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Airshow jousting

The traditional jousting between Airbus and Boeing was a bit muted at the Farnborough International Airshow, but it was still there.

Boeing said it was renouncing the old game of announcing orders at the show, then proceeded to tell the world that KLM had bought some more 777s. Its executives off-the-record repeated past public assertions by head salesman Toby Bright that Airbus was building white-tails among the 300-and-some aircraft in its production schedule for 2003. Airbus chief executive Noel Forgeard denied the charge, claiming that only three aircraft had been cancelled since the beginning of this year, and that Airbus had swept 100 orders out of future plans after September 11, on the grounds that they would not materialise.

The dog that failed to bark was the biggest potential order the industry will see for a long time. Even as Farnborough opened, both Boeing and Airbus were still locked in negotiations with easyJet. The airline is understood to want to order 120 aircraft with another 120 options. Boeing is offering 737-700s with 149 seats; Airbus counters with A319s, equipped with 156, which probably require some alterations such as overwing exits. The fact that easyJet is taking over Go, which was in exclusive negotiation with Airbus; that Ray Webster, CEO of easyJet, has talked about limits to economies of scale from a single-manufacturer fleet, and that negotiations have dragged on so long suggest this is the closest Airbus has ever come to winning a big order for single-aisle aircraft from a low-cost carrier.

Even If Airbus loses out, Forgeard can console himself with his internal forecasts showing that big traditional carriers will still dominate orders; after the Ryanair binge this year, Airbus sees low-cost carriers slipping back, accounting for only 13% of orders between 2006 and 2012.

The contrast between Boeing and Airbus is that the former has had to slash back production from a peak in the cycle, going down from over 500 units last year to 380 this year and 275-300 in 2003. In the process it has cut 30,000 jobs. Airbus, on the other hand, has merely had to rein in its planned ramp-up of production from 300 to over 450, and has kept job losses to a few thousand, cutting overtime and some contract workers instead. The upshot could be that Airbus will outstrip Boeing on production and deliveries, the measure that matters, next year - an historic moment, reflecting that Airbus really has caught up with Boeing.

Even so, Forgeard is prepared to acknowledge that Boeing is winning more orders in today's market, where demand has halved to around 400-450 orders, in his view this year. This is largely a reflection of the low-cost carriers being the only ones to place big orders. Nevertheless he hopes to land a couple of big orders for the A380, both from Asian carriers, one of which is thought to be ANA. JAL, the biggest operator of 747s, is not expected to plump for the A380 until it faces the prospect of more Asian carriers using it in competition with its Boeings.

Sonic boom fades

Boeing's proposed Sonic Cruiser appeared to be slipping. Sir Richard Branson, founder of Virgin Atlantic, seemed to be an enthusiast, when the aircraft first appeared as a paper concept last year. At Farnborough he turned against it, claiming that Airbus had got it right for the future, with its double-decker A380 rather than the Sonic Cruiser. He cited crowded air-

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ports, lack of slots and so on to justify his fickleness. The fact that he was sharing a platform with Forgeard to celebrate Virgin's purchase of the A340-600, the world's longest plane, might have had something to do with it.

Taking a leaf out of Renault's car ads, the message was size matters. But then, as the sleepless say in Seattle, it's not how big it is, it's what you do with it.

Alitalia's innovative recapitalisation

Alitalia has produced net losses totalling € 1.2bn over the past three years, but by the end of July will have been recapitalised to the tune of € 1.4bn in a transaction heavily involving the Italian state but sanctioned by the European Commission.

In June the EC formally approved the payment of the final € 129m of state aid out of a total of € 1.4bn approved on the "one time, last time" principle. More significantly, a further € 1.4bn of funding for Alitalia will come from a rights issue, half in the form of new shares issued at their nominal value, € 0.37, and half in the form of convertible bonds also priced at € 0.37, bearing an interest rate of 2.9% pa and maturing in 2005-07. Shareholders were granted the right to subscribe to one new share and one convertible bond for each share held.

The largest shareholder in Alitalia is the Ministry of Economy and Finance, which owns 62% of the carrier (no other entity owns more than 2%). Unsurprisingly, the Ministry announced that it was going to take up all its rights. This means that the Italian state's share remains at 62% and that Alitalia receives about € 870m from the state (assuming that the rights issues proceeds as planned). The official plan is to reduce the state's shareholding to 30% by the end of the year, which appears ambitious.

For the other 38%, however, there is a commercial and international interest. The three lead managers for this issue - Bank Imi, Merrill Lynch and CSFB - agreed to fully underwrite these rights. This is the main element that persuaded the EC that the Italian state's participation in the rights issue conformed to EC rules in that the government was acting just as an investor in a market economy.

However, it is clear that Alitalia's Euro-major rivals are very sceptical. In a recent letter to the Transport Commissioner Loyola de Palacio, British Airways KLM, bmi, Lufthansa and SAS have questioned whether this capital injection should have been allowed. The EC seems to be dismissive of this complaint, which would leave as the only option that of action at the European Court of Justice.

The EC was clearly impressed by the strategic plan on which the recapitalisation was based, noting that it had been "favourably analysed by the private financial entities guaranteeing the operation". Elements of the Alitalia's strategic plan are summarised below.

Rationalisation of non-core activities

• Alitalia is to focus on its core business - air transport;
• Leisure and other business are to be sold - Eurofly (the charter subsidiary), Italiatour (its tour operator), various property interests, etc.;
• Joint ventures are to be evaluated for Ground Handling and Maintenance; and
• Areas for possible outsourcing include Revenue Accounting, IT, Call Centre, etc.

This is now a standard strategy for reforming flag-carriers but the prices obtainable in today's market for the spin-offs will be poor.

Point-to-point and natural hubbing

• Alitalia is to concentrate on "high quality" point-to-point traffic; and
• Its hub policy becomes " Natural hubs for natural flows" - in effect this means reverting to a dual hub system at Rome Fiumicino and Milan Malpensa with both hubs serving intercontinental, international and domestic destinations depending on where the demand is, whereas Alitalia's previous network strategy has been to concentrate all on building up Malpensa while dehubbing Rome.

Malpensa, despite its enormous capital investment, still has many logistical problems, and Milan Linate remains the preferred airport for many travellers. Following the shift of Alitalia's long-haul hub operation from Rome, the vacuum was quickly filled by other long-haul operators,

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probably undermining Alitalia's overall long-haul viability.

Network rationalisation

• Domestic: eliminate unprofitable feeder routes and maintain dominance of Fiumicino-Linate;
• International: reduce capacity on Middle East/North Africa routes, and focus on Italy-France routes
• Intercontinental: Operate profitable trunk routes only and eliminate destinations like San Francisco, Beijing, Los Angeles, Rio de Janeiro.

This is a long overdue rationalisation of the network. Unit revenue (€/ASK) improvements of 11.5% for the first quarter of 2002 against 2001 are claimed already.

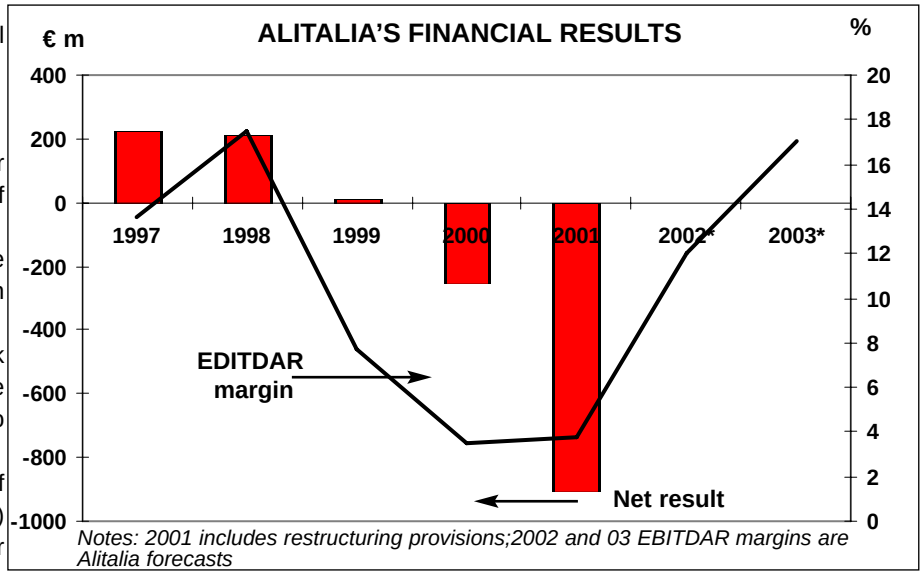
But whether Alitalia has come to terms with the concept that its main long-haul role may be in feeding Air France at Paris CDG is another matter. On the domestic and intra-European routes, there is no sign of a coherent response to the threat of the low-cost carriers, with Ryanair establishing a 33% share of the UK-Italy market and now expanding at Rome Ciampino, while easyJet's purchase of Go brings it into the Italian market for the first time.

