Aviation Strategy

Issue No: 32 June 2000

# New era of industry consolidation?

Does United's $4.3bn bid for US Airways really herald a new era of industry consolidation, or will the competition authorities refuse to permit a repeat of the merger mania of ten years ago?

Certainly, the stockmarkets have been implying for some time that rationalisation is required to improve shareholder value in the major airlines. As the tables below indicate, the largest airlines in the US had been trading around book value before merger speculation hit the markets (early May). At the prevailing prices it would have been possible in theory to fund the purchase of these airlines out of 1-2 years of their cashflow. In Europe there are deep discounts to book value for carriers like KLM, SAir and SAS.

M&A activity is generally a good way of boosting share prices for the target airlines. US Airways' shares soared 72% after United's offer (though it should have doubled if investors were fully confident that the deal would go through). Northwest shares jumped 22% on preliminary reports of a bid from American. Conversely, United and American stock both fell by 13%.

The first issue is: will UA/US get past the regulatory authorities? There is a formidable list of investigating bodies including:

- The DoT which has authority over transfer of international route rights;
- The DoJ to look at anti-competitive effects;
- The European Commission because it says it needs to;
- At least two congressional committees; and
- The Attorneys General of at least Pennsylvania, New York, Massachusetts who will examine the effect on their states' consumers.

The key authority is, however, the DoJ which will have to answer the question: what is the optimal number of airline to ensure competition exists? In this case United and US Airways will point to the lack of overlap between the two networks, domestically and internationally. But it is not quite that simple. Nonstop competition would go on routes between the two airlines' hubs, e.g. Chicago-Pittsburgh, and there are specific airports at which United and US Airways have competed fiercely, notably Washington Dulles.

**PRE-MERGER SPECULATION STOCK MARKET RATIOS**

| | Price cashflow | Price/ book value |
|---|---|---|
| **American** | 2.5 | 0.7 |
| **Delta** | 2.5 | 1.1 |
| **United** | 2.6 | 1.3 |
| **Northwest** | 2.7 | nm |
| **Continental** | 3.5 | 1.3 |
| **US Airways** | 4.2 | 2.7 |
| **Southwest** | 11.2 | 3.2 |

*Source: Goldman Sachs*



## CONTENTS



## PUBLISHER

*Aviation Economics*
James House, LG,
22/24 Corsham Street
London N1 6DR
Tel: +44 (0) 20 7490 5215
Fax: +44 (0) 20 7490 5218
*e-mail: info@aviationeconomics.com*

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

**Editor:** Keith McMullan

**Associate Editor:** Heini Nuutinen

**Subscription enquiries:** Keith McMullan Tel: +44 (0)20 7490 5215



*Aviation Economics* Registered No: 2967706 (England)

**Registered Office:** James House, LG 22/24 Corsham St London N1 6DR VAT No: 701780947

**ISSN 1463-9254**



United has attempted to deflect antitrust concerns through the curious sponsorship of a start-up - DC Air - which will operate from Reagan National in Washington using 222 slots sold by US Airways for a total of $141m. United will also lease aircraft and "lend" personnel to the start-up, which will be led by Robert Johnson, a US Airways board member and founder of a television network. This has naturally aroused suspicions about the independence of DC Air. Some cynics see this as a crude attempt to pre-empt American moving into this market.

Still, US stockmarket analysts are giving the deal a slightly better than 50:50 change of getting past the regulatory authorities, if various other concessions are made. Then United has to make the merger work. Far from enhancing shareholder value many of mergers in the last major phase of US consolidation in the late 80s/early 90s managed to destroy shareholder value. The three original components of US Airways - USAir, Piedmont and PSA - were much more profitable airlines and better brands than the merged entity.

Convincing United's labour force, in particular the pilots who own a quarter of UAL's (recently devalued) stock, of the wisdom of the take-over is going to be the most difficult task. Indeed, the timing of the announcement of the offer for US Airways came at a very sensitive time, in the middle of the post-ESOP pay negotiations (see *Briefing,* pages 12-16). Moreover, United's management has already made some startling concessions to heavily unionised and highly paid US Airways pilots who will apparently be able to assert their seniority over United employees. Also, a no-furlough pledge made by United seems to make no sense if the merger if to achieve genuine cost savings.

Then there is the question of hub rationalisation. One of US Airways' weaknesses was having too many hubs too close together in the east (Pittsburgh, Charlotte, Philadelphia, Washington National, and Baltimore). As these are now joined by United's hub at Washington Dulles, de-hubbing would be necessary.

Finally, there are the threats from competitive reaction if a United/US Airways deal lowers to barriers to consolidation. American had to respond vigorously to United by approaching Northwest as it stands to lose its marketing agreement with US Airways, having recently lost Canadian to United- and Lufthansa-backed Air Canada. American plus Northwest would attack United/USAirways domestically, on the Pacific and on the Atlantic (possibly in combination with BA/KLM). The next move would then probably be a link-up between Continental and Delta (bringing in Air France).

The only airlines which will definitely not be in play in this game are the two most highly rated airlines in the US and Europe - Southwest and Ryanair.

**EUROPEAN STOCK MARKET RATIOS**

| | Price/ cashflow | Price/ book value |
|---|---|---|
| **KLM** | 2.2 | 0.5 |
| **Air France** | 3.0 | 1.0 |
| **SAir** | 3.3 | 0.8 |
| **BA** | 4.8 | 1.0 |
| **SAS** | 5.3 | 0.7 |
| **Lufthansa** | 5.6 | 2.6 |
| **Ryanair** | 18.6 | 8.0 |

*Souurce: Goldman Sachs*

## Global consequences

A US consolidation process could have some unexpected consequences for the global alliance game. The resources needed to make such mega-mergers work will inevitably divert management attention away from the more nebulous benefits of harmonising the products of disparate carriers throughout the world. And the potential benefits in the long-term of a US mega-merger will be much greater than those from global alliances. So expect a de-emphasis on global alliances from the US majors.

The implication for the US competition authorities of a series of US mega-mergers is also intriguing. Will the Commission adopt a more laissez-faire or even promotional policy to intra-European mergers in the same way as it did in the aerospace sector following Boeing/ MDC?

# Intra-Europe rationalisation now conceivable

Following SAir's nearly full take-over of Sabena (*Aviation Strategy*, May 2000), a psychological barrier seems to have been breached. Suddenly European airlines are contemplating the prospect of real mergers.

Most explicitly, KLM, whose virtual merger with Alitalia ended in tears, is stating that it is not only anticipating full mergers but also it is accepting the reality that, with its poor financial results, it may have to settle for being the minority partner in a merger. CEO Leo van Wijk commented at the airline's financial results meeting: "Only true mergers can yield success...any alliance that falls short of that is not our objective."

Potential cross-border mergers in Europe would appear to be possible when the airlines have the following characteristics:

• The target airline has a high proportion of total traffic is intra-EU or within the European economic air space;
• A US open skies agreement is in place for both the country of the acquiring airline and the target airline; and
• Ownership clauses in ASAs with other key countries can be renegotiated (or will not be invoked).

Possible take-over targets in the European scheduled business are listed below. These airlines account for almost 40% of intra-European AEA traffic and 29% of the AEA airlines' North Atlantic traffic (measured by passengers carried). Yet most of them are smaller than US regional airlines (Comair, for comparison, carried 7.0m passengers last year), and in truly commercial mar-

**POSSIBLE TAKE-OVER TARGETS**

| | Share of total pax | | | Pax millions | Remarks |
|---|---|---|---|---|---|
| | Intra-Europe | N. Atlantic | Both | Total system | |
| SAS | 95% | 3% | 98% | 21.5 | Full merger with Lufthansa? US open skies |
| KLM | 54% | 18% | 72% | 15.0 | For sale? US open skies |
| THY | 91% | 2% | 93% | 9.9 | Part privatisation planned, Qualiflyer member |
| Sabena | 82% | 8% | 90% | 8.7 | Planned 100% ownership by SAir US open skies |
| Finnair | 92% | 3% | 96% | 6.8 | oneworld member US open skies |
| Olympic | 90% | 4% | 94% | 6.4 | Privatisation mooted, rescue capital needed? |
| British Midland | 100% | 0% | 100% | 6.0 | 20% owned by Lufthansa, 20% by SAS |
| Aer Lingus | 86% | 14% | 100% | 5.5 | Full privatisation this autumn; oneworld member |
| TAP | 84% | 3% | 87% | 4.5 | 34 % owned by SAir US open skies |
| Austrian | 75% | 8% | 83% | 3.4 | 10% owned by Lufthansa after SAir sale |
| Malev | 88% | 3% | 91% | 1.7 | Privatisation planned, seeking trade investor |
| CSA | 82% | 8% | 90% | 1.6 | Privatisation planned, seeking trade investor |
| Cyprus | 86% | 0% | 86% | 1.3 | Privatisation mooted |
| Icelandair | 62% | 38% | 100% | 1.3 | Unique niche |
| Air Malta | 90% | 0% | 90% | 1.2 | Privatisation mooted |
| Balkan | 70% | 3% | 73% | 0.8 | Privatisation mooted |
| Croatia | 99% | 0% | 99% | 0.8 | Privatisation mooted |
| Luxair | 100% | 0% | 100% | 0.7 | 14% owned by Lufthansa |

ket many of them would have been swallowed up by the Euro-majors.

As suggested above, KLM may be up for sale, and BA is rumoured to be the most likely purchaser (though BA itself may be a target for a UK leisure/travel conglomerate). Probably KLM's biggest asset is its transatlantic traffic, carried under an immunised agreement with Northwest. But that asset would be at risk if BA were to take over KLM, and American take over Northwest) as the competition authorities would surely not countenance such a development.

There may be little commercial logic to Lufthansa and SAS remaining as separate airlines, but SAS continues to exert its independence through, for instance, a re-emphasis on direct long-haul service from Copenhagen, rather than just feeding its Star partner at Frankfurt.

Olympic is an example of an airline that could solve many of its problems through a merger plus route rationalisation. Although only 7 % of its passengers are long-haul (4% transatlantic and a further 3% Australia and South Africa) losses on these routes wipe out the profits it makes elsewhere. BA had the opportunity of investing, but it has stated that it will definitely not take up its option to buy about 20% of Olympic. It was impossible to make an attractive investment case unless the long-hauls were in one way or another transferred to BA, with Olympic feeding at London and Bangkok. That strategy, for local political reasons, was very unlikely to find acceptance in Athens.

Both Lufthansa and SAir have considerable interests in this list of take-over targets, and they are the leading contenders for taking minority stakes in the former East Bloc airlines as they privatise. But these minority stakes do not give full management control, which must be the ultimate aim of the acquisitive Euro-Majors.

SAir's share price may actually be suffering because of its various minority holdings. It is being discounted against the market for two reasons - first, Swissair is an airline; second, it is perceived by stockmarket analysts as a confusing conglomerate. One possibility might be to create a holding company to contain all of SAir's disparate airline investments until rationalisation is possible - either through moving to full ownership, for example, of TAP or LOT, or through regional consolidation as in the new plan to merge Air Liberté with AOM and Air Littoral.

# Those elusive cost savings

Full-blown mergers offer the tantalising prospect of tangible bottom-line gains whereas as the financial benefits from alliances sometimes seem rather nebulous. Almost all the airline members claims some benefit from their participation in a global alliance. SAS, for example, claims that the Star alliance had a positive net effect of Skr 800m ($100m) in 1999 - a significant figure when compared to total pre-tax profits of Skr 1.85bn, but less impressive from the perspective that extra revenue generated and cost savings achieved accounted for only 1.9% of turnover.

The economic benefits of airline alliances are supposed to conform to the 80:20 rule, i.e. 80% of the benefits are derived from increased revenues - schedule co-ordination and yield management - and 20% from cost savings - technology transfer, joint merketint, joint purcahsing, etc..

The new hope is that full mergers will allow airline to extract genuine economise of scale and substantial costs saving. There is nothing particularly new hare: similar expectations fuelled the frenetic M&A activity in the US in the late 80s and early 90s.

It has to be said that major cost savings from these mergers tended to be lost in the painful process of integration, and shareholders of the acquiring companies saw value destroyed rather than added.

However, It could be argued that European airlines have learnt about the techniques of merging from the US experience and from the operation of alliance. Expertise can also be imported from other sectors where mega-mergers are almost commonplace - automobiles, telecoms, chemicals, for example.

The table on the right provides a starting point for looking at the potential cost savings from a merger. We have split out the main functional cost elements of a theoretical airline (compiled from a sample of European flag-carriers), added comments of the cost saving associated with alliance and full merger options, and come up with some tentative estimates of possible cost saving from merging.

