a different business model (as their revenue streams have different mechanics, with product bundling, etc.), but not low-cost carriers. What is different is their strategy and value proposition: the "how" and "where" they compete.



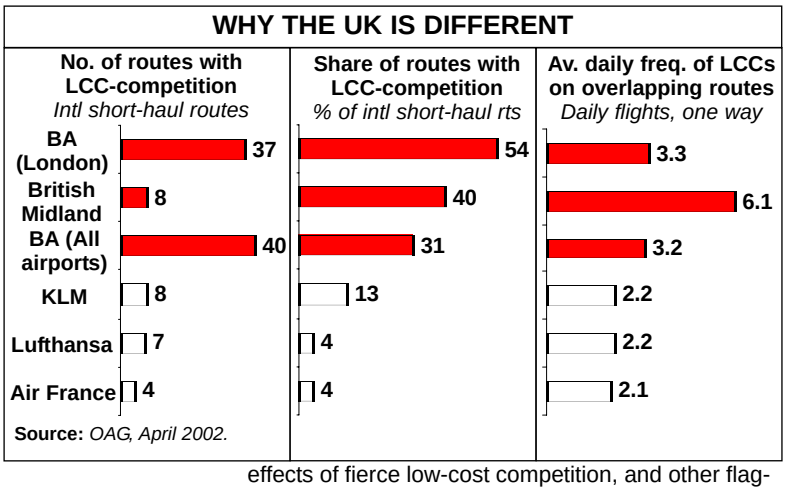
Note: **ACMI, fuel. **ATC, airport charges, ground handling. ***Inflight, sales, marketing, distribution, G&A.* **Source:** *AEA, CAA, annual reports, McKinsey analysis.*

It should be pointed out that the low-cost airline segment has destroyed value in past years: with the exception of Southwest, Ryanair and easyJet, all other players in the low-cost segment have accumulated losses of almost $1bn in the period from 1996 to 2001 in the US, (with many bankruptcies, like ValuJet, Carnival Air, Kiwi, PanAm II, Western Pacific, Midway, and Sun Country), and losses of almost $300m in the period from 1996 to 2001 in Europe (with Colorair, Debonair and AB Airlines going bankrupt).

There is obviously a start-up effect to be considered, but this gap between the performance of the leaders and the others might also suggest that there is only space for a handful of players in the low-cost market, some kind of "winner takes all" dynamics. Even for the leaders it may be tough to deliver against the expectations of the capital markets: Ryanair's share price implies a high long-term growth rate of 12% at sustained high operating margins (24% in average over the past five years). If these expectations are not met at some point in time, the share price is likely to plummet.

"Incumbent carriers will suffer heavily and eventually withdraw from markets with strong low-cost presence"

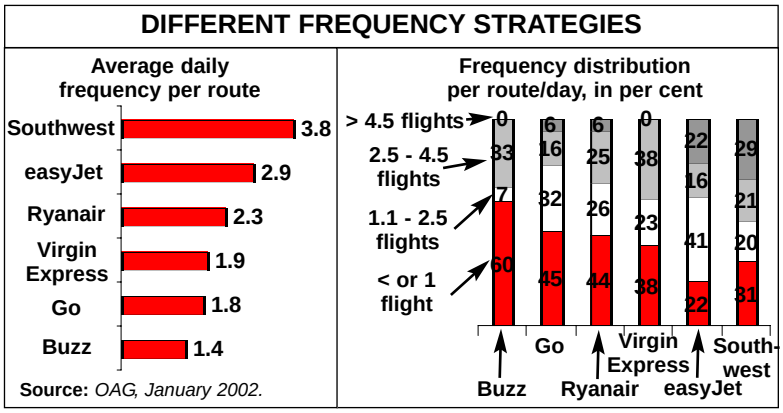
BA's short-haul network is suffering from the



effects of fierce low-cost competition, and other flag-carriers are likely to face similar problems in the near future. Is the short-haul market going to be dominated by low-cost carriers in Europe? The available evidence suggests that the answer is "No, but...".

Low-cost carriers lack a global network and flexible booking (e.g., re-booking to another airline if you miss the flight); in most of their markets they fly one to two frequencies per day, often at unattractive times of day, and they fly into secondary airports that are sometimes as much as 100 km away from city centres (like Frankfurt-Hahn). This makes them not particularly attractive to business travellers, especially frequent, global travellers.