SkyTeam Alliance

• The aim is for free-flow codesharing on all transatlantic flights this summer, with a common Alitalia/Air France marketing effort and coordination of schedules with Delta; and
• A full joint venture is planned on the Italy-France bundle, targetting 50/50 capacity and a 50/50 split of operating profit by 2004.

The EC approved the SkyTeam alliance in principle at the end of last year but has now raised specific concerns about concentration on Paris-Milan, Paris-Rome and Paris-Venice. The EC's view is that Alitalia and Air France will control the "quasi-totality of traffic of these routes and … the pooling of forces between the two carriers will also make it difficult for third parties to enter".

The solution, as in previous consolidation cases (Lufthansa/SAS on Frankfurt-Copenhagen and Lufthansa/Austrian on Frankfurt-Vienna), will be for the two carriers to reserve slots at peak times at their respective hubs for new entrants in sufficient numbers to comfort the EC.



Notes: 2001 includes restructuring provisions;2002 and 03 EBITDAR margins are Alitalia forecasts

Fleet restructuring

• Long haul: Replacement of 747s with 777s and 767s, while MD11s are phased out; the number of aircraft families will decrease from four to two .
• Short and medium haul: 10 new A319s to be added up to 2004, while MD80s are phased out; introduction of Regional Jets.

Homogenisation of the fleet is finally being addressed, and Alitalia is pursuing the BA policy on widebody downsizing. Whether this produces the needed unit costs savings will depend mostly on labour contract negotiations, while hoped-for unit revenue increases, as a result of changing increasing the proportion of business seats relative to economy seats will be very difficult in today's market.

Labour cost reduction

• A combination of "solidarity contracts", wage freezes, elimination of some benefits, early retirement incentives; and
• Employee stock ownership through the distribution of warrants - employees will receive a share of warrants proportional to their contribution to the labour cost reduction over the period 2002-3.

The traditions of the Italian public sector represent the most intractable problem for Alitalia, and one that will continue to undermine its competitiveness. The agreements whereby the unions will monitor and participate in the turnaround plan seem horrendously bureaucratic, with three levels of committees, secretariats, government-appointed outside experts and so on.

Is the traditional Big Hub model still viable?

The US industry is in the midst of its second financial disaster in ten years. The losses of 2001 ($10 bn operating, $7 bn net, even after federal subsidies) are not likely to abate significantly in 2002, with net losses of $5 bn likely. Economic value measures (return on capital minus cost of capital) also indicate a crisis measured in tens of billions. As the economic collapse is almost exclusively with carriers operating traditional Big Hub based networks (American, United, Delta, Northwest, Continental, US Airways and America West), the long-term viability of this business model is under challenge for the first time since deregulation.

Are Big Hub carriers on the road to financial recovery?

The central question is what will be required for these carriers to achieve a full turnaround, restoring sustainable financial returns. As yet there is no consensus even on the causes or seriousness of the crisis. Two diametrically opposed views have emerged.

The first view argues that the 2002 crisis is very similar to the 1992 crisis, and while challenging, the turnaround process will not require radical, structural change and should be manageable with full recovery possible within two, perhaps three years.

The second argues that the 2002 crisis is different from all previous crises, that the Big Hub business model is fundamentally broken, and only the non-hub "Quasi-Network" model primarily associated with Southwest will drive future financial returns. This implies that large portions of the Big Hub sector are unsustainable, and that the industry may be facing far more painful upheavals than it has ever experienced, and that the industry's current response to the crisis has been the proverbial rearrangement of the deck chairs on the Titanic.

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Although the broader issues may be relevant elsewhere, the discussion of the viability of hub airlines will be limited here to the specific market and operating conditions of the US domestic environment. One should not assume direct parallels with hub competition in Europe or elsewhere.

Is 2002 largely a rerun of 1992?

There are certainly broad similarities between the two crises.

- Both were proceeded by a dynamic period of change and profit improvement (mid 80s/90s) which in turn spurred major fleet expansion across the industry.
- Both dramatic collapses were accelerated by external shocks (Gulf War, September 11) and recession.
- Both featured major price wars that predated the external shocks.
- All Big Hub carriers experienced enormous losses, while Southwest maintained marginal profitability.
- Within the Big Hub sector, certain carriers faced liquidity/balance sheet crises.

The "manageable crisis" view notes that hubs have worked successfully for decades, and points out that the mid-90s recovery did not require any changes to the basic industry structure or business model. If one can infer a plan from the recent actions and statements of these seven carriers, financial recovery can be driven by:

- Serious belt tightening (capital freezes, recent layoffs, cost-cutting exercises);
- Big labour concessions (facilitated in some cases by the ATSB or Chapter 11);
- Aircraft lessor haircuts;
- Industry consolidation, focused on eliminating capacity of the "weaker" carriers; and
- An eventual rebound of business traffic, as the business cycle improves.

Unfortunately, this view is based on a flawed understanding of what actually drove the mid-90s recovery. When the Gulf War collapse first occurred, this type of approach failed. Short-term belt-tightening, labour concessions and cost-cut-

ting needed to occur, but they did not generate billions of improvement then, and today there is less obvious fat that can be quickly cut. The 92 collapse had not been caused by either wasteful spending or extravagant labour agreements. While some argued that the split of financial returns between capital and labour was out of whack, industry profitability recovered nicely in the mid-90s without any lasting changes in that area.

The "obvious" solution in 1992 was to "let market forces work", and punish those carriers who had proven incapable of running profitable airlines-Northwest, Continental, America West and TWA-so that the "better run" airlines with the stronger balance sheets could earn a reasonable return. Of course events proved that this view was completely wrong. Northwest and Continental proved to be the most profitable airlines of the 90s, and it was "strong" carriers like American that had unprofitably expanded in the late 80s and needed to shut down failed hubs. There was no relationship between the long-term competitiveness of an airline's network and its liquidity or balance sheet when the collapse deepened.

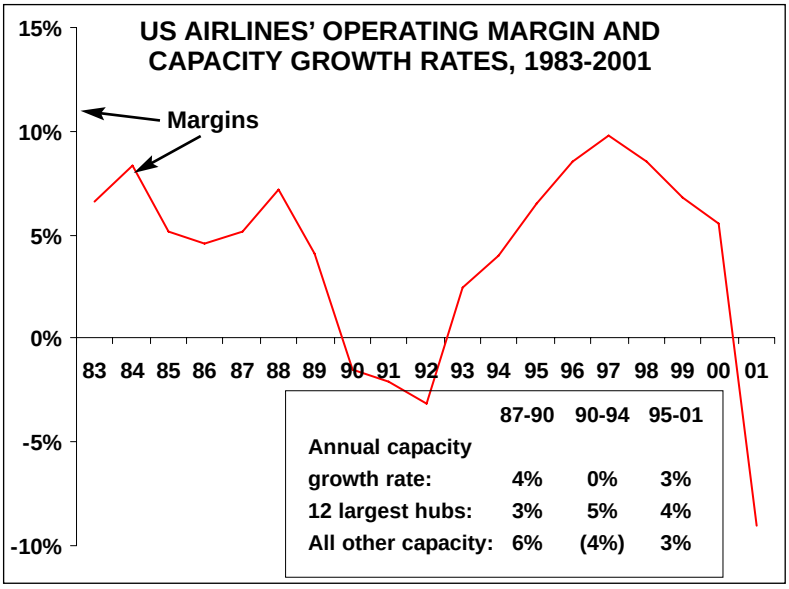
What really drove the 92 turnaround?

The 92 turnaround did not result spontaneously. Four factors were key.