**Aircraft ownership costs** So far there is little evidence that alliance partners have been able to agree on aircraft specifications that would permit joint purchasing savings from airframe manufacturers. Indeed, one of the closer alliance partnerships

between an European and a US airline admitted in private that it is virtually impossible for the respective airline management teams to ever agree on a specification. One management team and one Chief Pilot would dispense with such conflicts. But we suspect that only relatively minor price or lease reductions could be achieved through increasing the size of aircraft orders.

**Passenger services and station costs** In any take-over or merger the main cost savings come from the removal of duplication, which inevitably is largely reflected in job losses. In passenger services and especially outstation manning there should be substantial scope for rationalisation and cost saving through adopting the practice of whichever is the more efficient operator.

**Flight/cabin crew** Whereas alliance partners do not have standard operating procedures (SOPs) and cockpit configurations, it is impossible for one partner to use the aircraft of another partner. A fully merged airline with common-rated crew should benefit from higher crew and aircraft utilisation. However, one of the most intransigent barriers to effecting an airline merger is the smooth amalgamation of seniority lists - usually conflict and increased costs result.

**Fuel, landing fees and route changes** Joint purchasing in an alliance is probably just as likely to achieve discounts and larger scale purchasing by a merged airline. However, flight consolidation and a streamlined schedule could bring benefits from better aircraft utilisation.

**Maintenance** In an alliance some saving can be made through exercises like joint purchasing of parts, but a full merger should allow full integration of the two airlines' maintenance operations, again implying redundancies and union reaction. The degree of savings depends largely on how compatible the two airlines' fleets are.

**Commissions** There may be some saving here from increased negotiating power which could come from an alliance or a merger. Any effect on rates will, in any case, be dwarfed by the other industry changes in this field.

**Overheads** It is this area that major savings should be possible; for example, a merged airline would only need one finance director, one legal department, etc.. Gains though would be made by adopting best practice of the two airlines, and locating such heavily manned areas as revenue accounting in the lowest cost location and adopting the best working practices.

**Branding** Advertising costs go up after a merger but in the longer run a simplified brand should be more cost effective. Promoting one or more airline brands plus an alliance brand is expensive.

So bottom-line benefits of a full merger between carriers, or the take-over of one carrier by another, might be expected to equate to 8% or so of the combined cost pile.

**POSSIBLE COST SAVINGS FROM AIRLINE MERGING**

| | % of op.costs | Alliance | Merger | Potential saving from merger |
|---|---|---|---|---|
| **Aircraft rentals/depreciation** | 16.0 | Unproven | Economies of scale? | 2% |
| **Passenger services** | 12.5 | Some rationalisation | Remove duplication | 10% |
| **Stations** | 10.5 | Some rationalisation | Best practice | 10% |
| **Fuel** | 8.5 | Joint purchasing | Better aircraft utilisation | 2% |
| **Flight/cabin crew** | 8.5 | None | Increased productivity | 10% |
| **Commissions** | 6.5 | None | Economies of scale? | 0% |
| **Maintenance** | 6.3 | Joint purchasing | Efficiency gains | 10% |
| **Landing fees** | 5.5 | None | More efficient use of aircraft | 2% |
| **Sales and reservations** | 5.0 | None | Remove duplication | 10% |
| **General, admin., head office** | 5.0 | Increase | Remove duplication | 40% |
| **Handling and parking** | 4.5 | Joint purchasing | Best practice | 5% |
| **En-route charges** | 4.0 | None | More efficient use of aircraft | 2% |
| **Other selling costs** | 4.5 | Unknown | Best practice | 10% |
| **Advertising** | 1.2 | Two brands | One brand ? | 5% |
| **Audit, consulting, legal** | 1.0 | None | Remove duplication | 40% |
| **Insurance** | 0.5 | Joint purchasing | Economies of scale | 2% |
| **TOTAL** | 100 | | TOTAL | 8% |

# Cycle-logical state of the industry

The airline industry is beset by cycles - from the very short term through the day, through the week, by month and season to the longer range equipment cycle - although the industry has not been around that long to discover whether it adheres to any of the very long term Kondratieff cycles.

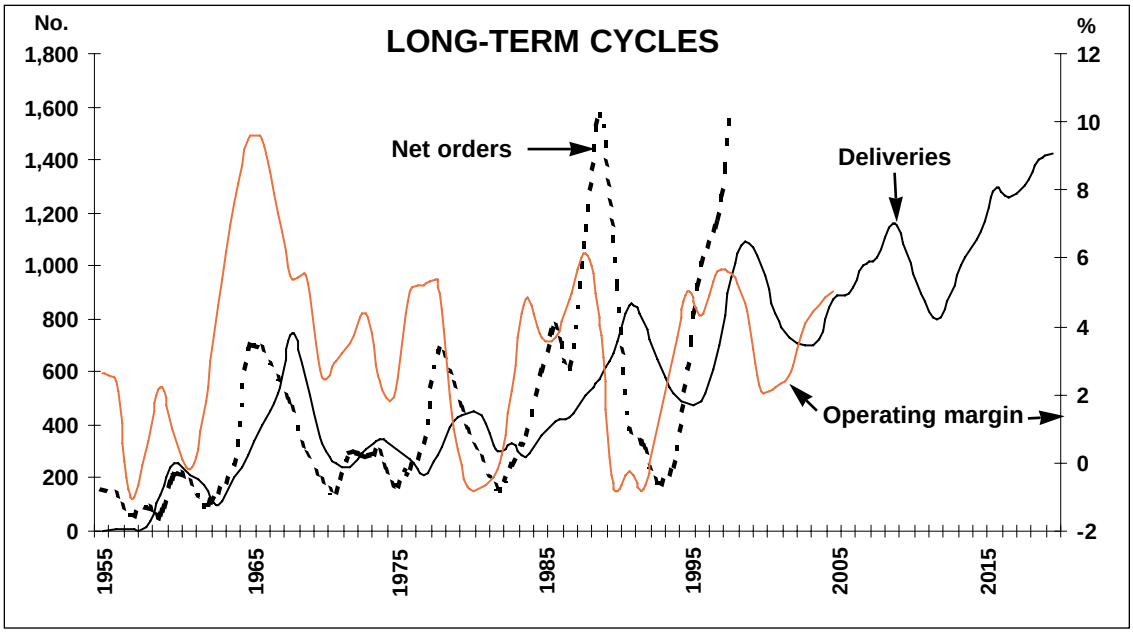
The industry also has the misfortune to be a highly capital intensive one with long-life assets while the product itself has a very short shelf life (once the doors are shut, you generally cannot get any more passengers on board). Meanwhile, the competition for the marginal passenger is very intense. In addition so much of an airline's operations are well outside the control of management and a small change in one extraneous variable can have a disproportionately large impact on profitability.

Past profit cycles in the industry have tended to follow a distinct pattern. When the industry makes money, the airlines start to order aircraft to provide expansion. Historically there would be a delay of 18 months to two years before the aircraft could be delivered. By the time the aircraft are delivered, something happens to upset the demand and the industry slips into a position of over-capacity, and subsequent losses.

At this point the first thing to be done is to cancel outstanding options and orders for aircraft where possible and wait for the supply/demand environment to improve. As it does, the industry makes money again and starts to order equipment.

In the mid-90s, so many commentators and industry participants said that this time the cycle would be different. The argument went that with the long-range single supplier flexible orders from the larger carriers there was for the first time a large element of flexibility in the potential introduction of capacity. Secondly, as the industry consolidates into the global alliances there would be a greater level of co-ordination. Thirdly. that there was a very significant level of flexibility implied by the introduction of the Chapter 3 noise regulations.

What happened was the crisis in Asia. As a result of this there was a massive switch of long haul capacity from Asian and Pacific routes onto the North Atlantic. At the



same time, those European carriers emerging from restructuring put a lot of capacity on to the Atlantic to "recover lost market share". The result was a decimation of profits in the Asian region, while generally reasonable profits were still to be made in North America buoyed up by the strong domestic environment and a modest dip in profitability overall for the Europeans - not helped by the war in Kosovo.

However, the erstwhile very profitable BA and KLM were aggressively hit by the resurgence of competition in Europe. On top of everything else fuel prices doubled from the nadir. As a result industry profits dipped from the peak seen in 1998.

## Improving supply/demand balance ?

Now however, the supply / demand equation appears to be improving. Asia is recovering reasonably well and the freight markets have continued buoyant through the Y2K watershed pointing to good world economic background. The US economy continues in its unprecedented positive run and the Euroland economies continue to show reasonable improvement. Deliveries of 747s, the long haul workhorse have virtually dried up and although North Atlantic capacity this year appears set to increase by around 8% overall, this is half the rate experienced last year. Fuel prices remain a problem: although some carriers are hedged at reasonable rates for the current year, there will be a strong increase in the fuel bill for most.

However, as normal, the carriers are able to pass on the cost increase to its passengers in select markets, and there has been a modest improvement in the yield environment since the beginning of the year, so that although one might have thought that a doubling in the cost of fuel would have wiped out margins entirely, the net result is unlikely to be as bad as that. All other things being equal we might see a further dip in industry profits this year - but not as far as to push the industry into loss as a whole - which could ironically turn out to be the bottom of the cycle.

# Chinese domestic traffic: discounting absolutely forbidden

China's domestic air travel continues to grow at a phenomenal rate, and but it's far from evolving into a mass transit system.

In the recession year 1998 Chinese GDP grew by only 7.8% and passenger traffic growth languished at 6.2%. This year, according to Deutsche Bank, a 13.5% rise in traffic is expected.

The improvement in traffic is attributed to two factors. First, there has been a relaxation in the travel budgets of the state owned enterprises (SOEs). Managers of SOEs plus government officials account for about 60-70% of domestic revenue. Second, traffic growth has regained momentum following a total ban on fare discounting imposed in April 1999.

However, the CAAC has now implemented a new policy of revenue-sharing on routes operated by more than one airline. Airline revenues go directly to the CAAC where they are divided up among the "competing" airline using a formula based on passengers carried, capacity offered and flight schedules.

The aim is gain to discourage any form of ticket discounting. As Hai Lian Cheng, Finance Director of the CAAC, puts it: "If ticket discounting hadn't been stopped in a timely manner, it would have caused the economic collapse of the industry and might have endangered safety".

Remarkably, some of the smaller airlines are reported to be continuing to discount in order to compete with the main carriers even though they are risking their AOCs.

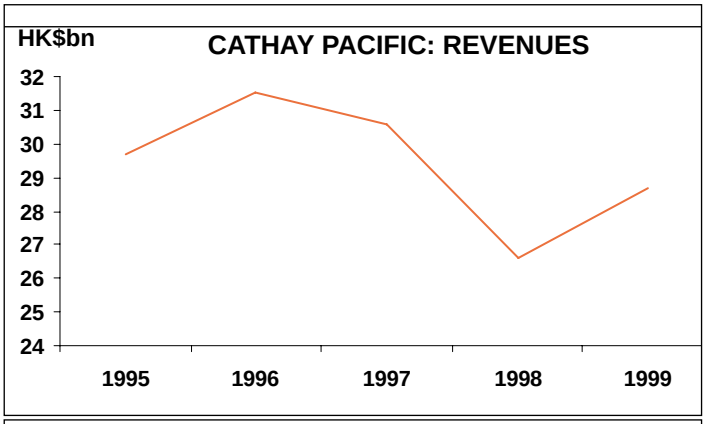
# Cathay Pacific: redefining its role

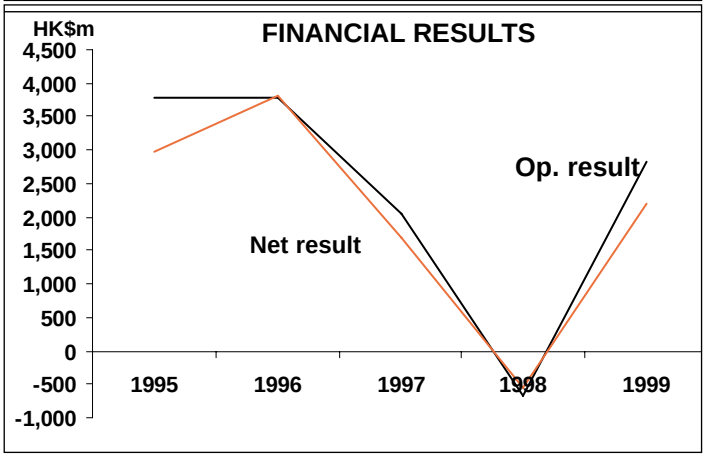
Cathay Pacific has survived the Asian crisis, returned to profitability and is again expanding rapidly. Now it has to re-define its role as a global Chinese carrier based in the Special Administrative Region (SAR) that Hong Kong has now become.