This is one of the reasons why many traditional carriers on the Continent see little change in their route economics after a low-cost entry. Revenue and load factors might even go up. The main reason is that traditional carriers and low-cost carriers seem to be complementary: the low-cost carrier stimulates new traffic, and captures most of it, but there is little cannibalisation of the incumbent's traditional customer base. This is also confirmed by the fact that only on a handful of occasions has the incumbent withdrawn from a particular route, and often the incumbent concerned was a secondary or non-hub carrier (Alitalia on London-Venice, British Midland on London-Frankfurt, Air France on Nice-Geneva, and Braathens on London-Oslo).



The situation can change if three or more flights a day to key airports at attractive times can be offered, as this clearly represents an attractive product for business travellers who frequently fly such routes. Some London-based low-cost carriers that fly into major European airports claim a share of 30-50% of business passengers on their flights, and this is the reason why the US majors and BA are having much more trouble than other traditional carriers, as many of their markets are large enough to allow low-cost carriers to operate a critical level of frequencies (graph left). In Europe, the UK is and will remain the largest low-cost market by a wide margin, since it encompasses well-balanced business and leisure traffic, has no significant seasonality, traffic flows in both directions and a metropolitan area with five airports and is simply the largest and most concentrated air travel market in Europe.

A comparison of the strategies of the five leading low-cost airlines in Europe, and the extent to which they might pose a real threat to traditional airlines, reveals significant differences in market selection and the number of frequencies offered (below left). While Easyjet operates only 20% of all routes with one flight a day or less, and averages 3 flights per route per day, Buzz operates 60% of all routes with one daily flight or less, including weekend flights to the seasonal destinations, leaving the total average frequency at around one flight per day. The cumulative share of low-cost flights with at least three daily flights per route is around 30%, and highly concentrated on UK routes, so at this point it does not threaten the business travel share of continental incumbents. There are also different route network/airport strategies: Easyjet has higher frequencies and flies into main airports and is therefore more likely to take share from incumbents than Ryanair, which focuses on thin markets to and from secondary airports.

In summary, there is no doubt that Europe provides scope for further growth in the low-cost sector, but there are also structural limits, and these limits may be reached sooner than in the US. Europe has a less favourable demand structure, with less VFR (few families dispersed across Europe); there is still a large proportion of "national businesses"; there is a well-developed charter industry; traditional carriers are relatively efficient in large domestic markets; and there is no year-around vacation area (except possibly the Canary Islands).

NARROWBODY LEASE RATES (US $000s per month)

	NEW	5 years old	10 years old	20 years old		NEW	5 years old	10 years old
A318	241				**717-200**	181		
A319 (IGW)	260	221			**727-200Adv**			
A320-200 (IGW)	264	234	209		**737-200Adv**			
A321-200 (LGW)	346	291			**737-300 (LGW)**		178	156
					737-400 (LGW)		176	157
					737-500		154	140
					737-600	206		
					737-700	251		
					737-800	305		
					737-900	310		
					757-200	263	260	247
					757-200ER	297	279	253
					757-300	312		
					MD-82		152	139
					MD-83		159	140
					MD-88		162	143
					MD-90		170	

WIDEBODY LEASE RATES (US $000s per month)

	NEW	5 years old	10 years old	20 years old		NEW	5 years old	10 years old
A300B4-200				115	**747-200B**			
A300B4-600			261		**747-400**	870	748	630
A300B4-600R (HGW)		360	318		**767-200**			223
A310-300 (IGW)		280	246		**767-300**		360	310
A330-200	614				**767-300ER (LGW)**	511	451	390
A330-300 (IGW)	638				**767-400**	577		
A340-200		527			**777-200**	691	591	
A340-300 (LGW)	707	605			**777-200ER**	779	683	
A340-300ER	745	624			**777-300**	844		
A340-500	839							
A340-600	904							
					DC-10-30			
Source: AVAC					**DC-10-40**			
Notes: As assessed at end-April					**MD-11P**		529	435
2002, mid-range values for all types								