• **Five years of industry- wide zero growth during 1990-94.** This followed the late 80s expansion, led by American, United and Delta, that presumed that earlier productivity-driven gains (new yield management tools, post-deregulation hub expansion, A/B wage scales, the decline of carriers like Eastern and Pan Am) would continue and ignored normal business cycle risks.

• **Major restructuring of failed network investments.** Some 30 weak hubs shutdown or were significantly downsized (Raleigh-Durham, Milwaukee, Cleveland) with assets moved to more productive uses (Dallas Ft Worth, Detroit, Newark).

• **New investors driving tangible improvements.** New equity investment was not huge, but "kick-started" the turnaround process, led by KLM's willingness to speculate on an Northwest turnaround, which in turn facilitated the "investments" from the Northwest labour groups. KLM added significant tangible value by developing a North Atlantic alliance, as did BA with its investment in USAir. In addition to equity, Texas Pacific made major improvements in the service culture and RASM performance at Continental.



• **New industry-wide/longer-term approach to capacity growth.** Certain carriers, led initially by American and Northwest (and strongly reinforced by Wall Street) proactively pushed for a new industry-wide focus on profits rather than market share and growth. Price stability was restored once the new focus on the overall supply-demand equilibrium took hold.

Had key participants not made bold, highly risky moves (in particular KLM and the ALPA and IAM groups at Northwest) it is quite possible that the destruction of viable assets would have been far greater, and the eventual recovery would have been slower and more difficult.

Can the 1992 approach work again in 2002?

It is clear that a 2002 turnaround will also require some type of major, structural improvements - short-term cuts and hoping for a business traffic recovery certainly won't drive a recovery. But it would appear that the conditions are much less favourable to serious reform than they were in 92.

• **No obvious network restructuring potential.** Unlike the early 90s, there are no hopelessly uncompetitive hubs left to close, and major distribution cuts are already in place.

• **Growth of Southwest and others.** Southwest was 2% of industry in 92, and there was no funding for JetBlue-type new entrants with aggressive growth plans in the early 90s.

• **Overcapacity/pricing collapse worse than 92** Today's supply-demand imbalance is driven by overexpansion during the greatest economic bubble in history, followed by post-September 11 demand drops that were much greater than those during the Gulf war; unlike 92 an absolute decline in business traffic has been observed, raising new concerns that traditional pricing approaches are fundamentally "broken".

• **No major new investors on the horizon** There is a fundamental shift in investment away from traditional Big Hub airlines to airlines following the Southwest-type Quasi-Network model.

Does the low-cost model make the Big Hub model obselete?

Southwest has maintained strong growth and returns by following a completely different business model, avoiding most traditional network and distribution approaches, and achieving much lower unit costs than the Big Hubs. Has the historic market share fight between the old-line majors been superceded by a battle to the death between the two airline business models?

The "Big Hubs are obsolete" argument starts with Southwest's cost advantage and superior financial performance and notes the growing ability, across the economy, for new business models to rapidly overwhelm long-standing traditional models. Common examples include Home Depot (who rendered the local hardware store obsolete), and Walmart (who overpowered department stores and other traditional retailers).

But are Southwest, JetBlue and the other Quasi-Network carriers really going to follow in the path of Walmart/Home Depot, eventually dominating the industry? Or will they be a bit more like Toyota and Nissan entering the US market: profitably capturing a share of the industry, weakening but not destroying the viability of traditional carriers, who thus will still carry the majority of all traffic?

Big Hub airlines *are* low cost airlines in many markets

Business models work if they create sustainable competitive advantage-meaningful cost advantage or greater customer value. The Big Hub model obviously did both for many years, and on paper at least, there is no reason it could not continue to do so for many years.

Big Hubs are the lowest cost way to establish a very large network serving thousands of O&D markets. They are far and away the lowest cost way to serve markets with limited traffic that cannot support multiple jet frequencies purely with local traffic. Hubs have grown successfully because the overwhelming majority of aviation markets fall into this category. Hubs are also highly effective in maximising service in one city (Dallas-Fort Worth, Detroit, etc) and hub carriers usually have an advantage serving markets with complex product or distribution requirements (such as first class or international traffic).

It is less appreciated that while Big Hubs have a significant cost advantage serving *many* markets, they do not have a cost advantage in *all* markets. Large hub networks can exploit real strengths, but a ubiquitous network must expand into O&Ds where cost advantage is limited or nonexistent.

As with any other sensible business model, certain conditions must be met if the natural competitive advantages of a Big Hub are to be profitably exploited, and certain risks must be carefully managed. Big Hubs specifically require:

• Mixed fleets (in order to tailor capacity to widely varying demand levels);

• Complex systems (to manage variety, volatility of markets and products);

• Major price discrimination (to capture the value created when a superior schedule is provided); and

• Very large operating scale (to cover these high initial airport and complexity costs).

The core customer is the frequent business flyer, who might value the high quality schedules Big Hubs can efficiently produce. However, fares must be kept in line with the level of value these customers receive (or perceive), and capacity must be in line with the revenue potential of this core market. Fill-up leisure traffic can be priced at marginal rates, but it is impossible to profitably invest capital to expand capacity for marginal, fill-up demand.

Since the marginal cost of producing an incremental unit of capacity is very low, Big Hub airlines face greater risk of overcapacity. Historical practice suggests that revenue is usually maximised by increasing yields while constraining

supply, which suggests that volume growth is difficult to achieve unless exogenous business travel demand is growing, or productivity improvements permit price stimulation.

While the higher costs of mixed fleets and complex systems are often seen as a critical flaw in the model, they are actually the key to serving more markets at lower cost and with greater flexibility. With managers and systems designed to cope with complexity and volatility, Big Hub carriers should be more adept at coping with marketplace changes.

Quasi-Network airlines only have lower costs in certain markets

The Quasi-Network approach is the lowest cost way to serve very high-volume O&Ds, and to serve medium sized O&Ds where Big Hub carriers do not have clear advantage (O&Ds to major hubs). This model was originally developed by PSA in the 1960s but is closely associated with Southwest. The Quasi-Network model is not designed to serve all markets, could not provide the basis for a comprehensive domestic network and would be an extremely high-cost operation in small markets. Multiple business models coexist in most industries, each powerful in a certain segment, but unable to dominate every market.

The Quasi-Network model has a number of key requirements, including maximum fleet standardisation and utilisation, maximum product/distribution simplification and more limited price discrimination (focus more on share shift/stimulation) among others. Quasi-network carriers must avoid high cost airports, as high fees and congestion can quickly undermine the cost advantage. With fewer scale economies than a Big Hub carrier, growth becomes more expensive. Facing Big Hub carriers with very low marginal costs, Quasi-Network carriers face greater risk of predation.

Where do the two models have "natural" advantage?

In the midst of the early 90s crisis, concerned about the future growth of Southwest, and anxious to refocus on "strength" markets, one of the Big Hub airlines attempted to estimate the size of the markets where each of the two models had competitive advantage.

Big Hubs were found to have advantage in O&Ds accounting for 70% of 1993 demand, including all O&Ds to/from the largest hub cities (Dallas Ft Worth, Detroit, Pittsburgh) and O&Ds too small to support multiple nonstop jet frequencies but where hub connections are geographically convenient (Jacksonville-Boston, New Orleans-Seattle, Milwaukee-Syracuse). "Quasi-Network" carriers were estimated to have potential competitive advantage for 20% of domestic traffic, covering high demand O&Ds that could support multiple nonstop jet frequencies (San Jose-Los Angeles, Baltimore-Orlando, Las Vegas-Kansas City), but excluding O&Ds at either the top hub airports or the highly congested Northeast airports. 10% of domestic traffic was in O&D where neither model had a clear advantage, including high-demand markets with complex product or distribution requirements that Southwest historically avoided (Hawaii, Caribbean) or low-demand O&Ds not well served by large hubs.

While an updated analysis would produce different results, the finding that Big Hub carriers have natural advantage in serving a large majority of domestic traffic flows is undoubtedly still valid.

In 1993, a major (although obvious) finding was that Southwest could comfortably plan on many, many years of profitable growth. Southwest was only 2.5% of the industry in 1993, and had the "Quasi-Network" segment all to itself at that point. It could make enormous investments in new aircraft with only a fraction of the uncertainty fleet planners at United or Delta faced. The more difficult challenge was how to prioritise their many promising network opportunities.