1998 was a nightmare year for Cathay Pacific executives. The Asian crisis struck hard just after the hand-over of the former British colony to PRC, and Hong Kong GDP fell by 5.9%. The collapse of intra-Asian business traffic, the drying-up of tourism from Japan and scares about chicken flu caused traffic to stagnate while yields dropped by 20%. For the first time since 1963 the airline produced a net loss, HK$542m (US$70m).

1999 saw a rapid return to profitability as economic growth resumed at around 2.5% (6-8% is expected for 2000). Revenues increased by 7.8% to HK$28.7bn ($3.7bn), costs fell by 2.3% to HK$26.5bn and net profits of HK$2.2bn ($285m) reappeared. For this year Deutsche Bank in Hong Kong is expecting a net profit of HK$3.6bn.

The share price has recovered as well. Having traded at a substantial discount to net asset value in 1998 and part of 1999, the airline has now got a stockmarket valuation of HK$47bn ($6.2bn), nearly 20% above that of its oneworld partners, American and British Airways. Deutsche Bank's target price for Cathay's shares in 2000 is HK$17.4 compared to HK$14 at mid-May.




## Turn-around elements

Cathay's turnaround strategy was based on a 3.6% reduction in capacity which, combined with a 1.9% recovery in traffic, pushed passenger load factors up to 71.5%, a level not seen since the early 90s. At the same time the decline in yield was stabilised. The capacity cutbacks were concentrated on Japan, Southeast Asia and Australia, while European and US services were maintained at previous levels.

The Asian export boom was the second most important factor in Cathay's recovery. Cathay Pacific Cargo's fleet of six 747Fs was fully utilised (80% load factor), as were the three 747Fs of Air Hong Kong, a 75%-owned subsidiary, and additional capacity had to be chartered in from Atlas Air.

With both volumes and yields well up Cathay's cargo revenue increased by 23% in 1999. Freight now accounts for nearly 30% of Cathay's business compared to 20% in the mid-90s. The cargo growth rate will inevitably slow this year as Asian currencies regain some of their value and export prices rise, but Cathay is committed to expansion in this sector, and the SAR is generally supportive of a liberal cargo regulatory regime.

Two more 747-400Fs will be added to the fleet this year.

Interestingly, Cathay's alliance links in the cargo market are with Lufthansa. It is now in its eighteenth year of joint operation on the Frankfurt-Hong Kong route, and it has recently signed an extensive agreement with DHL, 25% owned by Lufthansa, to carry express freight in the bellyholds of its passenger aircraft through the Southeast and Northeast Asian regions.

The Asian crisis forced management to confront its labour problems, including the ex-pat cost structure of its cockpit crews. This has not been achieved without pain - there was a two-week pilot strike last summer. Nevertheless, staffing levels were cut back sharply from pre-Asian crisis levels by about 2,500 employees or 16%. Labour costs fell by 8% in 1999 and further gains are still to come through. Cathay now claims that its productivity (ATK per employee) is equal to that of SIA.

Cathay has also attacked travel agent commissions in a big way - these were down by 7.5% in 1999, and should fall further as the airline moves further into electronic distribution and e-commerce. Landing and parking charges at Chep Lap Kok will be reduced this year as the airport authority cuts charges by 15% in January in an effort to promote the competitiveness of the new airport.

From 1990 to 1997 Cathay Pacific almost doubled its capacity but unit costs scarcely moved. As a result the airline's profitability was being squeezed well before the Asian crisis brought a precipitous fall in unit revenues. In effect, the Asian crisis has given Cathay the opportunity to halt this trend.

The other element in Cathay's recovery plan was its entry into the oneworld alliance in the autumn of 1998. In our previous briefing on Cathay (September 1998) we commented on the fact that Cathay executives had carried out the network analyses on various alliance options and concluded that the bottom-line benefits were not at all tangible. Still, Cathay's commitment to oneworld was quite understandable given the miserable trading conditions that the airline was facing at that time.

There are still genuine questionmarks over how Cathay can develop this alliance.

First, Cathay finds itself in fierce competition with the codeshared Qantas/BA service between the UK and Australia. Cathay for its part is highly unlikely to be allowed to codeshare with either of these oneworld carriers on either Hong Kong-Australia or UK-Hong Kong. The Australian Competition Commission has already expressed concern about possible collusion on this trunk route.

Cathay's codeshares with BA are limited to the UK domestic shuttles (Heathrow to Glasgow, Belfast, etc., which were formerly British Midland codeshares).

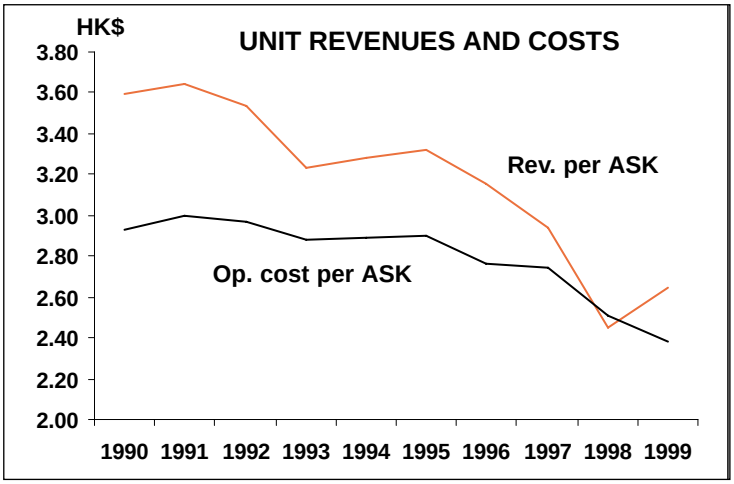
Second, the Hong Kong authorities failed to win codesharing rights for Cathay in its US bilateral negotiations early this year. The aim is for Cathay and American to codeshare on Hong Kong-US, intra-Asian and some US domestic services, but at present Hong Kong will not accede to US requests for increased fifth freedoms over Hong Kong.

Third, the single oneworld codeshare that was proving useful to Cathay was Hong Kong to Vancouver and Toronto, but that will end in June following the absorption of Canadian into Air Canada and Star.

Fourth, there is uncertainty over the alliance preferences of Cathay's Chinese partners. Dragonair has decided against joining oneworld and China Eastern is considering all its options at present.

In the 1999 annual report Cathay's chairman James Hughes-Hallett seemed to be slightly low-key on the benefits of oneworld, simply noting that "solid progress" has been made. In alliance terms, Cathay probably needs American as a partner because US carriers generally are looking to expand swiftly into the Hong Kong and Chinese markets following China's admission to the WTO earlier this year.

But there are conflicts of interest with BA and Qantas, which might swing Cathay towards Swissair, with whom it used to have a codeshare, bringing it into the new American/SAir/Sabena grouping. Cathay also has a codeshare and FFP links with South African Airways, which is partly owned by SAir.




Like SIA, Cathay appears ambiguous towards global alliances preferring the bilateral alliance model in many instances. Whether or not it switches from oneworld to American/SAir, it will certainly maintain its close cargo agreements with Lufthansa/DHL.

## New expansionism

The announcement of a major fleet order in May for seven A330s, one 777 and another 747-400F, all to be delivered before the end of next year, is indicative of the radically changed market conditions in Asia. Along with previously planned additions - three A330s, one A340 and two 747Fs - Cathay will be growing its capacity by over 20% in the next 18 months.

The fleet will total 80 units by the end of 2001, and there are plans to expand to 140 by 2005. This implies an imminent order for 20-30 777s or A340s, for delivery in 2001-03. In addition, Cathay is one of the key airlines that Airbus has been targeting as a launch customer for the A3XX.

Load factors in recent months have consistently been around 74-75% range which has put Cathay under strong pressure to expand. Even with the additional capacity, Cathay expects to be able to edge up yields at least in the short term.

There is a danger that costs will start to move up again - the new fleet expansion means that the airline will have to employ over 1,400 new cabin and cockpit crew - but Cathay maintains that its unit costs will continue decline, helped by the capacity increase. The target cost level is HK$2.0/ATK compared to HK$2.24 in 1999, and pre-Asian crisis levels of HK$2.64.

In the early 90s Cathay regularly achieved annual traffic growth rates of 10%-plus but the market that it is expanding in now has significantly changed. It is a permanently lower yielding market, with Economy Class and in particular sixth freedom passengers displacing Business and First customers. The Japanese market, which in pre-crisis times accounted for 25% of the airline's profits, is now characterised by executives travelling in the back of planes while the tourists who abandoned the island-state in the wake of the Chinese hand-over are now just beginning to trickle back.

The move from Kai Tak to Chek Lap Kok has provided Cathay which an airport to rival Changi as Asia's leading hub. However, the capacity constraints at Kai Tak airport afforded a certain protection to Cathay and shaped Hong Kong's ASA policy. Now with an unconstrained airport, Hong Kong authorities are eventually going to have to adopt a more liberal approach to ensure the type of overall growth in traffic needed to justify the investment.

In such circumstances rapid expansion is the logical strategy for Cathay to pursue. It has developed a genuine hub system at the

**CATHAY'S FLEET PLANS**

| | Current fleet | Orders (options) | Remarks |
|---|---|---|---|
| **747-200F** | 4 | | |
| **747-400F** | 2 | 3 | Delivery late 2000, mid 2001 |
| **747-400** | 19 | | |
| **777-200/300** | 11 | 1 | Delivery 2000 |
| **A330-300** | 12 | 10 | 7 to be delivered in 2001, 3 to be leased immediately |
| **A340-300** | 14 | 1 | From ILFC |
| **Total** | **62** | **15** | |

new airport with five waves of connecting flights a day. It claims that a 31% increase in meaningful connections between 1999 and 2000 will leapfrog it ahead of SIA as a network carrier.

But one of Cathay's fundamental problems, as well as being its main opportunity, is its home market. SIA has been able to take advantage of the Asian crisis to build its "domestic" market, first by winning more traffic from beleaguered Garuda and MAS in the Indonesian archipelago and Malaysian peninsula, and then by investing in Air New Zealand and Ansett in order to consolidate its position in the Australasian market. Cathay too has been able to exploit the problems of PAL and gain local and connecting from the Philippines, but Cathay's attempt to invest in and take over the running of PAL was firmly rebuffed by Lucio Tan.

For Cathay the home market is the PRC, and Cathay thinks of itself as the premier Chinese airline, positioned to be the leading carrier of international air traffic to/from China. But actually exploiting this massive opportunity is as always complicated as a result of the convolutions of Chinese aviation policy. Cathay's main shareholders are:

• Swire Pacific (with about 44%), the publicly quoted arm of the Swires Group, which has extensive mainland Chinese interests in engineering, brewing, property development, and a history of trading in the country that goes back to 1866.

• CITIC Pacific (with about 25%), the Hong Kong subsidiary of the mainland Chinese investment vehicle, CITIC.

• CNAC (with about 2%), the Hong Kong subsidiary of Beijing-based CAAC, which is the ultimate owner of the mainland Chinese airlines and the regulator of the aviation industry.

In turn, Cathay is linked with Dragonair, the main Hong Kong-mainland China airline. In 1997 Swires and CITIC Pacific each sold 17.7% of Dragonair to CNAC, which is now the major shareholder with 36%. Swire Pacific and Cathay together have about 26% of Dragonair and CITIC Pacific 29%.

This structure was supposed to establish Cathay's position within the "one country, two systems" framework. The cross-ownership of CITIC and Swires was intended to minimise unnecessary competition between Cathay and Dragonair, with the two airlines in combination offering services to most Chinese cities from Europe and the US over Hong Kong. (Cathay itself cannot serve internal Chinese points directly).

However, according to the Centre for Asia Pacific Aviation (CAPA), an Australia-based consultancy, Dragonair's majority owners, CNAC, may have a new role for this airline.

*Centre for Asia Pacific Aviation*

www.airportasiapac.com.au

CAPA suspects that Dragonair will soon be competing directly with Cathay on some Southeast Asian routes, exploiting its cost advantage. Already Dragonair has signaled its intentions by announcing a Hong Kong-Dubai-Manchester service in August in direct competition with Cathay. Dragonair fleet plans may also indicate that it has ambitions beyond the Hong-China markets. Six A320s, one A321 and two A330s (plus a further two options) are on order which will double the carrier's current fleet.

As Dragonair cannot operate pure domestic services (for example, between Beijing and Shanghai), Cathay also needs to strengthen its links with one of the three big domestic carriers - either Shanghai-based China Eastern, Guangzhou-based China Southern or Beijing-based Air China. Talks have recently taken place between Cathay and China Eastern on the possibility of an equity investment. The Chinese authorities are considering raising the stake foreigners can hold in a mainland carrier from 35% to 49%. China Eastern appears to have rejected Cathay's initial offer but this deal could still be done.