	Group revenue US$m	Group costs US$m	Group op. profit US$m	Group net profit US$m	Operating margin	Net margin	Total ASK m	Total RPK m	Load factor	Total pax. 000s	Group employees
Alaska											
Year 2000	**2,177**	**2,198**	**-20.6**	**-70**	**-0.9%**	**-3.2%**	**27,834**	**19,277**	**69.3%**	**13,512**	**9,940**
Jan-Mar 01	516	565	-49	-33	-9.5%	-6.4%	7,126	4,659	65.4%	3,198	10,677
Apr-Jun 01	579	568	11.3	4.7	2.0%	0.8%	7,528	5,289	70.3%	3,692	10,966
Jul-Sep 01	583.4	570.6	12.8	25.3	2.2%	4.3%	7,536	5,351	71.0%	3,741	10,826
Oct-Dec 01	462.2	558.6	-96.4	-36.4	-20.9%	-7.9%	6,622	4389	66.4%	3,025	10,500
Year 2001	**2,141**	**2,263**	**-121.8**	**-39.5**	**-5.7%**	**-1.8%**	**28,837**	**19,712**	**68.4%**	**13,668**	**10,742**
Jan-Mar 02	497	548	-51.4	-34.4	-10.3%	-6.9%	7,189	4,791	66.6%	3,193	
American											
Year 2000	**19,703**	**18,322**	**1,381**	**813**	**7.0%**	**4.1%**	**258,951**	**187,507**	**72.4%**	**86,239**	**99,610**
Jan-Mar 01	4,760	4,743	17	-43	0.4%	-0.9%	62,726	42,591	67.9%	19,676	108,900
Apr-Jun 01	4,838	5,586	-748	-494	-15.5%	-10.2%	66,007	47,484	71.9%	21,488	128,300
Jul-Sep 01	4,816	5,374	-558	-414	-11.6%	-8.6%	62,676	45,315	72.3%	20,123	127,200
Oct-Dec 01	3,804	4,952	-1148	-798	-30.2%	-21.0%	54,907	35,580	64.8%		109,300
Year 2001	**18,963**	**20,823**	**-1,860**	**-1,762**	**-9.8%**	**-9.3%**	**161,030**	**176,143**	**69.4%**	**61,287**	**102,093**
Jan-Mar 02	4,136	4,865	-729	-575	-17.6%	-13.9%	64,515	44,766			
America West											
Year 2000	**2,344**	**2,357**	**-12,637**	**7,679**	**-539.1%**	**327.6%**	**43,580**	**30,741**	**70.5%**	**19,950**	**13,869**
Jan-Mar 01	587	612	-25	-13	-4.3%	-2.2%	11,355	7,858	69.2%	5,104	14,204
Apr-Jun 01	587	641	-54	-42	-9.2%	-7.2%	11,098	8,367	75.5%	5,294	13,971
Jul-Sep 01	491	590	-99	-32	-20.2%	-6.5%	10,774	7,973	74.0%	5,034	13,633
Oct-Dec 01	400	538	-138	-61	-34.5%	-15.3%	9,477	6,492	68.5%	4,144	
Year 2001	**2,066**	**2,380**	**-316**	**-148**	**-15.3%**	**-7.2%**	**42,709**	**30,696**	**71.9%**	**19,576**	**13,827**
Jan-Mar 02	460	583	-123	-358	-26.7%	-77.8%	9,780	6,859	70.1%	4,303	
Continental											
Year 2000	**9,899**	**9,170**	**729**	**342**	**7.4%**	**3.5%**	**134,718**	**100,283**	**74.4%**	**45,139**	**45,072**
Jan-Mar 01	2,451	2,375	76	9	3.1%	0.4%	34,534	24,323	70.4%	11,220	
Apr-Jun 01	2,556	2,419	137	42	5.4%	1.6%	36,713	27,443	74.8%	12,256	
Jul-Sep 01	2,223	2,136	87	3	3.9%	0.1%	35,395	26,086	73.7%	11,254	
Oct-Dec 01	1,738	1,895	-157	-149	-9.0%	-8.6%	29,321	20,554	70.1%	9,508	
Year 2001	**8,969**	**9,119**	**-150**	**-95**	**-1.7%**	**-1.1%**	**135,962**	**98,393**	**72.4%**	**44,238**	**45,166**
Jan-Mar 02	1,993	2,180	-187	-166	-9.4%	-8.3%	30,498	22,582	74.0%	10,057	
Delta											
Year 2000	**16,741**	**15,104**	**1,637**	**828**	**9.8%**	**4.9%**	**236,665**	**173,453**	**73.1%**	**105,591**	**79,584**
Jan-Mar 01	3,842	3,957	-115	-133	-3.0%	-3.5%	60,714	40,691	67.0%	26,932	
Apr-Jun 01	3,776	3,890	-114	-90	-3.0%	-2.4%	61,538	44,784	72.8%	28,130	82,500