More importantly (although equally obvious) was that Big-Hub carriers would inevitably lose some of their current 93% share, with shrinkage to a 70-75% share possible. There were also nine majors fighting over this segment, adding significantly to volatility and the risk of future fleet investments. Capacity plans needed to recognise the inevitable loss of share to Quasi-Network carriers, and could not assume the market dominance of the 1980s as an absolute birthright. Similarly, when Toyota and Nissan entered the US car market with an efficient, sustainable model, the US carmakers needed to adjust investment and production

plans to recognise the inevitable loss of market share.

The Big Hub model didn't break in the mid 90s ...

In the mid 90s, the Big Hub carriers earned the strongest profit margins in industry history, and were generating economic returns well in excess of the cost of capital. They had strong competitive advantage in many markets, and were only vulnerable to Quasi-Network growth in a small subset of existing markets. In order to continue to earn strong returns for shareholders, the Big Hub carriers simply had to:

• Strictly focus on strength markets, avoid Southwest strength markets and carefully monitor these competitive issues and threats;
• Strictly focus on their core business customers;
• Keep capacity and costs in line with their core revenue base over the full business cycle; and
• Ensure all stakeholders were working together to maximise shareholder returns over the cycle.

... it was abandoned

The 2002 financial crisis did not result from flaws in the basic economics of operating Big Hubs. It resulted when the industry ignored or violated almost all of the economic logic that drove hubs for decade and had directly created the profit turnaround of 1993-95. Tens of billions of dollars of economic value were destroyed when the Big Hub carriers, beginning in 1996:

• Expanded while ignoring competitive advantage;
• Set prices while ignoring customer value and competition;
• Expanded capacity while ignoring supply and demand; and
• Managed shareholder returns while ignoring the business cycle.

Expansion into unsustainable markets

Although total network retrenchment to "strength" hub markets had dramatically improved profitability (especially at Northwest and Continental) in the early 90s, several carriers pursued major expansions into markets where Big Hub competitive advantage was nonexistent. American reintroduced local West Coast operations and acquired TWA in pursuit of a more ubiquitous presence and an increased national market share, despite the extreme competitive vulnerability and very poor historic profitability of these markets. Delta, US Airways and United actually developed major operations in markets where they would have a clear competitive disadvantage versus Southwest (Oakland-Los Angeles, Baltimore-Orlando).

Destroying value for business customers

Even with tightly constrained capacity, the Big Hub carriers were not powerful oligopolists in a position to drive business fares up at whim. In 1995 Southwest operated 3-4% of domestic capacity, but was clearly in a position to quadruple this share within a decade. The loyalty of the core Big Hub business customers requires that the higher fares charged be clearly offset by the value of the superior schedule and other service benefits.

In the early dot-com years, customers grudgingly accepted fare increases, but when the walk-up fares reached a level 7 or 8 times leisure levels, the long-standing perception of value for money broke down. Smaller airlines or discount restrictions that were previously avoided are now actively pursued, and business demand is apparently now much more price elastic.

The steep fare increases also created a huge price umbrella, encouraging Southwest and other Quasi-Network new entrants to compete much more aggressively for business traffic in traditional important Big Hub long-haul connect markets, emphasising growth in Buffalo-Phoenix and Nashville-Los Angeles instead of non-hub markets like Buffalo-Indianapolis or Nashville-Baltimore. A critical issue is that this shift will permanently reduce the "natural" market potential of the Big Hub carriers to an even smaller share than the 1993 analysis suggested.

Ignoring supply and demand

Although the mid-90s profit turnaround had been largely driven by five years of zero capacity growth, in 1996, the Big Hub carriers reversed course and grew ASMs 3% per year to

2001. Capacity was added at relatively high marginal cost, but the revenue added was generally at very low incremental yields, either bottom-end leisure traffic, or passengers in competitively weak markets.

Big Hub pricing and yield management systems, highly effective under the constrained, near-equilibrium conditions of the mid-90s, broke down with excess capacity and increased Southwest competition. Growth depressed leisure prices, which in turn weakened the Big Hub distribution system as carriers turned to the Internet for more new ways to fill empty seats. Business fares were raised to cover the leisure shortfall and higher capacity costs, but quickly undermined by unrestricted $100-200 seats available with just a few clicks.

The core business revenue base was mature, and despite the behaviour of investment bankers in the late 90s was certainly not growing 3% a year. The inflation-adjusted revenue base over a full business cycle may have been shrinking, even before the risk on share loss to Southwest. The tendency of Americans to purchase unrestricted business fares was not growing faster than the economy, and past growth had been driven by declining fares. Rational revenue maximising behaviour by the Big Hub carriers cut off any potential growth in business traffic in favour of lower volumes at higher yields. There was little reason to expect that productivity improvements could drive growth (simply holding unit costs in line would be a major challenge). Regional jets allowed certain carriers to capture share by providing more frequencies with the same ASMs, but did not provide a basis for profitably growing total industry ASMs.

Financial collapse due to badly justified growth plans seems to be one of the major themes in the history of civil aviation. Justifications for major fleet investment often emphasise aggregate traffic growth, rather than real revenue potential, or growth in core business demand. In the 90s, some carriers appeared to confuse dot-com yield increases with "market power" that would allow carriers to steadily drive prices upward. There were certainly pressures from Wall Street to demonstrate ongoing revenue growth. Whatever the reasoning, the aggregate result was the destruction of billions in shareholder value across the industry.

Ignoring long-term shareholder requirements

As a mature sector, airlines could not rationally expect earnings to continuously grow. However ,had they continued to pursue zero (average) capacity growth they could achieve strong average profitability over a full cycle. 1995-96 appears to have been roughly mid-cycle, and the Big Hub carriers earned healthy 9-10% margins. With zero average growth, the late 90s peak should have been extremely profitable, and carriers would have still been extremely healthy when the recession arrived. Shareholder value can be maximised as long as all stakeholders take a full-cycle view and no one group is capturing all the peak profits.

Instead, most Big Hub airlines told their stakeholders to focus on short-term results. Capacity growth and fleet expansion was heavily based on bubble-era growth. Management bonuses and stock options were based on quarterly/annual results despite the obvious presence of a cyclical boom. Insiders were benefiting from stock repurchases at dot-com peak prices while refusing to renegotiate union concessions made during the 92 crisis. Unions quickly adapted the same short-term view and won major increases that locked in dot-com level wages, while further polarising management and staff.

These higher capacity and wage costs caused Big Hub margins to fall in the late 90s, even though the economy was still strong. Desperate to prop up quarterly earnings, carriers responded with more and more dramatic increases in business fares. Big Hub RASM increased 7% in 2000 despite having been flat the previous four years. Unfortunately CASM increased 9%. With the financial picture collapsing, the industry turned to consolidation, hoping that even greater concentration of "market power" could force enough cash from consumers to cover the aircraft and wage bills. The American-TWA acquisition and the proposed US Airways-United merger would have locked in most of the dot-com overcapacity and employee costs, while adding billions in new financial obligations.

Meanwhile Southwest took the opposite approach

By contrast, Southwest during this period stayed strictly within the economics of its Quasi-

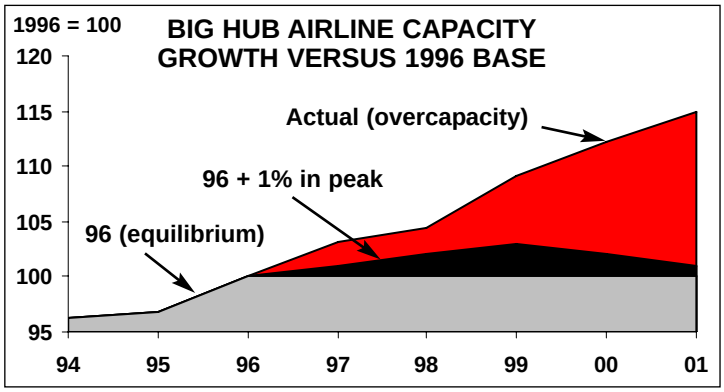
Network model. Its route expansion remained limited to markets where it had clear competitive advantage. Despite the boom and bust conditions of the late 90s, its capacity and market planning remained based on long-term, full-cycle criteria. And most importantly, all major stakeholders at Southwest were working together to maximise long-term (not quarterly) shareholder returns.