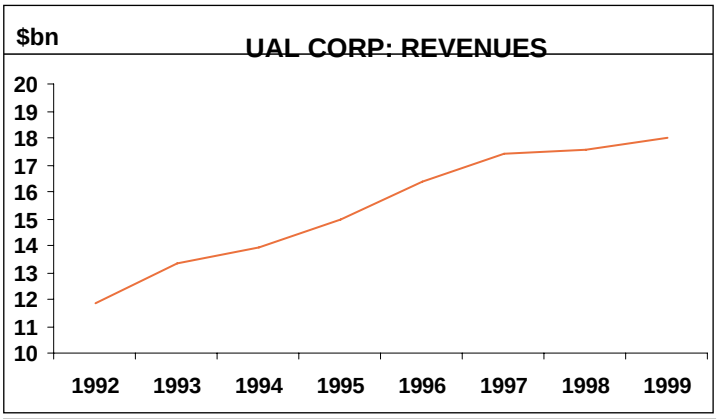
Another complication in the world of Chinese aeropolitics is the possibility of direct flights between Taiwan and the mainland. Currently about 2m passengers a year fly between Taiwan and Hong Kong to connect onto Dragonair or one of the other Chinese airlines on order to get to their final destination in the mainland. Cathay carries roughly half the Taiwan-Hong traffic, China Airlines and EVA the rest. If or when the ban on direct services is lifted the vast majority of these passengers will choose more convenient, shorter direct flights to the benefit of China Airlines and the mainland carriers but to the detriment of Cathay. This development is , however, at least two years away.

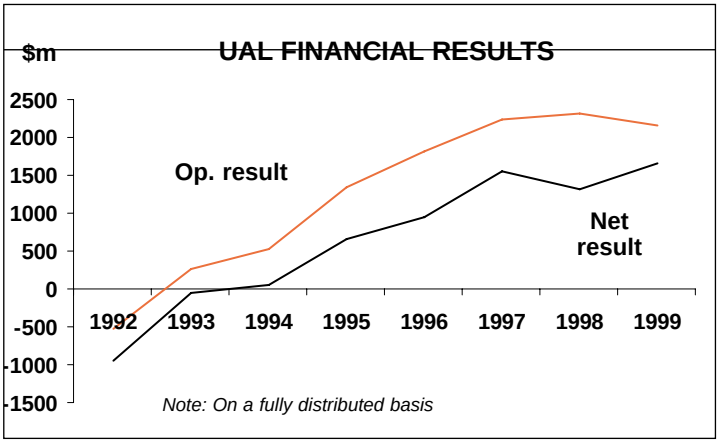
# United: the fundamental labour problems

Is United wise to take on US Airways in light of its extremely challenging labour situation? While United has continued to outperform the industry financially, it is now probably the worst-positioned among the US carriers on the labour front. It has to secure new contracts with most of its employee groups and faces a substantial hike in labour costs, due to the ending of its employee stock ownership plan (ESOP) between April and July this year.

The contract negotiations have turned out to be much more difficult than was initially expected, which makes it surprising that UAL's leadership is prepared to further complicate the situation with the integration issues posed by the merger.

UAL has continued to report record earnings, thanks to exceptionally strong domestic unit revenue growth and a recovery in Asian markets. For the March quarter, the company posted increases in operating, net and per-share earnings (before extradordinary items) on both GAAP and fully distributed basis, despite 34% higher average fuel prices.




In fact, UAL's operating earnings before one-time charges set a new first-quarter record at $384m or 8.4% of revenues on a fully distributed basis. Net earnings before special items rose marginally to $191m. This followed record net earnings of $1.7bn reported for 1999.

UAL's earnings have risen strongly and steadily since profitability was restored in 1994. Some $5.2bn worth of concessions granted by the workers in 1994 in exchange for a 55% ownership stake, as well as relative labour stability, have been instrumental.

The latest results reflect very favourably on UAL's top management, in particular James Goodwin, who took over as chairman and CEO when Gerald Greenwald retired in July 1999. Goodwin has surprised everyone with his leadership skills and bold initiatives, which have included helping to retain Air Canada in the Star alliance, introducing a new domestic "Economy Plus" product and aggressively developing United's e-commerce strategy.

The earnings stability has paved the way for UAL to restore regular dividends this month after a 13-year gap, making it the only major carrier to pay proper dividends (Delta and Southwest pay nominal amounts). Also, after buying back $750m worth of its common shares in 1997-99, another $300m share repurchase programme is under way.

UAL stockholders will receive 31.25 cents per share on June 15 in the first of what looks likely to become quarterly payments. The move, which could broaden UAL's shareholder base, is unlikely to be copied by other carriers as dividends are normally a tax-inefficient way of returning

cash to shareholders. But dividends paid to an ESOP receive favourable tax treatment, which United indicated would result in considerable savings. An added benefit is to be able to appease employee-owners at a time of contract talks.

Strong cash flow and equity boosts have strengthened UAL's balance sheet, after it was significantly weakened by the recapitalisation associated with the ESOP. However, the proposed purchase of US Airways, which includes a $4.3bn cash payment and assumption of $1.5bn of debt and $5.8bn of off-balance sheet leases, would substantially weaken UAL's balance sheet. At year-end the company had $16.5bn of debt and leases. S&P, which immediately placed UAL's ratings on "creditwatch negative", estimates that the deal would raise debt-to-capital ratio from 71% (year-end 1999) to around 81%.

UAL estimates that full-year 2000 earnings will fall to $8-$10 per share before special charges from the $10.06 per share earned in 1999, mainly because of the ending of the ESOP. Analysts currently believe that the results will be at the high end of the range. However, these estimates assume that the pricing environment will continue to be strong and that the post-ESOP wage increases can be kept within the management's targets.

## Strong unit revenue growth

One of United's greatest strengths at present is its remarkably strong revenue performance. A stunning 10% surge in March boosted unit passenger revenue growth to 5% in the first quarter, at the expense of only a marginal fall in load factor, and another 7-8% rise is expected for the current quarter and 4.5-7% for the year.

Domestically, the carrier has outperformed the industry, which is partly attributed to a new revenue management system, the Economy Plus product and constrained capacity addition. Economy Plus, which entailed reconfiguring almost the entire domestic fleet to provide five extra inches of legroom for full-fare passengers and some frequent-flyers, is estimated to boost domestic RASM by two percentage points this year, though unit costs will also rise because of the associated capacity reduction.

Continuation of strong domestic RASM trends is, of course, far from certain, but United is now also benefiting from accelerating unit revenue growth in all of its international regions. Most significantly, Pacific unit revenues have risen for three consecutive quarters (6% in the latest period), while Latin America has been running at around 8%. Even transatlantic unit revenues rose by 3% in the March quarter - the first improvement in over a year as industry capacity growth moderated.

## Impact of ESOP ending

But the revenue gains may be more than offset by a surge in labour costs this year as the ESOP comes to a close. The process began in April, when the wages of pilots and most other ESOP employees snapped back to the pre-August 1994 levels. The machinists' ESOP contract will come to a close on July 12.

The ESOP does not actually "expire", in

**UNITED'S FLEET PLANS**

| | Current fleet | Orders (options) | Remarks |
|---|---|---|---|
| **727** | 75 | | Stage 3 |
| **737-200/300** | 125 | | Stage 3 |
| **737-500** | 57 | | |
| **747-200** | 9 | | |
| **747-400** | 43 | 1 | Delivery 2000 |
| **747SP** | 1 | | |
| **757-200** | 98 | | |
| **767-200/300** | 53 | 3 | Delivery 2000-01 |
| **777-200** | 41 | 20 | Delivery 2000-01 |
| **DC-10-10/30** | 17 | | |
| **A319** | 29 | 22 | Delivery 2000-02 |
| **A320** | 59 | 32 | Delivery 2000-02 |
| **Total** | **607** | **78** | |

that in February United's employee-owners and management decided to "freeze" it at its current state. Instead of creating a new ESOP at this stage, employees will get pay increases. The practice of allocating more UAL stock into employees' accounts in a trust will cease, but workers will still receive the previously allocated shares when they retire or leave the company. If there is no new ESOP, employee ownership at United will wind down gradually over a few decades.

Renewing the ESOP in some modified form has been a possibility, but according to United's CFO Doug Hacker, there is little appetite for that at present (a comment made before the merger announcement). The pilots have made getting a contract their first priority, but they continue to be potentially interested in an ESOP after the contract is secured. There is apparently significantly less interest among other employee groups.

A new ESOP is probably the lowest of all priorities at present in light of the US Airways merger announcement and the likelihood that the contract talks will, as is typical, drag on for months or even years.

The wage snapbacks are only a small part of the problem (the pilots' pay went up by just 6.7% in April when the ESOP ended). The biggest problems are that the 1994 pay rates are obviously substantially below competitors' rates and that the pilots are now demanding industry-leading wages. According to ALPA, a United 777 captain is now paid 28.5% less than a Delta 777 captain.

United says that it is fully committed to restoring competitive wages to its workforce after the ESOP, as outlined in its "Vision 2000" plan. But its April offer of 13.4% over the 1994 level was a long way off the 25-30% demanded by the pilots. The gap also remains wide on benefits, job security and the use of regional jets. The current scope clause allows only 65 RJs with a maximum of 50 seats, which puts United at a competitive disadvantage with carriers like American and Delta.

Both sides originally expected much smoother talks and certainly a new contract by the April 12 deadline. They have been negotiating since December 1998. The company also took great care to ensure that Gerald Greenwald's succession would not become an issue with the unions. In September 1998 former president/COO John Edwardson stepped down when it became clear that the heads of IAM and ALPA would not support him to succeed Greenwald. And James Goodwin was strongly supported by the unions and is popular with the workers.

Also, despite the ESOP coming to a close, the unions have retained their board seats and veto powers over major decisions, because the governance principles are written into the company's charter. Labour contract and stock ownership negotiations are regarded as entirely separate processes. The impression gained is that the management is prepared to live with the existing governance structure in the hope of maintaining labour stability.

**ESTIMATED IMPACT OF ESOP ENDING ON UAL LABOUR COSTS ($m)**

| *Employee Group* | 1999 | 2000 | Change | 1Q | 2Q | 3Q | 4Q |
|---|---|---|---|---|---|---|---|
| **Pilots** | 1,520 | 1,900 | 380 | | 127 | 127 | 127 |
| **Ramp and customer contact workers** | 1,316 | 1,500 | 184 | | | 92 | 92 |
| **Mechanics** | 909 | 1,000 | 91 | | | 45 | 45 |
| **Admin and management** | 598 | 700 | 102 | | | 51 | 51 |
| **Non-ESOP Groups** | 1,386 | 1,400 | 14 | | | 7 | 7 |
| **Total 2000 vs 1999** | **5,729** | **6,500** | **771** | | **127** | **322** | **322** |
| **Total 2001 vs 1999** | | | **1,288** | **322** | **322** | **322** | **322** |

*Source: Merrill Lynch*

But the pilots' patience is beginning to wear thin. While there is no threat of strike or other organised work action, over the past month some pilots have been refusing to fly "overtime" in protest over lack of progress in the contract talks. This led to some crew shortages and spates of flight cancellations in May, though the situation was exacerbated by poor weather conditions. The company is

now recruiting more pilots in an effort to eliminate the problem, and the contract talks are due to resume under federal mediation in early June.

The pilot representative on UAL's board was the only director to vote against the merger on May 23. On June 2, after three days of meetings with the management, ALPA announced that it could not support the deal "as it is presently structured". The main problem is seniority integration, as US Airways has a much larger percentage of senior pilots than UAL has.

According to ALPA, Goodwin told them that he had pressed for measures to protect United pilots' seniority in the merger talks, but US Airways chairman Stephen Wolf did not want the deal to be contingent on any labour issues. This is obviously hard for the pilots to accept, given that UAL is the acquirer. Also, it can only add to the grievances that United pilots have about being left out of the decision-making process and not being treated with the respect that employee-owners deserve.

Nevertheless, the pilots' carefully worded statement left the door open for negotiation. Interestingly, according to the union, in the context of the merger presentations Goodwin pledged to give the pilots an "industry-leading" contract.

The pilots will not be able to veto the merger because the IAM representative on UAL's board voted for the deal. But in practice United needs its pilots' approval for the merger to have any chance of success.

It is not yet clear if the merger issues will be dealt with in the context of the contract talks. If so, they will divert attention from tough existing issues, such as RJs, and prolong the negotiating process.