Jul-Sep 01	3,398	3,649	-251	-259	-7.4%	-7.6%	60,719	43,260	71.3%	26,441	83,500
Oct-Dec 01	2,863	3,457	-594	-734	-20.7%	-25.6%	51,460	32,798	63.7%		
Year 2001	**13,879**	**15,124**	**-1,245**	**-1,216**	**-9.0%**	**-8.8%**	**237,914**	**163,693**	**68.8%**	**104,943**	77,654
Jan-Mar 02	3,103	3,538	-435	-397	-14.0%	-12.8%	54,298	37,384	68.9%	24,618	
Northwest											
Year 2000	**11,240**	**10,671**	**569**	**256**	**5.1%**	**2.3%**	**171,789**	**127,298**	**76.6%**	**56,836**	**53,131**
Jan-Mar 01	2,611	2,847	-236	-171	-9.0%	-6.5%	40,212	29,395	73.1%	13,364	
Apr-Jun 01	2,715	2,751	-36	-55	-1.3%	-2.0%	42,217	32,887	77.9%		
Jul-Sep 01	2,594	2,749	-155	19	-6.0%	0.7%	41,871	31,753	75.8%		
Oct-Dec 01	1,985	2,426	-441	-216	-22.2%	-10.9%	33,985	23,620	69.5%		
Year 2001	**9,905**	**10,773**	**-868**	**-423**	**-8.8%**	**-4.3%**	**158,284**	**117,682**	**74.3%**	**54,056**	**50,309**
Jan-Mar 02	2,180	2,376	-196	-171	-9.0%	-7.8%	35,022	26,611	76.0%	11,899	
Southwest											
Year 2000	**5,650**	**4,628**	**1,021**	**603**	**18.1%**	**10.7%**	**96,463**	**67,961**	**70.5%**	**72,568**	**28,752**
Jan-Mar 01	1,429	1,218	210	121	14.7%	8.5%	25,512	17,170	67.3%	15,716	29,563
Apr-Jun 01	1,554	1,263	291	176	18.7%	11.3%	26,430	18,970	71.8%	17,527	30,369
Jul-Sep 01	1,335	1,242	93	151	7.0%	11.3%	26,217	18,121	69.1%	16,208	30,946
Oct-Dec 01	1,238	1,201	37	64	3.0%	5.2%	26,888	17,343	64.5%	14,996	31,580
Year 2001	**5,555**	**4,924**	**631**	**511**	**11.4%**	**9.2%**	**105,079**	**71,604**	**68.1%**	**64,447**	**31,014**
Jan-Mar 02	1,257	1,207	49	21	3.9%	1.7%	26,586	16,726	62.9%	14,463	
United											
Year 2000	**19,351**	**18,685**	**666**	**96**	**3.4%**	**0.5%**	**282,276**	**204,188**	**72.3%**	**83,853**	**100,976**
Jan-Mar 01	4,424	4,815	-391	-313	-8.8%	-7.1%	67,741	46,268	68.3%	18,860	98,600
Apr-Jun 01	4,658	5,011	-353	-292	-7.6%	-6.3%	71,928	52,652	73.2%	21,331	98,000
Jul-Sep 01	4,107	4,819	-712	-542	-17.3%	-13.2%	69,233	50,610	73.1%	19,815	95,900
Oct-Dec 01	2,949	3,835	-886	-308	-30.0%	-10.4%	56,421	38,140	67.6%	15,450	79,300
Year 2001	**16,138**	**18,481**	**-2,343**	**-2,145**	**-14.5%**	**-13.3%**	**265,291**	**187,701**	**70.8%**	**75,457**	**96,142**
Jan-Mar 02	3,288	3,999	-711	-510	-21.6%	-15.5%	55,056	39,761	72.2%	15,361	
US Airways											
Year 2000	**9,268**	**9,322**	**-54**	**-269**	**-0.6%**	**-2.9%**	**106,999**	**75,358**	**70.4%**	**59,772**	**45,228**
Jan-Mar 01	2,241	2,469	-228	-171	-10.2%	-7.6%	27,752	18,372	66.2%	14,193	44,077
Apr-Jun 01	2,493	2,473	20	-24	0.8%	-1.0%	29,395	21,693	73.8%	16,582	44,673
Jul-Sep 01	1,989	2,739	-750	-766	-37.7%	-38.5%	27,609	19,619	71.1%	14,188	42,723
Oct-Dec 01	1,554	2,101	-547	-906	-35.2%	-58.3%	22,640	14,308	63.2%	11,151	35,232
Year 2001	**8,288**	**9,355**	**-1,067**	**-1,969**	**-12.9%**	**-23.8%**	**107,347**	**73,944**	**68.9%**	**56,114**	**43,846**
Jan-Mar 02	1,709	2,079	-370	-269	-21.7%	-15.7%	22,495	15,419	68.5%	11,825	