Although the success of Southwest is most often linked to its customer and employee friendly culture, the enormous economic value created over the last thirty years is more properly attributed to this strategic rigour and discipline, and its success in aligning the interests of all stakeholders. Every aspect of Southwest's operations and marketing (including its noteworthy culture) is clearly linked to the economics of the Quasi-Network model, and the competitive advantages and weakness of that model versus the Big Hub model.

Big-Hub overcapacity was 10-15% *before* September 11

Industry overcapacity can only be estimated with respect to a point where supply and demand were roughly in equilibrium. In 95-96, all carriers (except TW) were earning strong profits, and the restructuring of weak hubs (Raleigh-Durham-Nashville) and weak balance sheets (Continental-Northwest-America West) was largely complete.

If 1996 is used as a base year, and zero (average) ASM growth would have maximised returns for the Big Hub sector as a whole, then there was 15% excess capacity in the industry prior to September 11. If 1% average growth from a 96 base was optimal then overcapacity was closer to 10%. If 95 conditions better reflect equilibrium then overcapacity was closer to 20%.



The graph also illustrates a case where carriers exploit the cyclical peak by delaying routine retirements of very old, fully depreciated aircraft, and then accelerating them as the downturn begins, capturing marginal traffic without increasing average capacity over the cycle. In either case it is clear that the overcapacity problem accelerated rapidly after 1999, when the downturn in the business cycle was clearly evident.

The overcapacity crisis obviously worsened when demand collapsed after September 11 but it is difficult to quantify this impact, or isolate incremental from pre-existing problems. To some extent revenue drops may reflect pricing and business elasticity changes that predated September 11, and to some extent post-September 11 conditions may have amplified earlier changes.

As year-over-year Big Hub ASMs have dropped 5%, the hypothesis here is that the recent cuts may have covered post September 11 revenue declines, but may have had little or no impact on the pre-existing 15% overcapacity problem.

Overcapacity created huge cost/balance sheet burdens

Big Hub airlines acquired 750 new Mainline narrowbodies plus 575 new Regional Jets since 96, while under a zero/low growth strategy they would have only acquired a small fraction of this number. Only 250 first generation jets were retired in this period and no carrier achieved major fleet simplification. Perhaps as few as 500-600 of these aircraft created economic value. This created much of the current Big Hub "cost problem" (especially when one considers the associated crew training and promotion costs) and the balance sheet burden limited financial flexibility after September 11.

What will it take to restore sustainable Big Hub profitability?

Those who view the Big Hub airlines as being as obsolete as the dodo are overlooking both the strong economics underlying the sector, and the fact that no alternative model has emerged that can serve most airline markets at lower cost.

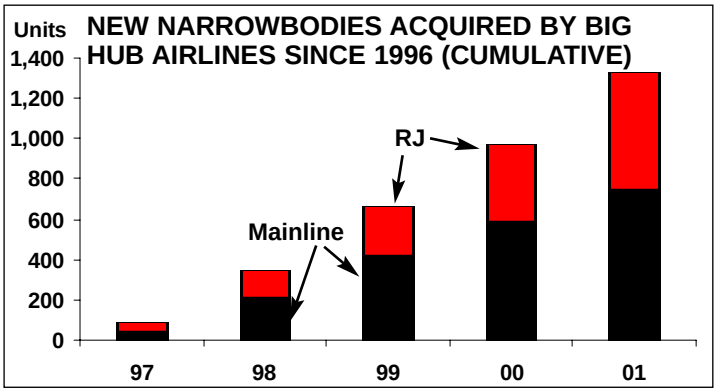
However, the Big Hub sector is clearly facing

a greater restructuring challenge than it faced ten years ago, but there is little visible evidence of proposals or concrete actions that might actually drive a turnaround.

Structural reforms would need to include major industry-wide cuts in business fares to levels that restore business traveller perceptions of value and large, across-the board capacity cuts, and zero future growth, aligned with these lower, but more realistic revenue expectations. If the Big Hub airlines are to survive in a cyclical, no-growth world over time, they will eventually need a basic realignment of shareholder and stakeholder expectations and compensation that better reflects that economic reality.

Several obvious problems can be noted. As in the early stages of the 92 crisis there is some level of denial, and perhaps some manoeuvring, in the hope that the collapse of a weaker carrier, or some other external event, will shift some of the pain elsewhere. Restructuring that requires huge initial cutbacks but with few near-term offsetting benefits is always difficult to achieve. The brunt of these cuts would fall on groups who did not really create the crisis and have already carried most of the burden of the post-September 11 cutbacks.

While major reform would be in the interest of all of the Big Hub carriers, new pricing and capacity regimes would require industry-wide acceptance, there are major obstacles to any actual coordination of planning or action. Aside from workout discussions via the Stabilization Board or chapter 11, there is little than any one airline can



unilaterally do to move the process forward. And many management groups still rely on the outdated planning, pricing, and financial approaches that contributed to the failed decisions of the late 90s.

It is difficult to believe that meaningful recovery is possible if today's capacity and pricing remains in place, even if certain carriers achieve important labour concessions. One danger is establishing an airline version of the vicious circle that paralysed the US carmakers response to Japanese competition. With no way to impose industry-wide structural reforms, each set of stakeholders fought to protect its historical position, while short-term management decisions continued to make the overcapacity and competitive problems even worse. As with the automakers, slower reform means that the share of the domestic market the Big Hub airlines can profitably serve will continue to shrink.

MyTravel: troubled TO seeks LCC solution

MyTravel Group, one of the world's leading air-inclusive tour operators, is facing troubled times. Holiday bookings for the summer 2003 season are disastrous, September 11 cost the group £59m in profits, founder and executive chairman David Crossland will retire later this year, and the share price is plummeting. MyTravel's latest move is the launch of a low-cost, low-fare airline, but is this sound strategic thinking or a desperate attempt to deflect attention from problems in its core business?

Until a few years ago, MyTravel - which changed its name from Airtours earlier this year - had enjoyed steady success. Airtours was founded by David Crossland in 1972, and after floating at a market capitalisation of just £28m in 1987, the company's value rose to £2.7bn by 1999. But it was the company's attempts to expand into other key European markets that caused the first problems. Airtours' purchase of 36% of German tour operator Frosch (FTi) in 1998/99 proved costly (see *Aviation Strategy,* February 2001), and 1999 saw pre-tax profits fall for the first time (see chart, right). In 2000 major organisational changes were announced, with the German and Scandinavian business reporting directly to a new CEO, Tim Byrne, who replaced David Crossland (who stayed on as executive chairman). Profits recovered in 2000, as the group continued its acquisition strategy and finally managed to purchase the remainder of FTi, thus finally gaining operational control of the loss-making operator.

2001 also started brightly, and operating profits for April-June 2001 grew to £26.6m, compared with just £2.1m in the same quarter the year before. September 11, however, was a huge blow, although it was too late to affect the summer 2001 season as Airtours reported record operating profits of £147m for the year to 30 September 2001, a rise of 57% on the previous year. But despite attacking costs in late 2001 (1,600 jobs were axed across the group) and cutting seat capacity by 25% for the next summer season compared to a year before, the financial impact of September 11 on future trading was always going to be severe. After initially forecasting a £10m hit to the bottom line from September 11, the eventual figure was close to £60m, due primarily to holidaymakers postponing booking decisions for the summer 2002 season.

Summer woes

Interim results (for October 2001-March 2002) released in late May revealed that the slow start in selling holidays for the 2002 summer season was continuing (see chart, page 14) and that 1m summer holidays remained unsold, with the group being unlikely to make up the shortfall in brochure-priced bookings it experienced in the first quarter.

Turnover fell to £1.7bn in the six-month period compared with £2.1bn in the same period the year before, while the interim operating loss (before e-commerce costs, exceptional items and goodwill) was £122m, compared with a £77m loss for October 2000-March 2001. Although there was some good news, such as an improvement in MyTravel's troubled German operation, these results prompted analyst downgrades, and the share price slid to £1.52 by the end of May, compared with £2.20 at the start of the month. The shares are at £1.48 as at mid-July, giving a market capitalisation of £729m - a far cry from the heady £2.7bn valuation in 1999.