As a result of the ending of the ESOP, United expects its salary costs to rise by 12% in the current quarter, after a mere 1% increase in January-March. Unit costs are expected to surge by almost 10% (or 7% excluding fuel). The ESOP cost impact for 2000 is estimated at $780m (or $1.3bn on a full 12-month basis, according to Merrill Lynch). But those estimates are based on what United's management believes are competitive wages, rather than what the workers will accept.

Because UAL submitted the ESOP impact estimates to the financial community several months ago, the labour cost factor is believed to have been fully reflected in its share price for a while. Until the US Airways merger announcement, many analysts included UAL among their "top picks" on grounds of low valuation and longer-term growth potential. Of course, the prevalent advice now is caution until the overall consolidation picture clears.

## Aggressive e-commerce

According to a recent survey by Salomon Smith Barney, United is ahead of its competitors in terms of stakes held in Internet ventures. This gives it enhanced potential for cashing in on non-core assets in the future.

CFO Doug Hacker suggested recently that one way to make shareholders happier might be to spin off disaggregate e-commerce ventures, thus isolating the benefits that could be more specifically targeted to particular types of investors.

More immediate plans, however, involve the creation of an e-commerce subsidiary, staffed by employees from United's marketing and technical divisions and located outside its headquarters, to enable it to better sell travel products on the Internet, as well as to manage its partnerships and relationships with online travel sites.

United is also spending $8-$10m to improve its web site, to help double this year's Internet sales from the $500m or 4% of total sales achieved last year. The goal is to boost Internet sales to "at least 20%" of revenues by 2003.

## International growth plans

United is in the middle of an international expansion drive, focusing particularly on Los Angeles which was designated as a domestic hub a year ago. San Francisco, the more established international hub, has seen restoration of many Pacific services as the Asian markets have recovered. After

Shanghai and Seoul, Beijing and Frankfurt are due to be added later this year.

Next year's plans envisage a daily non-stop "air bridge service" linking both San Francisco and Chicago with Beijing and Shanghai, thus eliminating the Tokyo stop. United also expects to become the only carrier to operate a round-the-world service, linking Washington DC, Los Angeles, Hong Kong, Delhi and London.

United's Pacific capacity, which is still well below the pre-Asian crisis peak level, is expected to surge by 11.5% this year, and more growth will follow in 2001. This year's estimated 8% transatlantic ASM growth is much higher than previously anticipated because of a new San Francisco-Frankfurt service. But a planned 10% reduction in Latin American ASMs will moderate this year's total international capacity growth to a little over 7%.

United has been quick to develop cooperation with new Star alliance entrants like Austrian. It has a well-established alliance with Mexicana, which will join Star in July, and is keen to cooperate with British Midland (due to join later this year) and Lufthansa at London Heathrow. United's main interest in a potential US-UK "mini-deal" is the opportunity to "mount collectively quite an attractive Heathrow operation with our Star partners".

However, Star is clearly not a priority for United, which contrasts with Lufthansa's considerable efforts to coordinate the alliance. This probably largely reflects the fact that international services are a much bigger part of European airlines' total operations.

## Domestic network

United expects its domestic capacity to increase by just 0.5% this year, in part because of the seat removals associated with Economy Plus. Because of this, system capacity will rise by around 2.8%, which would be below the industry average. Growth will accelerate from zero in the first quarter to up to 6.5% in the fourth quarter.

Having established strong hubs at Chicago, Denver and San Francisco, much of United's effort over the past year or so has focused on building up domestic hub operations at Los Angeles and Washington Dulles. The Los Angeles expansion, which has been in response to strong demand and AMR's acquisition of Reno and new codeshares with Alaska, has included increased frequencies to Dallas, Houston, Atlanta and cities on the East Coast.

In early 1999 United decided to start strengthening it presence on the East Coast -"the one piece of our very strong US and international route network that is not yet in place". This has included a rapid build-up of long haul and feeder services at Washington Dulles - a process that has inflicted much localised damage on US Airways but has given United only a limited foothold in the region.

The main reason behind UAL's bid for US Airways is to effectively fill the East Coast gap and to gain an edge over American (rather than respond to Delta, Continental, Southwest and others that are also expanding rapidly on the East Coast). Its mainly east-west route structure provides a "perfect strategic fit" with US Airways' East Coast north-south operations.

United is at least publicly confident of securing regulatory approval for the merger. However, it seems likely that more concessions will be necessary to allay anti-trust concerns.

In the event that the merger is approved, the long term benefits to United - through East Coast revenue generation, hub consolidation and fleet commonality - could substantially offset the higher labour costs and financial obligations. According to a recent report from Merrill Lynch, United estimates that the acquisition would dilute per-share earnings by 35% in year 1 (2001) but boost earnings by a similar amount in year 2.

Should the merger not materialise, United actually has some promising growth opportunities at Chicago, its main hub and home base, as slot controls there are phased out over the next two years. Although competitors will obviously also benefit, trends at other dual-hub airports like Dallas Fort Worth have shown that over time the number one hub carrier gains market share at the expense of the number two (American at Chicago) and others.

By Heini Nuutinen

# Route and network profitability: how to measure it

This is the second in a series of articles on measuring an airline's route and network profitability. The first, published in the February 2000 issue, focused on some fundamental development principles for management to adopt when setting out to build and/or improve this vital MIS tool. Assuming then - and it's a big assumption - that the MIS development process is managed well, there remains a daunting list of technical, process and analytical challenges.

On the technical front, the strength of the internal IT group and the selection of experienced and successful systems and software suppliers - and contractors - will be a critical factor.

Key questions need to be resolved efficiently and cost-effectively, including how to: process/warehouse such huge volumes of data; integrate with existing architecture(s); meet data and information availability and timeliness goals, and deliver flexible online/ad-hoc analysis.

The process challenges - alongside those outlined in the previous article - encapsulate difficulties such as:

• Ensuring accurate data capture and quality control at source - how many MIS tools suffer from the user criticism of "rubbish in, rubbish out"?

• Recognising the limitations of existing data capture processes, assessing these against the ideal MIS requirements and determining what and where to compromise; and

• The use and control of the MIS information by management.

The analytical challenge focuses on the robustness of the mathematical algorithms and allocation mechanisms used in building the route and network profitability model. This applies to costs and revenues which have to be combined to report profitability - along a variety of dimensions at different "reporting levels".

This article is structured around these four elements: dimensions, reporting levels, costs and revenues.

## Dimensions

Most airlines want visibility of profitability on a common set of dimensions: by flight number, by route, by city pair, by O&D, by hub, by fleet type, by geography/region and for the whole network. The specifics of the dimensions (e.g. which geography basis) are often driven by organisation structure.

The trick is to retain the flexibility in the model to absorb the inevitable changes in organisation (as new management arrive and consultants pontificate). Many airlines are going through the strains of migrating from a route-oriented approach to one based on O&Ds.

Since this MIS will inevitably be a, if not the, major repository of cost data, then managers may also wish to build in other interesting capabilities as well, to support decision-making. For example:

• Relative profitability of class of service;

• Cost effectiveness of different distribution channels; and

• Short haul versus long haul.

One final subtle dimension to be considered in designing the analytical framework is one of timeframe. The MIS will be used to assess historical route performance and support tactical decision-making. In this context and timeframe, the design can treat whole groups of costs as "fixed", for example, sales and marketing, flight operations overhead.

However, in a longer-term planning context, many of these costs become more "variable". So, in the case of the two examples given:

• Sales and marketing: significant long-term changes in network size or distribution may require staff costs in reservations, yield management and pricing to be modelled on a variable basis;

• Flight operations overhead: significant fleet rationalisation or reduction may require costs in operations control, central training and crew scheduling to be considered as variable.

Such timeframe considerations will impact the flow of data capture and management.

## Reporting levels

The design and selection of levels to be reported should be driven by one simple question: can management take decisions and action based on the information presented?

We have seen airlines with the number of reporting levels varying from two to twelve. In the first instance, there was perhaps too little transparency; in the second, most of the levels presented were meaningless in terms of providing "actionable" information.

Analyses will be required at what may usefully be called activity levels:

• Passenger activity: to help understand the true incremental cost of carrying a passenger (e.g. meal, handling, transfer charges, in-flight services, and - for the really retentive - fuel burn);

• Flight activity: to help assess the profit earned by operating the flight, including the incremental costs incurred (fuel, landing fees, crew allowances etc.);

• Fleet activity: to understand the economics of operating the fleet, by including the incremental fleet costs (aircraft ownership, crew salaries and training etc.);

• Network activity: to identify network profitability by including items such as sales costs; and

• Airline activity: to measure profitability including all overhead costs.

Five levels are probably too many for primary, senior management reports but will be necessary for the real analysts who work daily with the system (e.g., network planners). This subject will be discussed in more detail in a future article.

## Costs

At the highest level of detail, route profitability reports require costs to be allocated to flight numbers. So the first thing to understand is the nature of existing data capture and how to make best use of it.

The purist approach, designed to deliver ultimate accuracy, would capture "actual costs by flight" e.g. actual catering charge incurred for the number and mix of passengers boarded. Such "perfect" information is rarely readily available and would be unnecessarily difficult and expensive to establish, so most airlines adopt an approach that uses either:

• Cost rates: a derived rate where the rate times a production driver gives the actual; or

• Fixed amount allocation: monthly total cost allocated using a valid cost driver.

Passenger and flight related costs (as described above) are usually generated and allocated using cost rates. Fleet, network and airline-related costs almost always require the allocation of fixed amounts (using management accounting values).

That is, the MIS design and usefulness will inevitably rely heavily on accurate capture of actual production values, particularly number of departures/legs and number of passengers. And that is not necessarily as easy as it seems (aircraft switches, cancelled flights, combined flights).

The allocation methods and calculation mechanisms themselves can become both complex and controversial. Solutions exist but have to be customised by airline because data capture capability varies, business priorities differ and users are prepared to make different compromises.

However, particular pitfalls and complexities that will be faced include the following.

### *Passenger*

• Capture and modelling of different passenger class costs;

• Dedicated check-in desks and associated impact on check-in staffing levels; and

• Customised handling facilities (e.g., meals, priority baggage or lounges).

### *Flight*

• Differentation by time of day for landing fees, to reflect cost of operations at peak periods;

• Allocation of crew hotel and transport costs, to reflect the relative impact of operating and rostering a specific flight number with its directly associated hotel requirements;
• Handling/estimation of ATC charges (invoices from some countries are often received many months after flights are operated);
• Allocation of ground handling charges to departing and/or arriving flight numbers; and
• Allocation of higher line maintenance charges for flight patterns using longer ground times.

### *Fleet*

• Allocation of crew salary and training costs, to reflect the relative impact of operating a specific flight number with its associated crew rostering requirements;
• Whether to use actuals or unit costs for the allocation of aircraft ownership costs;
• Whether to use actuals or unit costs for "heavy" aircraft maintenance costs, given the seasonality of the activity;
• Ensuring transparency of utilisation effects during the year;
• Reflecting commercially-driven schedule decisions on aircraft utilisation (e.g., stay on ground down-line to ensure departure time at best time for market);
• Cost allocations for "tag" or utilisation-driven flights; and
• Allocation of crew salary and training costs where crews are dual-rated (as with the A320 and A330).

### *Network*

• Allocation of sales costs to specific routes or the entire network (e.g., the New York sales office not only sells seats on the New York to "home base" route, but also routes across network); and
• Should station overhead costs be distributed on a network basis or to specific routes?

### *Airline*

• Should "overhead" type costs be allocated to specific routes at all?
• If so, what allocation driver should be used to avoid bias: block hours? RPKs? passengers? legs? directly attributable cost distribution?

## Revenues

Daunted by the cost allocation problem? Amazingly, many airline managers consider this issue to be "relatively" simple - compared to the allocation of revenues. Certainly, revenue allocation tends to give rise to much more animated debate, especially in the US environment where hub flows and connections are key to revenue generation.

The situation is exacerbated by the complexity of revenue accounting and revenue information (interline, code-share, block space, unearned revenue, front and back-end commissions).

Transparent and robust reporting of point-to-point and connecting revenue mix is vital to understanding a route's total network contribution, and will be discussed further in this series.

The complexity does not stop here. The profitability measurement process has to incorporate cargo as well. And what about O&D profitability as airlines move to O&D-based management?