Note: Annual figures may not add up to sum of interim results due to adjustments and consolidation. 1 ASM = 1.6093 ASK.

		Group revenue US$m	Group costs US$m	Group op. profit US$m	Group net profit US$m	Operating margin	Net margin	Total ASK m	Total RPK m	Load factor	Total pax. 000s	Group employees
Air France												
	Year 2000/01	**11,148**	**10,746**	**402**	**382**	**3.6%**	**3.4%**	**119,562**	**93,355**	**78.1%**	**42,400**	**52,310**
	Apr-Jun 01	3,113	2,887	226		7.3%		32,266	25,515	79.0%		
	Jul-Sep 01	2,959	2,895	64		2.2%		31,738	25,481	79.2%		
	Oct-Dec 01	2,682	2,785	-103	-121	-3.8%	-4.5%	30,070	20,907	70.6%		
	Jan-Mar 02	2,667	2,647	20	1	0.7%	0.0%	29,703	22,925	77.2%		
	Year 2001/02	**11,234**	**11,017**	**217**	**141**	**1.9%**	**1.3%**	**123,777**	**94,828**	**76.6%**		
Alitalia												
	Jul-Dec 00	2,553	2,753	-200	-209	-7.8%	-8.2%	32,735	24,534	74.9%		
	Year 2000	**4,968**	**5,210**	**-242**	**-236**	**-4.9%**	**-4.8%**	**57,483**	**41,433**	**72.1%**	**26,700**	**23,478**
	Jan-Jun 01	2,348	2,504	-156	-228	-6.6%	-9.7%	26,437	18,953	71.7%	12,565	24,023
	Jul-Dec 01							24,944	17,423	69.8%	12,204	
	Year 2001	**4,745**	**5,007**	**-262**	**-818**	-5.5%	-17.2%	**51,392**	**36,391**	**70.8%**	**24,737**	**23,667**
BA												
	Jan-Mar 01	3,048	3,136	-88	-111	-2.9%	-3.6%	40,018	26,800	67.0%	9,721	62,425
	Year 2000/01	**13,700**	**13,139**	**561**	**189**	**4.1%**	**1.4%**	**162,824**	**116,674**	**71.7%**	**44,462**	**62,844**
	Apr-Jun 01	3,277	3,206	71	37	2.2%	1.1%	40,980	28,646	69.9%	11,293	58,989
	Jul-Sep 01	3,219	3,116	103	33	3.2%	1.0%	39,629	29,297	73.9%	11,306	59,902
	Oct-Dec 01	2,616	2,882	-266	-205	-10.2%	-7.8%	35,449	23,106	65.2%	8,574	55,758
	Jan-Mar 02	2,842	2,908	-66	-63	-2.3%	-2.2%	34,998	25,221	72.1%	8,831	
	Year 2001/02	**12,138**	**12,298**	**-160**	**-207**	**-1.3%**	**-1.7%**	**151,046**	**106,270**	**70.4%**	**40,004**	
Iberia												
	Year 2000	**4,136**	**4,075**	**61**	**188**	**1.5%**	**4.5%**	**54,120**	**40,049**	**73.8%**	**24,500**	**26,814**
	Year 2001	**4,240**	**4,236**	**4**	**45**	**0.1%**	**1.1%**		**41,297**	**70.8%**	**24,930**	
KLM												
	Jan-Mar 01	1,360	1,422	-62	-77	-4.6%	-5.7%	18,056	13,805	76.4%		26,538
	Year 2000/01	**6,319**	**6,068**	**251**	**70**	**4.0%**	**1.1%**	**75,222**	**60,047**	**79.8%**	**16,100**	**30,253**