For chairman David Crossland, who is retiring in November, and CEO Tim Byrne, the problems at MyTravel run deeper than just one bad summer season. MyTravel is a truly vertically-integrated travel group. Based in Manchester, UK, it currently comprises more than 100 brands, 2000 retail

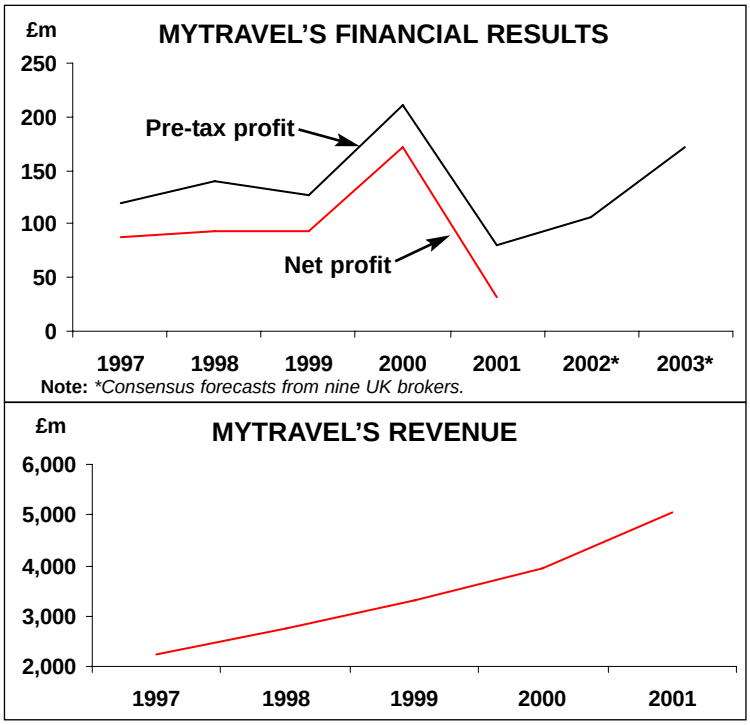
travel agencies, 47 aircraft and just under 28,000 employees, and operates throughout Europe and in North America,

In some respects MyTravel can be said to have had more than its fair share of bad luck. While it has steadily acquired small and medium-sized tour operators over the last few years, a mega-merger or acquisition in Europe has remained tantalisingly out of reach. In 2000, Airtours discussed a possible merger with rival European tour operator C&N Touristic, which came to nothing, and in June this year the European Court of First Instance ruled that the European Commission was wrong to block Airtours' proposed £850m takeover of UK rival First Choice in 1999. At the time the EC said that it had blocked the deal because of competition fears in the UK market, but the ECFI said that the EC had no grounds for such a conclusion. If Airtours had taken over First Choice as proposed, its position in the UK market would be much stronger now, and it would be better able to meet the current holiday bookings slump. Although the ruling means that MyTravel will recover its estimated £2m legal costs, this is scant reward given that a bid for First Choice today is unlikely, due to the current weakness of MyTravel. On the contrary, there is speculation in the City of London that MyTravel may be the object of a bid by First Choice.

Low cost airline

At the same time as the disappointing interims were released, MyTravel revealed plans for a new strategic stretch for the group - a low cost, no-frill scheduled airline, to be launched in October 2002. Operating from "a major UK airport", the carrier will serve initially 10 international destinations with two A320s transferred from the MyTravel fleet, before expanding destinations and the fleet for summer 2003.

With this move, MyTravel wants to exploit the growth in the low cost scheduled airline sector, but at the time of their announcement the plans were met by scepticism by some of the analysts that cover the group. As MyTravel Group's core skills and experience



are clearly in the charter sector, might the new low cost scheduled airline move prove to be a stretch too far for MyTravel? The Group insists this will be a "low-risk entry" into the low cost market, but the new airline has a perhaps overly-ambitious target of being profitable by the end of its second year of operation, after projected losses of £5m in the first year.

Perhaps in order to answer some of these criticisms, MyTravel has just announced it is hiring Tim Jeans, the Sales and Marketing Director at Ryanair, to become Managing Director of the new airline (although no firm date for his appointment has yet been released). If he succeeds, Jeans will certainly earn his money, as his MyTravel staff will have to change from working in a charter environment to working in a regular scheduled operation, where low costs are paramount. Although there are some similarities, particularly in offering a no-frills service, most of the skills needed are different, as many in the low cost sector would testify.

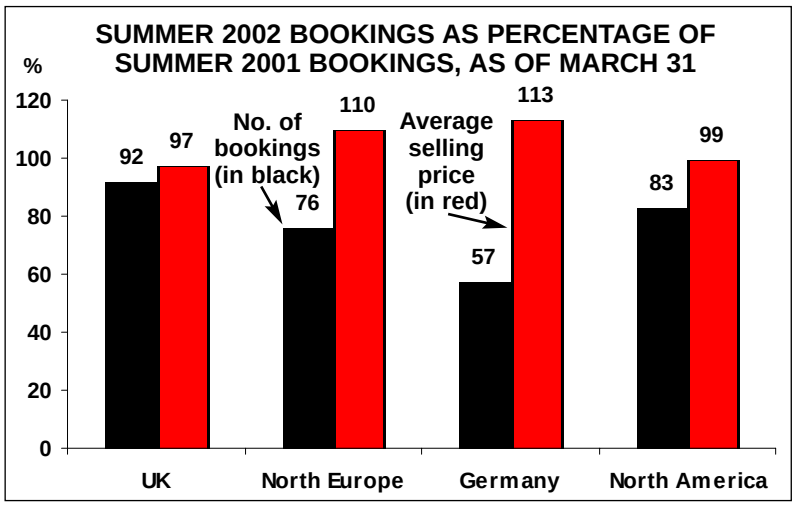
However, before judgement can be made on MyTravel's move into the low cost scheduled sector, a brief analysis of the traditional charter sector is needed. The charter airline

industry emerged in the 1960s as the holiday market boomed in Europe, particularly to Spain, and tour operator demand for flight capacity increased likewise. In many respects, through the 1960s, 1970s and 1980s the charter airlines challenged the scheduled airlines in the same that the low-cost airlines are challenging the scheduled today. For the tour operator, charter airlines offered cheap and flexible air travel - but this must be seen in the context of the traditional package holiday, where customers buy an all-in-one product.

From the 60s to the 00s

The challenge for today's tour operator is that more and more holidaymakers are rejecting the typical package product, instead seeking to assemble their own holidays. People are unwilling to take flights out of, for example, Gatwick airport at five in the morning in the peak summer season when the airport is packed with screaming children. Rising living standards and the freer availability of pricing information via the internet are a real challenge to tour operators, particularly when combined with the trend by those who still book package holidays to postpone bookings until the last minute, instead of giving cash to operators up to 12 months in advance for a holiday priced far higher than those booked at the last minute.

But what does this mean for charter airlines? As the European tour operator industry consolidated in the 1980s and 1990s, most of the independent charter airlines were either taken over by the operators or went bust. The fate of most of today's charter airlines therefore depends on the wishes of their operator owners - and as demand for more flexible packages and "better" flight times increases, then the traditional role of charter airlines must be in doubt. Of course there will always be demand for the typical package products by a hardcore of thrifty customers, who are prepared to put up with very early morning departure and arrival times based on 7 or 14-day periods, and for this demand an operator may well decide to keep a so-called "charter" operation. But for the growing number of more-demanding customers, operators may well want to develop other options - and that includes their own low cost, no-frills airline, which can depart at more sensible times and can offer more flexible departure dates for customers.



In an initial response to the greater demand for flexibility from customers, most European operators with their own charter airline started to offer seat-only capacity, and that has proved very popular with customers trying to bolt together their own holidays - MyTravel's flight-only operation sells more than 1m seats a year. But charter flights also face a major challenge from the low-cost carriers, who in many cases offer not only better flight schedules, but also cheaper seats and slicker internet-booking capabilities.

So MyTravel is facing a double challenge: not only are traditional inclusive package-buying customers migrating to self-assembled, more flexible holidays, but also MyTravel's answer to this problem - its own flight-only operation - is facing stiff competition from the low cost airlines.