*By David Stewart*
dstewart@dial.pipex.com

## EUROPEAN SCHEDULED TRAFFIC

| | Intra-Europe | | | North Atlantic | | | Europe-Far East | | | Total long-haul | | | Total international | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ASK bn | RPK bn | LF % | ASK bn | RPK bn | LF % | ASK bn | RPK bn | LF % | ASK bn | RPK bn | LF % | ASK bn | RPK bn | LF % |
| **1992** | 129.6 | 73.5 | 56.7 | 134.5 | 95.0 | 70.6 | 89.4 | 61.6 | 68.9 | 296.8 | 207.1 | 69.8 | 445.8 | 293.4 | 65.8 |
| **1993** | 137.8 | 79.8 | 57.9 | 145.1 | 102.0 | 70.3 | 96.3 | 68.1 | 70.7 | 319.1 | 223.7 | 70.1 | 479.7 | 318.0 | 66.3 |
| **1994** | 144.7 | 87.7 | 60.6 | 150.3 | 108.8 | 72.4 | 102.8 | 76.1 | 74.0 | 334.0 | 243.6 | 72.9 | 503.7 | 346.7 | 68.8 |
| **1995** | 154.8 | 94.9 | 61.3 | 154.1 | 117.6 | 76.3 | 111.1 | 81.1 | 73.0 | 362.6 | 269.5 | 74.3 | 532.8 | 373.7 | 70.1 |
| **1996** | 165.1 | 100.8 | 61.1 | 163.9 | 126.4 | 77.1 | 121.1 | 88.8 | 73.3 | 391.9 | 292.8 | 74.7 | 583.5 | 410.9 | 70.4 |
| **1997** | 174.8 | 110.9 | 63.4 | 176.5 | 138.2 | 78.3 | 130.4 | 96.9 | 74.3 | 419.0 | 320.5 | 76.5 | 621.9 | 450.2 | 72.4 |
| **1998** | 188.3 | 120.3 | 63.9 | 194.2 | 149.7 | 77.1 | 135.4 | 100.6 | 74.3 | 453.6 | 344.2 | 75.9 | 673.2 | 484.8 | 72.0 |
| **1999** | 200.0 | 124.9 | 62.5 | 218.9 | 166.5 | 76.1 | 134.5 | 103.1 | 76.7 | 492.3 | 371.0 | 75.4 | 727.2 | 519.5 | 71.4 |
| **Mar 00** | 16.9 | 10.5 | 62.1 | 17.8 | 14.1 | 79.3 | 11.7 | 9.3 | 79.6 | 41.4 | 32.5 | 78.4 | 61.5 | 45.3 | 73.6 |
| **Ann. chng** | 7.3% | 6.4% | -0.6 | 7.7% | 5.7% | -1.4 | 4.4% | 6.1% | 1.3 | 5.1% | 6.4% | 1.0 | 6.0% | 7.0% | 0.6 |
| **Jan-Mar 00** | 48.6 | 27.1 | 55.8 | 50.9 | 35.5 | 69.7 | 34.0 | 26.0 | 76.4 | 120.4 | 88.3 | 73.3 | 178.0 | 121.4 | 68.2 |
| **Ann. chng** | 8.5% | 6.0% | -1.3 | 8.9% | 7.6% | -0.8 | 3.9% | 4.4% | 0.4 | 6.2% | 6.8% | 0.4 | 7.1% | 7.0% | 0.0 |

**Source:** AEA.

## US MAJORS' SCHEDULED TRAFFIC

| | Domestic | | | North Atlantic | | | Pacific | | | Latin America | | | Total international | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ASK bn | RPK bn | LF % | ASK bn | RPK bn | LF % | ASK bn | RPK bn | LF % | ASK bn | RPK bn | LF % | ASK bn | RPK bn | LF % |
| **1992** | 857.8 | 536.9 | 62.6 | 134.4 | 92.4 | 68.7 | 123.1 | 85.0 | 69.0 | 48.0 | 27.4 | 57.0 | 305.4 | 204.7 | 67.0 |
| **1993** | 867.7 | 538.5 | 62.1 | 140.3 | 97.0 | 69.2 | 112.5 | 79.7 | 70.8 | 55.8 | 32.5 | 58.2 | 308.7 | 209.2 | 67.8 |
| **1994** | 886.9 | 575.6 | 64.9 | 136.1 | 99.5 | 73.0 | 107.3 | 78.2 | 72.9 | 56.8 | 35.2 | 62.0 | 300.3 | 212.9 | 70.9 |
| **1995** | 900.4 | 591.4 | 65.7 | 130.4 | 98.5 | 75.6 | 114.3 | 83.7 | 73.2 | 62.1 | 39.1 | 63.0 | 306.7 | 221.3 | 72.1 |
| **1996** | 925.7 | 634.4 | 68.5 | 132.6 | 101.9 | 76.8 | 118.0 | 89.2 | 75.6 | 66.1 | 42.3 | 64.0 | 316.7 | 233.3 | 73.7 |
| **1997** | 953.3 | 663.7 | 69.6 | 138.1 | 108.9 | 78.9 | 122.0 | 91.2 | 74.7 | 71.3 | 46.4 | 65.1 | 331.2 | 246.5 | 74.4 |
| **1998** | 961.0 | 679.1 | 70.7 | 150.3 | 118.5 | 78.8 | 112.1 | 81.6 | 72.8 | 84.0 | 52.3 | 62.3 | 346.4 | 252.4 | 72.9 |
| **1999** | 1,008.6 | 708.3 | 70.2 | | | | | | | | | | 358.6 | 267.1 | 74.5 |
| **Mar 00** | 89.7 | 65.9 | 73.5 | | | | | | | | | | 30.3 | 23.6 | 77.8 |
| **Ann. chng** | 5.0% | 6.6% | 1.1 | | | | | | | | | | 3.4% | 6.0% | 1.8 |
| **Jan-Mar 00** | 254.2 | 171.7 | 67.5 | | | | | | | | | | 87.1 | 62.5 | 71.8 |
| **Ann. chng** | 6.6% | 5.9% | -0.5 | | | | | | | | | | 3.8% | 5.4% | 1.1 |

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

## ICAO WORLD TRAFFIC AND ESG FORECAST

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

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

## DEMAND TRENDS (1990=100)

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

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

## COST INDICES (1990=100)

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

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

## FINANCIAL TRENDS (1990=100)

| | Inflation (1990=100) | | | | | | Exchange rates (against US$) | | | | | | LIBOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | US | UK | Germany | France | Japan | | UK | Germ. | France | Switz. | Euro** | Japan | 6 month Euro-$ |
| **1991** | 104 | 106 | 104 | 103 | 103 | **1991** | 0.567 | 1.659 | 5.641 | 1.434 | 0.809 | 134.5 | 5.91% |
| **1992** | 107 | 107 | 109 | 106 | 105 | **1992** | 0.570 | 1.562 | 5.294 | 1.406 | 0.773 | 126.7 | 3.84% |
| **1993** | 111 | 109 | 114 | 108 | 106 | **1993** | 0.666 | 1.653 | 5.662 | 1.477 | 0.854 | 111.2 | 3.36% |
| **1994** | 113 | 109 | 117 | 110 | 107 | **1994** | 0.653 | 1.623 | 5.552 | 1.367 | 0.843 | 102.2 | 5.06% |
| **1995** | 117 | 112 | 119 | 112 | 107 | **1995** | 0.634 | 1.433 | 4.991 | 1.182 | 0.765 | 94.1 | 6.12% |
| **1996** | 120 | 114 | 121 | 113 | 107 | **1996** | 0.641 | 1.505 | 5.116 | 1.236 | 0.788 | 108.8 | 4.48% |
| **1997** | 122 | 117 | 123 | 114 | 108 | **1997** | 0.611 | 1.734 | 5.836 | 1.451 | 0.884 | 121.1 | 5.85% |
| **1998** | 123 | 120 | 124 | 115 | 109 | **1998** | 0.603 | 1.759 | 5.898 | 1.450 | 0.896 | 130.8 | 5.51%*** |
| **1999** | 125 | 122 | 126 | 116 | 108 | **1999** | 0.621 | 1.938 | 6.498 | 1.587 | 1.010 | 103.3 | 5.92%*** |
| ***2000** | 127 | 126 | 127 | 117 | 108 | **May 2000** | 0.679 | 2.157 | 7.233 | 1.719 | 0.907 | 107.6 | 6.93%*** |

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

## FREIGHTER LEASE RATES

| Model | Age | Rental ($000) | Model | Age | Rental ($000) | Model | Age | Rental ($000) |
|---|---|---|---|---|---|---|---|---|
| **A300F4** | 1976-79 | 200-235 | **737-300Q** | 1986-91 | 220-260 | **DC8-61F** | 1968-71 | 60-90 |
| | 1980-84 | 215-245 | | 1992-97 | 250-270 | **DC8-63F** | 1968-71 | 80-120 |
| **A310-200F** | 1982-88 | 195-235 | **747-200F** | 1971-78 | 230-280 | **DC8-71F** | 1968-71 | 160-190 |
| **707-320H** | 1965-72 | 35-75 | **(SCD)** | 1979-84 | 280-365 | **DC8-73F** | 1968-71 | 180-210 |
| **727-100C** | 1965-71 | 30-50 | | 1985-91 | 365-450 | **DC10-30F** | 1971-78 | 215-290 |
| **727-100CH** | 1965-71 | 45-70 | **747-400F** | 1993-98 | 840-1,150 | | 1979-84 | 280-330 |
| **727-200F** | 1972-78 | 50-80 | **757PF** | 1986-93 | 335-365 | **MD-11F** | 1990-93 | 670-800 |
| | 1979-83 | 75-105 | | 1994-98 | 355-385 | | 1994-98 | 780-845 |

**Source:** Aircraft Value Journal, Jan/Feb 2000.

## JET AND TURBOPROP ORDERS

| | Date | Buyer | Order | Price | Delivery | Other information/engines |
|---|---|---|---|---|---|---|
| **ATR** | - | | | | | |
| **Airbus** | May 11 | ILFC | 40 A320 family | | | |
| | | | 7 A330-200s | | | |
| | | | 3 A340-600s | | 2001-08 | |
| **BAE Systems** | - | | | | | |
| **Boeing** | May 25 | LAPA | 6 737-700s | $270m | | Previously 'unidentified' customer |
| | May 11 | JMC | 2 757-300s | | | Previously 'unidentified' customer |
| | May 4 | Amer. Trans Air | 10 757-300s, 20 737-800s | | | North American launch customer for winglet versions |
| | May 2 | American Airlines | 20 757-200s | | 2001-02 | |
| **Bombardier** | May 26 | Dogus Air (Turkey) | 3 Global Express | $78m | 2001+ | |
| | May 11 | Air Dolomiti | 3 CRJ200LRs | $72.5m | 4Q00+ | +3 options for CRJ200s or CRJ700s |
| **Embraer** | May 2 | Continental Exp. | 11 ERJ145s | | 4Q03 | Conversion of options |
| **Fairchild** | - | | | | | |