	Apr-Jun 01	1,507	1,487	20	17	1.3%	1.1%	19,231	15,200	79.0%		27,211
	Jul-Sep 01	1,679	1,596	83	24	4.9%	1.4%	19,554	16,049	82.1%		28,911
	Oct-Dec 01	1,291	1,358	-67	-82	-5.2%	-6.4%	17,030	12,483	73.3%		27,738
	Jan-Mar 02	1,302	1,414	-112	-97	-8.6%	-7.5%	16,473	13,215	79.9%		
	Year 20001/02	**5,933**	**6,018**	**-85**	**-141**	**-1.4%**	**-2.4%**	**72,228**	**56,947**	**78.7%**		**33,265**
Lufthansa												
	Year 2000	**14,014**	**12,648**	**1,366**	**635**	**9.7%**	**4.5%**	**123,801**	**92,160**	**74.4%**	**47,000**	**69,523**
	Jan-Mar 01	3,222	3,202	20	-80	0.6%	-2.5%	30,223	21,232	70.3%	10,903	72,279
	Apr-Jun 01	4,119	4,045	74	41	1.8%	1.0%	30,658	22,930	74.8%	12,236	85,771
	Jul-Sep 01	4,188	4,027	161	96	3.8%	2.3%	32,454	24,546	75.6%	12,692	83,447
	Oct-Dec 01							28,293	18,854	67.4%	9,873	
	Year 2001	**14,966**	**14,948**	**18**	**-530**	**0.1%**	**-3.5%**	**126,400**	**90,389**	**71.5%**	**45,710**	**87,975**
	Jan-Mar 02	3,556	3,513	43	-165	1.2%	-4.6%	26,757		71.0%	9,700	
SAS												
	Year 2000	**5,185**	**4,853**	**332**	**233**	**6.4%**	**4.5%**	**33,782**	**22,647**	**67.0%**	**23,240**	**22,698**
	Jan-Mar 01	1,183	1,175	8	2	0.7%	0.1691%	8,558	5,286	61.8%	5,482	29,985
	Apr-Jun 01	1,345	1,329	16	18	1.2%	1.3%	9,144	6,227	68.1%	6,279	30,499
	Jul-Sep 01	1,199	1,220	-21	-20	-1.8%	-1.7%	9,629	6,498	67.5%	6,463	30,896
	Oct-Dec 01	1,208	1,316	-108	-108	-8.9%	-8.9%	8,509	5,097	59.9%	5,300	
	Year 2001	**4,984**	**5,093**	**-109**	**-103**	-2.2%	-2.1%	**35,521**	**22,956**	**64.6%**	**23,060**	**22,656**
	Jan-Mar 02	1,392	1,534	-142	-133	-10.2%	-9.6%	8,228	5,229	63.1%	5,091	
Ryanair												
	Jan-Mar 01	98	82	16		16.3%						
	Year 2000/01	**442**	**338**	**104**	**95**	**23.5%**	**21.5%**	**6,657**	**4,656**	**69.9%**	**7,000**	**1,476**
	Apr-Jun 01	132	107	25	21	18.9%	15.9%				2,400	
	Jul-Sep 01	168	105	63	58	37.5%	34.5%			84.0%	2,900	
	Oct-Dec 01	122	97	25	26	20.5%	21.3%			79.0%	2,700	
	Jan-Mar 02											
	Year 2001/02											
easyJet												
	Sep 00-Mar 01	210	225	-15	-15	-7.1%	-7.1%			80.6%	3,200	
	Apr-Sep 01	314	273	41	41	13.1%	13.1%				3,915	
	Year 2000/01	**513**	**455**	**58**	**54**	**11.3%**	**10.5%**	**7,003**	**5,903**	**83.0%**	**7,115**	**1,632**
	Sep-Mar 02	285	279	6	1	2.1%	0.4%			84.2%	4,300	