Given these twin problems, MyTravel's response is to set up a low cost airline of its own, in order to give those increasing number of "self-assembly" holidaymakers a different type of flight option to the charters that MyTravel currently offers. (The only other possible rationales for MyTravel's low cost

scheduled move - that it wants to earn a quick profit similar to that achieved by venture capitalist 3I with Go, or that it wants to distract attention from poor results at its core operations - can be discounted; MyTravel's management is too smart for that.) It's interesting to note that other major tour operators are also looking at launching low-cost, no-frills carriers - German giant Preussag, for example, is considering starting a low-cost airline in cooperation with regional airline Germania,

And the low cost scheduled airline launch should be seen in conjunction with other MyTravel moves, particularly in distribution. Airtours was a comparative late starter in the internet distribution game (way behind successful holiday/flight websites such as Lastminute, Expedia, and easyJet), but is now trying to play catch up via its MyTravel website, mytravel.com. According to MyTravel's interim report: "Our investment in e-commerce is delivering results and accounts for over 7% of the UK internet travel agency market, without incurring any advertising expenditure." The site cost the group £10m in the six months to March 2002 - but MyTravel isn't resting there.

The group also has plans for MyTravel TV - an interactive digital television channel to be launched later in 2002, which it claims it can do "without significant additional investment". While this latter claim may be in doubt, the move is significant because it appears that MyTravel realises it has to do more than just play catch-up with distribution via a website - a slick, easy-to-use transactional web site is not a differentiating factor any more for an airline, it's just a minimum requirement that must be met. Some analysts may scoff at the interactive digital television plans, but proactive travel groups have to push the boundaries of distribution, even if that means taking risks.

A future for charter?

So what are the implications for MyTravel's charter operations? Airtours had already shut down Air Belgium and, in November 2001, Fly FTi - its German charter airline - although the latter closure was primarily to do with problems at German tour operator subsidiary Frosch (FTi) and general overcapacity in the German inclusive-tour market. Instead FTi will use a variety of scheduled and charter airlines, such as Air Berlin, LTU and Aero Lloyd.

But MyTravel's main charter capacity is operated by MyTravel Airways, the airline formed by the merger of Airtours International and Scandinavia-based Premiair earlier this year. The airlines' combined fleet totals 47 aircraft. In March 2001 Airtours ordered 21 A320 family aircraft for Airtours International and Premiair, to replace leased aircraft as those leases expire. These 8 A320s and 13 A321s will arrive by 2004.

If the new low cost scheduled airline proves successful, then presumably there will be a further transfer of aircraft from the MyTravel Airways fleet into the new carrier. The rate of this transfer will depend on those two key factors affecting MyTravel's core business discussed earlier - how quickly IT customers switch to self-assembled holidays, and how much further business the low cost scheduleds take from MyTravel's flight-only operation.

It's conceivable that in a few years' time the MyTravel Airways fleet will be reduced considerably, with MyTravel's low cost scheduled airline providing the bulk of seat capacity at the Group. But whether the new scheduled airline succeeds or not, the long-term changes in holidaymakers' booking habits will continue, and the future for a charter airline that operates in the same way as MyTravel Airways does now looks bleak.

MYTRAVEL INTERIM RESULTS BY DIVISION

	2002		2001	
	Turnover	Operating result*	Turnover	Operating result*
UK	938.1	-50.8	830.8	-87.6
North Europe	518.4	-7.4	419.1	-17.6
Germany	302.2	-25.0	182.6	-18.3
North America	340.0	4.3	280.1	0.7
Other	19.7	1.5	15.1	0.5
Total	**2,118.4**	**-77.4**	**1,727.7**	**-122.3**

Note: *Sep 2000 to Mar 2001 and Sep 2001 to Mar 2002. *Operating result is stated before e-commerce costs, exceptional items and goodwill.*

Budgeting: designing the necessary inputs to achieve goals

Successful management of an airline, or of any corporation for that matter, requires effective planning, budgeting and control. Moreover, airlines provide one of the best examples of the need for these disciplines because achievement of profit objectives is often elusive in the face of revenue and cost volatility, operating and financial leverage, as well as competitive pressures.

Planning determines the nature, design and quality of the product to be brought to market. The **Operating Budget** analyses and applies the optimum mix and utilisation of resources required to create the planned product. In this sense, planning creates the goal of the corporation, whereas budgeting designs the necessary inputs. **Control** is the discipline essential to insure that input usage is effectively monitored.

An airline's flight schedule is the culmination of the planning process. Given available assets, rights, obligations, regulations, resources and personnel, a carrier attempts to offer desired services to the public, of a quality necessary to establish and maintain a favourable niche among its competitors. The flight schedule displays what the airline is, and what the airline wants to be.

The subject of this series of articles is primarily operational budgeting, thus the subjects of planning (scheduling) and control (monitoring) will be discussed only briefly. Suffice it to say that the planning function is split between two disciplines: market research and schedule optimisation.

Market research determines the where, when, quantity and value of traffic available to the airline; schedule optimisation attempts to utilise aircraft assets to capture as much of this traffic as possible. Market research deals with significant uncertainty and unknowns, scheduling relies on asset utilisation, time, mathematical models and precision.

Control is the policing technique expended to adhere to hoped-for expectations. It is a human process in which people (managers) are measured against their organisational objectives and commitments.

A financial exercise

Budgeting is a financial exercise, governed by accounting disciplines and rules. The process involves the creation of a financial model of what the airline hopes to achieve, and hopes to be able to report to the airline's owners and lenders. The annual budget is produced in profit/loss form, with corresponding balance sheets and cash flow forecasts.

This model becomes the performance commitment of management, and the expectation of company owners and lenders. Normally, detailed budgets are prepared on an annual basis to encompass a complete seasonal cycle. Actual financial performance is routinely compared to budgeted expectations, deviations analysed and explained, and adjustments to operations made as necessary.

Budgets are also often prepared two-to-five years out. However, these "budgets" tend to be probabilistic forecasts for long-term goal creation, equipment acquisition requirements, and capital raising purposes. Long-term budgeting tends to be relatively vague, in less detail and flexible. With so many business variables impinging on potentially volatile results, long-term budgeting must remain fluid, and viewed with the uncertainty inherent in future trending.

All airlines engage in budget preparation in some form and with varying degrees of management participation. At some carriers the "budget," no matter how detailed, is created by a small, select group of accounting experts who construct a forecast of future financial events. The resulting proforma performance estimate often guides senior managers. Without wide company inter-disciplinary participation, the budget fails to

become the airline managers' "commitment." While the proforma form of budgeting is better than none, it fails to act as the cohesive force necessary to achieve objectives.

Some carriers assign specialists within each major company department the task of preparing spending forecasts. These departmental forecasts are then consolidated at the corporate level, and when paired with the market research revenue forecast, a preliminary annual profit estimate is achieved. Still, this method really falls short of the ideal process because it fails to involve line managers specifically. The accounting specialists become the crutch separating those responsible for managing work from those who estimate costs and spending.

The importance of involvement

Most successful carriers engage the lowest managerial levels in the budgeting process. In this way each manager is made aware that the tasks and people he or she supervises cost money. And because of this

OUTLINE OF THE BUDGETING PROCESS

- **Purpose**
  - Plan and forecast
  - Test alternatives
  - Participation
    - Degrees of participation
      - Analyst proforma
      - Trend lines
      - Zero based
    - Objective is to get the responsible party to do the thinking
  - Goals and Objectives
    - Profit sensitivity (risk)
    - Efficiency techniques
    - Capital spending requirements
- **Sequence (Heuristic Process)** Search into the unknown
  - Managerial goals: Protection of unique niche in the face of the vagaries of the marketplace and competition.
  - Planning
    - Market analysis
    - Schedule creation
      - Sales forecast
        - Volume
        - Yield
      - Level of Operations
  - Budgeting
    - Departmental costing
    - Combination of forecast sales and organisational costs = trial profit
    - Reiterations (Never plan for a loss)
  - Control monitoring
- **Budget integration with the Accounting System**
  - Forecast in terms of the Chart of Accounts
  - Financial reporting must be regular, routine and accurate
  - Never report a financial result without a Budget Comparison (responsibility spending)
- **Major Departments**
  - Flight Operations
  - Maintenance and Engineering
  - Customer Service
  - Stations
  - Finance
  - General Overhead
  - Sales and Distribution
  - Over Flight
  - Fuel
  - Landing Fees
  - Any and all spending groups and requirements that affect the final financial result.

awareness, motivation to become increasingly efficient can be instilled through establishment of individual goals and objectives. Dissemination of budgetary responsibility to all levels of management is the best way to get the job done.