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

| | Group revenue | Group costs | Group operating profit | Group net profit | Total ASK | Total RPK | Load factor | Group rev. per total ASK | Group costs per total ASK | Total pax. | Total ATK | Total RTK | Load factor | Group employees |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | US$m | US$m | US$m | US$m | m | m | % | Cents | Cents | 000s | m | m | % | |
| **American*** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 4,583 | 3,958 | 625 | 433 | 65,920.1 | 48,093.9 | 73.0 | 6.95 | 6.00 | 21,457 | 9,739.3 | 5,466.1 | 56.1 | 89,078 |
| Oct-Dec 98 | 4,152 | 3,857 | 295 | 182 | 64,317.3 | 43,811.6 | 68.1 | 6.46 | 6.00 | 19,805 | 9,526.7 | 5,060.1 | 53.1 | 90,460 |
| Jan-Mar 99 | 3,991 | 3,954 | 37 | 158 | 62,624.3 | 41,835.4 | 66.8 | 6.37 | 6.31 | | | | | |
| Apr-Jun 99 | 4,528 | 4,120 | 408 | 268 | 67,313.8 | 47,945.9 | 71.2 | 6.73 | 6.12 | | | | | |
| Jul-Sep 99 | 4,629 | 4,603 | 547 | 279 | 67,972.2 | 48,792.9 | 71.8 | 6.88 | 6.26 | | | | | |
| Oct-Dec 99 | 4,477 | 4,206 | 271 | 280 | 65,751.2 | 44,328.2 | 67.4 | 6.81 | 6.41 | | | | | 98,700 |
| Jan-Mar 00 | 4,577 | 4,365 | 212 | 132 | 64,392.8 | 43,478.4 | 67.5 | 7.11 | 6.78 | | | | | 104,500 |
| **America West** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 499 | 453 | 46 | 22 | 9,884.3 | 7,108.3 | 71.9 | 5.05 | 4.58 | 4,665 | 1,240.4 | 746.9 | 60.2 | 11,600 |
| Oct-Dec 98 | 507 | 470 | 37 | 20 | 10,037.2 | 6,491.9 | 64.7 | 5.05 | 4.68 | 4,335 | 1,261.2 | 688.1 | 54.6 | 11,687 |
| Jan-Mar 99 | 520 | 469 | 51 | 26 | 10,135.4 | 6,485.5 | 64.0 | 5.13 | 4.63 | 4,263 | | | | |
| Apr-Jun 99 | 570 | 494 | 76 | 42 | 10,446.0 | 7,204.8 | 69.0 | 5.46 | 4.73 | 4,724 | | | | |
| Jul-Sep 99 | 553 | 511 | 41 | 22 | 10,522.9 | 7,502.8 | 71.3 | 5.26 | 4.86 | 4,896 | | | | |
| Oct-Dec 99 | 569 | 532 | 37 | 29 | 10,594.0 | 7,307.8 | 69.0 | 5.37 | 5.02 | 4,822 | | | | 11,575 |
| Jan-Mar 00 | 563 | 552 | 11 | 15 | 10,440.8 | 6,960.5 | 66.7 | 5.39 | 5.29 | 4,612 | | | | 12,024 |
| **Continental** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 2,116 | 1,973 | 143 | 73 | 31,609.9 | 24,049.4 | 76.1 | 6.69 | 6.24 | 11,655 | 3,801.8 | 2,542.9 | 66.9 | 40,082 |
| Oct-Dec 98 | 1,945 | 1,817 | 128 | 66 | 30,557.4 | 21,273.3 | 69.6 | 6.37 | 5.95 | 10,637 | 3,664.5 | 2,339.0 | 63.8 | 41,118 |
| Jan-Mar 99 | 2,056 | 1,896 | 160 | 84 | 30,938.8 | 22,107.0 | 71.5 | 6.65 | 6.13 | 12,174 | | | | |
| Apr-Jun 99 | 2,198 | 1,942 | 256 | 137 | 32,448.3 | 24,009.1 | 74.0 | 6.77 | 5.98 | 11,493 | | | | |
| Jul-Sep 99 | 2,283 | 2,071 | 21 | 110 | 34,711.0 | 26,380.3 | 76.0 | 6.58 | 5.97 | 11,922 | | | | |
| Oct-Dec 99 | 2,158 | 2,073 | 85 | 33 | 33,771.2 | 24,094.4 | 71.3 | 6.39 | 6.14 | 11,347 | | | | |
| Jan-Mar 00 | 2,277 | 2,223 | 54 | 14 | 33,710.2 | 24,143.0 | 71.6 | 6.75 | 6.59 | 11,201 | | | | |
| **Delta** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 3,802 | 3,250 | 552 | 327 | 59,017.9 | 45,242.3 | 76.7 | 6.44 | 5.51 | 27,575 | 8,486.8 | 5,196.9 | 61.2 | 75,722 |
| Oct-Dec 98 | 3,448 | 3,128 | 320 | 194 | 57,810.9 | 39,947.7 | 69.1 | 5.96 | 5.41 | 25,531 | 8,244.1 | 4,699.3 | 57.0 | 76,649 |
| Jan-Mar 99 | 3,504 | 3,148 | 356 | 216 | 56,050.3 | 39,163.9 | 69.9 | 6.25 | 5.62 | | | | | |
| Apr-Jun 99 | 3,957 | 3,315 | 642 | 364 | 57,957.3 | 43,422.1 | 74.9 | 6.83 | 5.72 | | | | | |
| Jul-Sep 99 | 3,877 | 3,527 | 350 | 352 | 60,710.8 | 45,528.3 | 75.0 | 6.39 | 5.81 | 27,183 | | 5,258.2 | | 72,300 |
| Oct-Dec 99 | 3,713 | 3,705 | 8 | 352 | 58,265.1 | 40,495.3 | 69.5 | 6.37 | 6.36 | 25,739 | | | | |
| Jan-Mar 00 | 3,960 | 3,605 | 355 | 223 | 57,093.8 | 39,404.4 | 69.0 | 6.94 | 6.31 | 25,093 | | | | 72,300 |
| **Northwest** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 1,928 | 2,204 | -276 | -224 | 32,406.3 | 24,295.8 | 75.0 | 5.95 | 6.80 | 11,148 | 5,107.4 | 3,058.6 | 59.9 | 50,654 |
| Oct-Dec 98 | 2,212 | 2,404 | -192 | -181 | 37,947.0 | 26,534.3 | 69.9 | 5.83 | 6.34 | 12,962 | 6,125.2 | 3,588.9 | 58.6 | 50,503 |
| Jan-Mar 99 | 2,281 | 2,295 | -14 | -29 | 37,041.3 | 26,271.8 | 70.9 | 6.16 | 6.20 | | | | | |
| Apr-Jun 99 | 2,597 | 2,333 | 264 | 120 | 40,541.5 | 30,900.2 | 76.2 | 6.41 | 5.75 | | | | | |
| Jul-Sep 99 | 2,843 | 2,472 | 370 | 180 | 43,194.5 | 33,562.1 | 77.7 | 6.58 | 5.73 | | | | | |
| Oct-Dec 99 | 2,555 | 2,461 | 94 | 29 | 39,228.3 | 28,618.2 | 73.0 | 6.51 | 6.27 | | | | | |
| Jan-Mar 00 | 2,570 | 2,573 | -3 | 3 | 39,486.0 | 28,627.4 | 72.5 | 6.51 | 6.52 | | | | | |
| **Southwest** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 1,095 | 891 | 204 | 130 | 19,762.1 | 13,620.3 | 68.9 | 5.54 | 4.51 | 13,681 | 2,519.0 | 1,420.4 | 56.4 | 25,428 |
| Oct-Dec 98 | 1,047 | 888 | 159 | 100 | 19,763.0 | 12,603.4 | 63.8 | 5.30 | 4.49 | 13,291 | 2,504.1 | 1,317.4 | 52.6 | 26,296 |
| Jan-Mar 99 | 1,076 | 909 | 167 | 96 | 19,944.0 | 12,949.2 | 64.9 | 5.40 | 4.56 | 12,934 | | | | |
| Apr-Jun 99 | 1,220 | 966 | 254 | 158 | 20,836.9 | 15,241.7 | 73.1 | 5.85 | 4.64 | 14,817 | | | | |
| Jul-Sep 99 | 1,235 | 1,029 | 206 | 127 | 21,903.8 | 15,464.0 | 70.6 | 5.64 | 4.70 | 14,932 | | | | |
| Oct-Dec 99 | 1,204 | 1,050 | 154 | 94 | 22,360.7 | 15,047.8 | 67.3 | 5.38 | 4.70 | 14,818 | | | | 27,653 |
| Jan-Mar 00 | 1,243 | 1,057 | 155 | 74 | 22,773.8 | 15,210.2 | 66.8 | 5.46 | 4.77 | 14,389 | | | | 27,911 |
| **TWA** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 863 | 839 | 24 | -5 | 14,293.8 | 10,531.3 | 73.7 | 6.04 | 5.87 | 6,273 | 1,999.7 | 1,150.0 | 57.5 | 21,848 |
| Oct-Dec 98 | 747 | 813 | -66 | -79 | 13,452.4 | 8,731.6 | 64.9 | 5.55 | 6.04 | 5,574 | 1,863.7 | 982.8 | 52.7 | 21,321 |
| Jan-Mar 99 | 764 | 802 | -38 | -22 | 13,352.4 | 9,205.2 | 68.9 | 5.72 | 6.01 | | | | | |
| Apr-Jun 99 | 866 | 848 | 18 | -6 | 14,274.4 | 11,130.9 | 78.0 | 6.07 | 5.94 | | | | | |
| Jul-Sep 99 | 876 | 935 | -59 | -54 | 15,188.0 | 11,524.3 | 75.9 | 5.76 | 6.16 | 6,928 | 1,957.0 | 1,248.6 | 63.8 | 20,982 |
| Oct-Dec 99 | 809 | 913 | -104 | -76 | 14,501.6 | 9,687.1 | 66.8 | 5.58 | 6.30 | 6,038 | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **United** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 4,783 | 4,088 | 695 | 425 | 73,913.5 | 56,283.7 | 76.1 | 6.47 | 5.53 | 23,933 | 11,255.3 | 6,847.4 | 60.8 | 94,270 |
| Oct-Dec 98 | 4,281 | 4,090 | 191 | 54 | 70,620.9 | 49,484.4 | 70.1 | 6.06 | 5.79 | 21,616 | 10,774.4 | 6,182.8 | 57.4 | 94,903 |
| Jan-Mar 99 | 4,160 | 4,014 | 146 | 78 | 67,994.5 | 46,899.8 | 69.0 | 6.12 | 5.90 | | | | | |
| Apr-Jun 99 | 4,541 | 4,108 | 433 | 669 | 71,573.6 | 50,198.9 | 70.1 | 6.34 | 5.74 | | | | | |
| Jul-Sep 99 | 4,845 | 4,226 | 619 | 359 | 74,043.0 | 55,628.0 | 75.1 | 6.54 | 5.71 | 23,765 | | | | 96,700 |
| Oct-Dec 99 | 4,480 | 4,286 | 194 | 129 | 70,715.9 | 49,172.2 | 69.5 | 6.34 | 6.06 | 21,536 | | | | 96,600 |
| Jan-Mar 00 | 4,546 | 4,294 | 252 | -99 | 68,421.1 | 46,683.5 | 68.2 | 6.64 | 6.28 | 20,141 | | | | 96,100 |
| **US Airways** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 2,208 | 1,938 | 270 | 142 | 23,267.3 | 17,639.5 | 75.8 | 9.49 | 8.33 | 15,290 | 3,166.1 | 1,898.2 | 60.0 | 40,660 |
| Oct-Dec 98 | 2,121 | 1,943 | 178 | 104 | 23,318.8 | 16,112.3 | 69.1 | 9.10 | 8.33 | 14,202 | 3,171.1 | 1,754.5 | 55.3 | 40,664 |
| Jan-Mar 99 | 2,072 | 1,983 | 89 | 46 | 22,745.8 | 15,405.8 | 67.7 | 9.11 | 8.72 | | | | | |
| Apr-Jun 99 | 2,286 | 2,007 | 279 | 317 | 23,891.7 | 17,557.5 | 73.5 | 9.57 | 8.40 | | | | | |
| Jul-Sep 99 | 2,102 | 2,213 | -111 | -85 | 23,006.6 | 17,205.6 | 71.7 | 8.76 | 9.22 | 13,984 | | | | 40,613 |
| Oct-Dec 99 | 2,135 | 2,256 | -121 | -81 | 24,705.9 | 16,714.2 | 67.6 | 8.64 | 9.13 | 14,075 | | | | 41,636 |
| Jan-Mar 00 | 2,098 | 2,237 | -139 | -218 | 24,250.3 | 15,568.7 | 64.2 | 8.65 | 9.22 | 12,804 | | | | 42,727 |
| **ANA** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 3,399 | 3,355 | 44 | 73 | 42,415.9 | 27,404.4 | 64.6 | 8.01 | 7.91 | 21,449 | | | | |
| Oct-Dec 98 | | | | | | | | | | | | | | |
| Jan-Mar 99 | | | | | | | | | | | | | | |
| Apr-Jun 99 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Jul-Sep 99 | 4,541 | 4,329 | 212 | 146 | 44,156.0 | 29,032.0 | 65.7 | 10.28 | 9.80 | 21,970 | | | | |
| Oct-Dec 99 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Jan-Mar 00 | 5,591 | 5,842 | -251 | 6 | 49,646.9 | 31,844.9 | 64.1 | 11.26 | 11.77 | 27,430 | | | | |
| **Cathay Pacific** | | | | | | | | | | | | | | |
| Jul-Sep 98 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Oct-Dec 98 | 1,769 | 1,713 | 56 | -45 | 31,367.0 | 21,173.0 | 67.5 | 5.64 | 5.46 | | 5,649.0 | 3,847.0 | 68.1 | |
| Jan-Mar 99 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Apr-Jun 99 | 1,695 | 1,664 | 31 | 17 | 28,801.0 | 19,325.5 | 67.1 | 5.89 | 5.78 | | 5,267.0 | 3,581.6 | 68.0 | |
| Jul-Sep 99 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Oct-Dec 99 | 1,989 | 1,658 | 331 | 133 | 29,313.0 | 22,167.9 | 75.6 | 6.79 | 5.66 | | 5,600.0 | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **JAL** | | | | | | | | | | | | | | |
| Jul-Sep 98 | | | | | | | | | | | | | | |
| Oct-Dec 98 | TWELVE MONTH FIGURES | | | | | | | | | | | | | |
| Jan-Mar 99 | 14,555 | 14,249 | 305 | 249 | 123,097.8 | 84,092.9 | 68.3 | 11.82 | 11.58 | 35,492 | 18,405.3 | 11,890.4 | 64.6 | |
| Apr-Jun 99 | | | | | | | | | | | | | | |
| Jul-Sep 99 | | | | | | | | | | | | | | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |

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

| | Group revenue | Group costs | Group operating profit | Group net profit | Total ASK | Total RPK | Load factor | Group rev. per total ASK | Group costs per total ASK | Total pax. | Total ATK | Total RTK | Load factor | Group employees |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | US$m | US$m | US$m | US$m | m | m | % | Cents | Cents | 000s | m | m | % | |
| **Korean Air** | | | | | | | | | | | | | | |
| Jul-Sep 98 | TWELVE MONTH FIGURES | | | | | | | | | | | | | |
| Oct-Dec 98 | 3,283 | 3,063 | 219 | 212 | 58,246.4 | 40,190.3 | 69.0 | 5.64 | 5.26 | 25,557 | | 9,480.0 | | 17,050 |
| Jan-Mar 99 | | | | | | | | | | | | | | |
| Apr-Jun 99 | | | | | | | | | | | | | | |
| Jul-Sep 99 | | | | | | | | | | | | | | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **Malaysian** | | | | | | | | | | | | | | |
| Jul-Sep 98 | | | | | | | | | | | | | | |
| Oct-Dec 98 | | | | | | | | | | | | | | |
| Jan-Mar 99 | | | | | | | | | | | | | | |
| Apr-Jun 99 | | | | | | | | | | | | | | |
| Jul-Sep 99 | | | | | | | | | | | | | | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **Singapore** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 2,232 | 2,013 | 219 | 278 | 41,466.2 | 29,456.2 | 71.0 | 5.38 | 4.86 | 6,240 | 7,693.4 | 5,225.2 | 67.9 | |
| Oct-Dec 98 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Jan-Mar 99 | 2,421 | 2,130 | 291 | 341 | 41,725.5 | 30,843.7 | 74.9 | 5.80 | 5.10 | 6,537 | 7,958.5 | 5,540.3 | 69.6 | |
| Apr-Jun 99 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Jul-Sep 99 | 2,577 | 2,259 | 317 | 346 | 43,145.7 | 32,288.3 | 74.8 | 5.97 | 5.24 | 6,752 | 8,251.9 | 5,852.7 | 70.9 | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **Thai Airways** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 629 | 584 | 45 | 176 | 12,118.0 | 8,769.0 | 72.4 | 5.19 | 4.82 | | | | | |
| Oct-Dec 98 | 727 | 647 | 80 | 170 | 12,599.0 | 9,195.0 | 73.0 | 5.77 | 5.14 | | | | | |
| Jan-Mar 99 | 675 | | | 125 | | | | | | | | | | |
| Apr-Jun 99 | 651 | | | 93 | | | | | | | | | | |
| Jul-Sep 99 | | | | | | | | | | | | | | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **Air France** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 5,088 | 4,894 | 194 | 228 | 49,724.0 | 38,070.0 | 76.6 | 10.23 | 9.84 | | | | | |
| Oct-Dec 98 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Jan-Mar 99 | 5,550 | 5,552 | -2 | 56 | 51,394.0 | 38,242.0 | 74.4 | 10.80 | 10.80 | | | | | |
| Apr-Jun 99 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Jul-Sep 99 | 5,249 | 4,889 | 360 | 316 | | | | | | | | | | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **Alitalia** | | | | | | | | | | | | | | |
| Jul-Sep 98 | TWELVE MONTHS FIGURES | | | | | | | | | | | | | |
| Oct-Dec 98 | 5,152 | 4,432 | 720 | 235 | 51,638.4 | 35,427.2 | 68.8 | 9.98 | 6.86 | 24,103 | | | 18,825 | |
| Jan-Mar 99 | | | | | | | | | | | | | | |
| Apr-Jun 99 | | | | | | | | | | | | | | |
| Jul-Sep 99 | | | | | | | | | | | | | | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **BA** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 4,034 | 3,601 | 433 | 357 | 46,792.0 | 35,543.0 | 76.0 | 8.62 | 7.70 | 12,608 | 6,533.0 | 4,630.0 | 70.9 | 64,106 |
| Oct-Dec 98 | 3,585 | 3,431 | 154 | -114 | 44,454.0 | 29,736.0 | 66.9 | 8.06 | 7.72 | 10,747 | 6,277.0 | 4,111.0 | 65.5 | 64,608 |
| Jan-Mar 99 | 3,343 | 3,481 | -138 | -119 | 43,544.0 | 29,537.8 | 67.8 | 7.68 | 7.99 | 10,285 | 6,130.0 | 3,933.0 | 64.2 | 64,366 |
| Apr-Jun 99 | 3,527 | 3,378 | 149 | 302 | 45,813.0 | 32,032.0 | 69.9 | 7.70 | 7.37 | 11,733 | 6,437.0 | 4,215.0 | 65.5 | 65,179 |
| Jul-Sep 99 | 3,933 | 3,742 | 191 | 49 | 47,465.0 | 35,873.0 | 75.6 | 8.29 | 7.88 | 12,983 | 6,690.0 | 4,689.0 | 70.1 | 65,607 |
| Oct-Dec 99 | 3,473 | 3,476 | -3 | -112 | 45,347.0 | 30,192.0 | 66.6 | 7.66 | 7.67 | | 6,469.0 | 4,270.0 | 66.1 | 65.800 |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **Iberia** | | | | | | | | | | | | | | |
| Jul-Sep 98 | TWELVE MONTH FIGURES | | | | | | | | | | | | | |
| Oct-Dec 98 | 4,451 | 4,100 | 351 | 356 | 45,041.6 | 32,520.0 | 72.2 | 9.88 | 9.10 | 21,753 | | 3,740.0 | | 22,065 |
| Jan-Mar 99 | | | | | | | | | | | | | | |
| Apr-Jun 99 | | | | | | | | | | | | | | |
| Jul-Sep 99 | | | | | | | | | | | | | | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **KLM** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 1,865 | 1,675 | 190 | 121 | 19,363.0 | 15,984.0 | 82.6 | 9.63 | 8.65 | | 3,359.0 | 2,583.0 | 76.9 | 33,586 |
| Oct-Dec 98 | 1,673 | 1,661 | 12 | -15 | 18,476.0 | 13,767.0 | 74.5 | 9.05 | 8.99 | | 3,214.0 | 2,415.0 | 75.1 | 33,761 |
| Jan-Mar 99 | 1,550 | 1,670 | -120 | -45 | 17,716.0 | 13,294.0 | 75.0 | 8.75 | 9.43 | | 3,088.0 | 2,284.0 | 74.0 | 33,892 |
| Apr-Jun 99 | 1,626 | 1,547 | 79 | 37 | 18,778.0 | 14,302.0 | 76.2 | 8.66 | 8.24 | | 3,253.0 | 2,427.0 | 74.6 | 34,980 |
| Jul-Sep 99 | 1,731 | 1,596 | 135 | 32 | 19,630.0 | 16,083.0 | 81.9 | 8.81 | 8.13 | | 3,352.0 | 2,640.0 | 78.8 | 35,226 |
| Oct-Dec 99 | 1,450 | 1,479 | -29 | -17 | 19,014.0 | 14,434.0 | 75.9 | 7.63 | 7.78 | | 3,280.0 | 2,550.0 | 77.7 | 35,128 |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **Lufthansa*** ** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 3,528 | 3,167 | 361 | 198 | 26,929.0 | 20,681.0 | 76.8 | 13.10 | 11.76 | 11,198 | 5,231.0 | 3,748.0 | 71.6 | 54,695 |
| Oct-Dec 98 | 2,929 | 2,106 | 823 | 96 | 25,530.0 | 18,259.0 | 71.5 | 11.47 | 8.25 | 9,819 | 5,204.0 | 3,676.0 | 70.6 | 55,368 |
| Jan-Mar 99 | 3,301 | 3,210 | 91 | 64 | 25,445.0 | 17,942.0 | 70.5 | 12.97 | 12.62 | 9,658 | 4,972.0 | 3,435.0 | 69.1 | 56,420 |
| Apr-Jun 99 | 3,322 | 3,012 | 310 | 97 | 30,500.0 | 22,279.0 | 73.0 | 10.89 | 9.86 | 11,444 | 5,626.0 | 3,993 | 71.0 | 53,854 |
| Jul-Sep 99 | 4,049 | 3,677 | 382 | 184 | 31,335.0 | 23,866.0 | 76.2 | 12.92 | 11.73 | 11,891 | 5,699.0 | 4,142.0 | 72.7 | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **SAS** | | | | | | | | | | | | | | |
| Jul-Sep 98 | 1,283 | 1,152 | 131 | 127* | 8,283.0 | 5,843.0 | 70.5 | 15.49 | 13.91 | 5,714 | | | | 26,553 |
| Oct-Dec 98 | 1,368 | 1,266 | 102 | 46* | 8,116.0 | 5,089.0 | 62.7 | 16.86 | 15.60 | 5,431 | | | | 27,071 |
| Jan-Mar 99 | 1,203 | 1,227 | -24 | -3* | 8,062.0 | 4,713.0 | 58.5 | 14.92 | 15.22 | 5,017 | | | | 27,110 |
| Apr-Jun 99 | 1,357 | 1,294 | 63 | 60* | 8,466.0 | 5,571.0 | 65.8 | 16.03 | 15.28 | 5,580 | | | | 27,706 |
| Jul-Sep 99 | 1,173 | 1,150 | 23 | 12* | 8,450.0 | 5,667.0 | 67.1 | 13.88 | 13.61 | 5,589 | | | | 27,589 |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |
| **Swissair**** | | | | | | | | | | | | | | |
| Jul-Sep 98 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Oct-Dec 98 | 2,187 | 2,070 | 117 | 165 | 20,476.8 | 15,391.3 | 75.2 | 10.68 | 10.11 | 5,277 | | | | 10,396 |
| Jan-Mar 99 | SIX MONTH FIGURES | | | | | | | | | | | | | |
| Apr-Jun 99 | 1,932 | 1,877 | 55 | 57 | 23,411.0 | 16,130.0 | 68.9 | 8.25 | 8.02 | 7,784 | | | | 10,715 |
| Jul-Sep 99 | | | | | | | | | | | | | | |
| Oct-Dec 99 | | | | | | | | | | | | | | |
| Jan-Mar 00 | | | | | | | | | | | | | | |

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

# Aviation Economics

The Principals and Associates of *Aviation Economics* apply a problem-solving, creative and pragmatic approach to commercial aviation projects.

Our expertise is in strategic and financial consulting in Europe, the Americas, Asia, Africa and the Middle East, covering:

- Start-up business plans
- Antitrust investigations
- Credit analysis
- Privatisation projects
- Asset valuations
- Turnaround strategies
- Merger/takeover proposals
- Corporate strategy reviews
- IPO prospectuses
- E&M processes
- State aid applications
- Competitor analyses
- Market forecasts
- Cash flow forecasts
- Distribution policy


For further information please contact:

**Tim Coombs or Keith McMullan**

Aviation Economics

James House, LG, 22/24 Corsham Street, London N1 6DR

Tel: + 44 0207 490 5215 Fax: +44 0207 490 5218

e-mail:kgm@aviationeconomics.com


## SUBSCRIPTION FORM

☐ **Please enter my Aviation Strategy subscription for: One year (12 issues) @ £390 / € 625 / US$625, starting with the _____ issue**

**(Discounts available for multiple subscriptions - please call for details)**

### Delivery address

**Name** _____

**Position** _____

**Company** _____

**Address** _____

_____

_____

**Country** _____ **Postcode** _____

**Tel** _____ **Fax** _____

**e-mail** _____

**DATA PROTECTION ACT**

*The information you provide will be held on our database and may be used to keep you informed of our products and services or for selected third party mailings*

☐ **I enclose a Sterling, Euro or US Dollar cheque, made payable to: Aviation Economics**

☐ **Please invoice me**

☐ **Please charge my AMEX/Mastercard/Visa credit card**

Card number _____

Name on card _____ Expiry date _____

☐ **I am sending a direct bank transfer of £390 net of all charges to Aviation Economics' account:** HSBC Bank
Sort code: 40 04 37 Account no: 91256904

**Invoice address (if different from delivery address)**

Name _____

Position _____

Company _____

Address _____

_____

_____

Country _____ Postcode _____

**PLEASE RETURN THIS FORM TO:**

Aviation Economics
James House, LG
22/24 Corsham Street
London N1 6DR
Fax: +44 0207 490 5218