Note: Annual figures may not add up to sum of interim results due to adjustments and consolidation. 1 ASM = 1.6093 ASK.

	Group revenue US$m	Group costs US$m	Group op. profit US$m	Group net profit US$m	Operating margin	Net margin	Total ASK m	Total RPK m	Load factor	Total pax. 000s	Group employees
ANA											
Apr-Sep 00	5,228	4,793	495	359	9.5%	6.9%	47,586	31,753	66.7%	24,958	
Oct 00-Mar 01	5,376	5,186	190	-486	3.5%	-9.0%	46,278	29,168	63.0%	24,471	
Year 2000/01	**10,914**	**10,629**	**285**	**-137**	**2.6%**	**-1.3%**	**85,994**	**58,710**	**68.3%**	**43,700**	**14,303**
Apr-Sep 01	5,168	4,811	357	136	6.9%	2.6%	45,756	30,790	67.3%	25,876	
Oct 01-Mar 02											
Year 2001/02	**9,714**	**9,529**	**185**	**-76**	**1.9%**	**-0.8%**	**87,908**	**57,904**	**64.7%**	**49,306**	
Cathay Pacific											
Jan-Jun 00	2,070	1,765	305	285	14.7%	13.8%	29,839	22,588	75.7%	5,483	
Jul-Dec 00	2,356	1,983	373	382	15.8%	16.2%	32,070	24,587	76.7%	6,147	
Year 2000	**4,431**	**3,752**	**679**	**642**	**15.3%**	**14.5%**	**61,909**	**47,153**	**76.2%**	**11,860**	**14,293**
Jan-Jun 01	2,031	1,898	133	170	6.5%	8.4%	32,419	23,309	71.9%	5,936	
Jul-Dec 01							30,371	21,497	70.8%	5,378	
Year 2001	**3,902**	**3,795**	**107**	**84**	**2.7%**	**2.2%**	**62,790**	**44,792**	**71.3%**	**11,270**	**15,391**
JAL											
Year 1999/00	**14,442**	**14,039**	**403**	**177**	**2.8%**	**1.2%**	**119,971**	**88,479**	**70.2%**	**37,200**	**18,974**
Apr-Sep 00											
Oct 00-Mar 01							54,859	40,462	73.8%	16,724	
Year 2000/01	**13,740**	**13,106**	**634**	**331**	**4.6%**	**2.4%**	**129,435**	**95,264**	**73.6%**	**38,700**	**17,514**
Korean Air											
Year 2000	**4,916**	**4,896**	**20**	**-409**	**0.4%**	**-8.3%**	**55,824**	**40,606**	**72.7%**	**22,070**	**16,000**
Year 2001	**4,309**	**4,468**	**-159**	**-448**	**-3.7%**	**-10.4%**					
Jan - Mar 02	1,113	1,060	54	23	4.9%	2.1%	13,409	9,799	73.1%	5,399	
Malaysian											
Year 1999/00	**2,148**	**2,120**	**28**	**-68**	**1.3%**	**-3.2%**	**48,158**	**34,930**	**71.3%**	**15,370**	**21,687**
Year 2000/01	**2,357**	**2,178**	**179**	**-351**	**7.6%**	**-14.9%**	**52,329**	**39,142**	**74.8%**	**16,590**	**21,518**
Qantas											
Year 1999/00	**5,710**	**5,162**	**548**	**324**	**9.6%**	**5.7%**	**85,033**	**64,149**	**75.4%**	**20,490**	**29,217**
Jul-Dec 00	2,745	2,492	224	142	8.2%	5.2%	46,060	35,451	77.0%	11,175	31,382
Year 2000/01	**5,473**	**5,099**	**374**	**223**	**6.8%**	**4.1%**	**92,943**	**70,540**	**75.9%**	**22,150**	**31,632**
Jul-Dec 01	3,050	2,904	125	84	4.1%	2.8%	48,484	37,262	76.9%	13,335	32,361
Singapore											
Apr-Sep 00	2,864	2,438	426	668	14.9%	23.3%	46,478	36,137	77.8%	7,584	
Oct 00-Mar 01	2,635	2,317	318	209	12.1%	7.9%	46,171	34,982	75.8%	7,416	
Year 2000/01	**5,729**	**4,954**	**775**	**892**	**13.5%**	**15.6%**	**92,648**	**71,118**	**76.8%**	**15,000**	**14,254**
Apr-Sep 01	2,592	2,329	263	90	10.1%	3.5%	48,058	36,091	75.1%		
Oct 01-Mar 02											
Year 2001/02	**9,448**	**8,464**	**983**	**926**	**10.4%**	**9.8%**	**94,559**	**69,995**	**74.0%**	**14,765**	

Note: Figures may not add up due to rounding.

JET AND TURBOPROP ORDERS

	Date	Buyer	Order	Price	Delivery	Other information/engines
Airbus	June 10	Emirates	2 A330-200s		2003	RR Trent 772
ATR	-					
BAE Systems	-					
Boeing	June 4	Cathay Pacific	3 777			
Bombardier	June 4	Atlantic Coast A/L	25 CRJ 200ER		2003	CF34-3B1
		Undisclosed	1 CRJ 200			CF34-3B1
Embraer	-					
Fairchild	-					