Managers expect feedback. If a supervisor has made the effort to provide his company with the detailed spending forecast for which he/she is responsible, frequent comparison of actual spending to the budget is obligatory. Herein finds a source of frequent difficulty. For the budget process to work, the airline's finance department must have the systems in place to provide accurate periodic (monthly) profit/loss statements for management scrutiny.

The monthly account closing schedule must be sacrosanct. Ideally, monthly account closings and budget comparison print-outs will occur together. The process should be automated and simultaneous. Without guaranteed, accurate and timely feedback of actual versus budget spending results, the cohesive and driving force potential of the budget reporting process falls apart.

Budgeting is unfortunately heuristic, and thus lengthy, time consuming, and very often frustrating. Recall that the process begins with the planning effort to create the airline's product, or schedule. The airline's flight schedule attempts to capture maximum revenue within the limits of time and resources. As created, the schedule produces what is known as the "Level of Operations."

By Tom Weyer

The "Level" describes the schedule in cost-driving terms: number of hours flown by equipment type, number of takeoffs and landings at individual airports, the times of day landings occur, length of equipment time on-the-ground, aircraft routings, assumed aircraft acquisitions and retirements, ASKs, etc. Dissemination of the Level of Operations to all airline departments is the event that initiates the annual budgeting process.

Each airline department, or "responsibility center," then must craft its departmental spending in conformance with the Level. For example: the Customer Services Department must staff the ticket counters at each station to conform to scheduled arrivals and departures; the Flight Operations Department must estimate flight payrolls given union contract obligations, and ensure that enough qualified cockpit crews and cabin attendants are available; the Fuel Management Group must forecast the cost of fuel and oil purchases at all locations at appropriate forecast prices; the Maintenance Department must plan for all aircraft maintenance events, scheduled and unscheduled, and the cost to fix repairable parts, etc. No cost element should be overlooked.

And next...

The next part of this serialised article will deal with the duties of budget builders and the difficulties of budgeting tasks and events. The significance of the processes, the corporate mindset that can develop and far reaching benefits obtained by the use of the budgeting discipline will be explained.

FREIGHTER VALUES ($ millions)

	New	5 years old	10 years old	20 years old
A300F4-200				12.92
A300B4-600RF	68.27	54.61		
727-200F Adv				2.86
737-300QC		23.76	19.17	
747-200M				14.45
747-400M	132.34	104.43	76.52	
747-400F	148.02	120.09		
747-400ERF	153.84			
757-200PF		41.81	32.32	
767-300F	74.23	57.20		
DC-10-30C/F				17.05
MD-11C		61.39	49.23	
MD-11F		67.99	55.45	

Source: AVAC **Notes**: As assessed at mid April 2002, mid-range values for all types

FREIGHTER LEASE RATES ($ 000/month)

	New	5 years old	10 years old	20 years old
A300F4-200				159
A300B4-600RF	452	410		
727-200F Adv				55
737-300QC		201	177	
747-200M				189
747-400M	934	796	664	
747-400F	1,150	956		
747-400ERF	1,243			
757-200PF		301	274	
767-300F	506	445		
DC-10-30C/F				202
MD-11C		560	492	
MD-11F		631	540	

	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**
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			
Apr-Jun 02	4,479	5,080	-601	-495	-13.4%	-11.1%	70,724	53,125	71.4%		100,100
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**
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	
Apr-Jun 02	533	534	-1	-15	-0.2%	-2.8%	11,024	8,351	75.8%	5,080	
Continental											
Year 2000	**9,899**	**9,170**	**729**	**342**	**7.4%**	**3.5%**	**134,718**	**100,283**	**74.4%**	**45,139**	**45,072**
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	
Apr-Jun 02	2,192	2,307	-115	-139	-5.2%	-6.3%	33,108	24,922	74.6%		
Delta											
Year 2000	**16,741**	**15,104**	**1,637**	**828**	**9.8%**	**4.9%**	**236,665**	**173,453**	**73.1%**	**105,591**	**79,584**
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	
Apr-Jun 02	3,474	3,601	-127	-186	-3.7%	-5.4%	60,709	42,355	73.4%	27,427	75,700
Northwest											
Year 2000	**11,240**	**10,671**	**569**	**256**	**5.1%**	**2.3%**	**171,789**	**127,298**	**76.6%**	**56,836**	**53,131**
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	
Apr-Jun 02	2,406	2,452	-46	-93	-1.9%	-3.9%	39,848	29,902	78.9%		46,260
Southwest											
Year 2000	**5,650**	**4,628**	**1,021**	**603**	**18.1%**	**10.7%**	**96,463**	**67,961**	**70.5%**	**72,568**	**28,752**
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	
Apr-Jun 02	1,473	1,284	189	102	12.8%	6.9%	29,074	20,314	69.9%	16,772	33,149
United											
Year 2000	**19,351**	**18,685**	**666**	**96**	**3.4%**	**0.5%**	**282,276**	**204,188**	**72.3%**	**83,853**	**100,976**
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	
Apr-Jun 02	3,793	4,278	-485	-341	-12.8%	-9.0%	60,315	44,896	74.4%	17,501	79,800
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	

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

JET AND TURBOPROP ORDERS

	Date	Buyer	Order	Price	Delivery	Other information/engines
Airbus	June	Iberia	3 A340-642s		2Q03	Trent 556
	May	Northwest	4 A319-114s			CFM56-5A5
			2 A320-212s			CFM56-5A3
	May	South African	11 A319-100s		2005	
			15 A320-200s		2010	
			6 A340-313s		1Q04	CFM56-5C/P
			6 A340-642s		4Q02	Trent556
ATR	-					
Boeing	May	Alaska	2 737-700s		2003	CFM56-7B-24
	May	GECAS	1 737-700, 1 737-800		2Q02	CFM56-7B-26
Bombardier	-					
Embraer	May	Fadesa	1 135 Legacy		3Q02	AE3007A1P
	June	Wexford Mngmt	1 135LR, 1 145LR		4Q02	AE3007A3, AE3007A1-2
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
May-02	17.8	11.9	66.7	16.7	13.2	79.1	10.8	8.1	75.6	38.6	20.1	75.3	59.3	42.7	72.0
Ann. chng	-9.8%	-4.2%	3.9	-19.9%	-16.2%	3.6	-8.0%	-2.6%	4.2	-13.3%	-11.2%	1.8	-12.3%	-9.4%	2.3
Jan-May 02	78.4	49.7	63.4	72.3	55.9	77.4	51.9	41.9	80.6	181.6	141.3	77.8	273.4	200.1	73.2
Ann. chng	-13.2%	-8.2%	3.4	-22.6%	-16.8%	5.4	-10.0%	-5.1%	4.1	-13.7%	-10.0%	3.2	-13.8%	-9.8%	3.3

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
Jun-02	85.1	64.3	75.6	14.3	12.7	88.9	8.8	6.6	84.2	7.0	4.7	67.0	30.2	26.2	82.4
Ann. chng	-10.0%	-9.0%	0.8	-16.0%	-13.2%	2.5	-22.8%	-15.5%	7.1	-2.2%	-4.7%	-1.8	-15.2%	-12.2%	2.6
Jan-Jun 02	483.9	376.5	70.8	75.5	59.3	78.5	49.7	40.3	82.1	42.5	28.9	67.9	167.1	128.5	76.9
Ann. chng	-10.0%	-9.0%	0.8	-16.0%	-13.2%	2.5	-22.8%	-15.5%	7.1	-2.2%	-4.7%	-1.8	-15.2%	-12.2%	2.6

Note: US Majors = Aloha, Alaska, American, Am. West, American Transair, Continental, Cont. Micronesia, Delta, Hawaiian JetBlue, MidWest Express, Northwest,Southwest, United and US Airways **Source**: 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	3,390	70.8	4.9	7.2	5.6	6.0	5.3	6.5
***2001**							4,698	3,262	69.4					-1.1	-3.9
***2002**							4,607	3,294	71.1					-1.9	0.4
***2003**							4,903	3,584	73.1					6.4	9.4
***2004**							5,154	3,8819	74.1					5.1	6.6

Note: * = Forecast; ICAO traffic includes charters. **Source:** Airline Monitor, June 2002

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-May	353	172	525	305	97	402	927

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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