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

EUROPEAN SCHEDULED TRAFFIC

	Intra-Europe			North Atlantic			Europe-Far East			Total long-haul			Total Int'l		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
1994	144.7	87.7	60.6	150.3	108.8	72.4	102.8	76.1	74	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	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
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
2000	208.2	132.8	63.8	229.9	179.4	78.1	137.8	108.0	78.3	508.9	396.5	77.9	755.0	555.2	73.5
2001	212.9	133.4	62.7	217.6	161.3	74.1	131.7	100.9	76.6	492.2	372.6	75.7	743.3	530.5	71.4
Apr-02	17.0	11.4	66.9	15.4	11.7	76.4	10.9	8.8	80.8	37.4	28.9	77.1	57.3	42.1	73.6
Ann. chng	-10.6%	-8.7%	1.4	-22.7%	-21.3%	1.4	-5.1%	0.6%	4.6	-13.5%	-12.4%	1.0	-12.8%	-11.7%	0.9
Jan-Apr 02	60.5	37.8	62.5	55.7	42.7	76.7	41.9	34.3	81.9	143.7	112.7	78.4	214.7	157.8	73.5
Ann. chng	-14.3%	-9.5%	3.3	-23.3%	-17.1%	5.7	-9.1%	-4.3%	4.1	-13.4%	-9.3%	3.6	-13.9%	-9.6%	3.5

Source: AEA

US MAJORS' SCHEDULED TRAFFIC

	Domestic			North Atlantic			Pacific			Latin America			Total Int'l		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
1994	886.9	575.6	64.9	136.1	99.5	73.0	107.3	78.2	72.9	56.8	35.2	62	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	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	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	960.8	678.8	70.7	150.5	117.8	78.3	112.7	82.5	73.2	83.5	52.4	62.8	346.7	252.7	72.9
1999	1,007.3	707.5	70.2	164.2	128.2	78.1	113.2	84.7	74.8	81.3	54.3	66.8	358.7	267.2	74.5
2000	1,033.5	740.1	71.6	178.9	141.4	79.0	127.7	97.7	76.5	83.0	57.6	69.4	380.9	289.9	76.1
2001	1,025.4	712.2	69.5	173.7	128.8	74.2	120.1	88.0	73.3	83.4	56.9	68.2	377.2	273.7	72.6
Apr-02	81.2	57.7	71.0	13.0	10.1	77.9	8.2	6.3	76.4	7.0	4.6	65.2	28.2	21.0	74.3
Ann. chng	-9.3%	-10.6%	-1.0	-14.7%	-15.8%	-1.0	-23.9%	-16.3%	6.9	-5.0%	-10.1%	-3.7	-15.5%	-14.8%	0.7
Jan-Apr 02	315.4	218.7	69.4	46.9	35.1	74.8	31.4	25.8	82.2	28.4	19.7	69.3	106.7	80.6	75.5
Ann. chng	-10.8%	-9.9%	0.8	-17.9%	-15.0%	2.6	-24.4%	-15.4%	8.8	-2.6%	-4.1%	-1.1	-16.5%	-12.7%	3.3

Note: US Majors = American, Alaska, Am. West, Continental, Delta, NWA, Southwest, United, US Airways. Source: Airlines, ATA

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 %
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	79.4	4.9	7.4	6.8	8.0	6.0	7.8
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	1,911	1,297	67.9	2,600	1,858	71.5	4,512	3,157	70.0	5.4	5.0	5.7	7.4	5.6	6.4
2000	2,005	1,392	69.4	2,745	1,969	71.8	4,750	3,361	70.8	4.9	7.2	5.6	6.0	5.3	6.5
***2001**							4,713	3,205	68.0					-1.1	-6.0
***2002**							4,737	3,270	69.0					0.5	2.0
***2003**							5,066	3,596	70.9					6.9	10.0
***2004**							5,320	3,830	72.0					5.0	6.5

Note: * = Forecast; ICAO traffic includes charters. **Source:** Airline Monitor, Oct 2001.

AIRCRAFT AVAILABLE FOR SALE OR LEASE

	Old narrowbodies	Old widebodies	Total old	New narrowbodies	New widebodies	Total new	Total
1997	162	104	266	54	13	67	333
1998	187	125	312	67	55	122	434
1999	243	134	377	101	53	154	531
2000	302	172	474	160	42	202	676
2001	368	188	556	291	101	392	948
2002-Mar	338	175	513	330	97	427	940

Source: *BACK* **Notes:** *As at end year; Old narrowbodies = 707, DC8, DC9, 727,737-100/200, F28, BAC 1-11, Caravelle; Old widebodies = L1011, DC10, 747-100/200, A300B4; New narrowbodies = 737-300+, 757. A320 types, BAe 146, F100, RJ; New widebodies = 747-300+, 767, 777. A600, A310, A330, A340.*

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