

## Should BA buy into SAir?

With the KLM talks dragging on, the idea of the SAir Group as an alternative merger target for BA has been floated. BA will certainly be keeping all its options open, and SAir has got some important attractions, now that Bob Ayling's departure has also removed a suspected personality clash with Philippe Bruggisser.

A link-up with SAir would help re-establish BA's relations with American, which has an immunised codeshare agreement with Swissair and Sabena. Brussels has now the potential to be as efficient a hub as Schiphol for Atlantic/intra-European connecting traffic, and Swissair's business-orientated traffic base fits in perfectly with the market sector on which BA is focusing all its efforts.

Because BA/American/SAir would have a smaller transatlantic market share than BA/KLM/Northwest/American there would probably be less regulatory opposition to the deal. But the fundamental problem remains: the US authorities are not going to countenance a merged European entity with some of its transatlantic operation under open skies agreements and the rest under a restrictive bilateral.

SAir might take the opportunity of a merger with BA to split into a core airline which could be absorbed into BA and an aviation services group which would include all the minority investments that SAir has made. Through such a break-up SAir would probably enhance its value by getting rid of the conglomerate stigma that has depressed its share price.

It is not clear if SAir, like KLM, is now willing to accept a minority role in a merged airline. But Swissair does have the unique experience of having completed, apparently successfully, a transborder merger with its integration of Sabena.

## Should Qantas buy into MAS?

Reports from Kuala Lumpur suggest that Qantas may be about to buy 30%, or possibly 45%, of MAS. The logic behind such a move from Qantas' perspective is to establish another Europe-Southeast Asia/Australia operation at Kuala Lumpur, giving Qantas/BA three strong hub positions in that regions (KL, Singapore and Bangkok). However, as Kevin O'Connor, Deutsche Bank analyst in Hong Kong, point outs, Qantas would be putting its money into a technically bankrupt company. MAS's adjusted shareholders' funds current show a negative value of RM525m (US\$138m), and a return to profitability is not expected before 2002.

"Strategic" investments in airlines lacking effective local management and in which fundamental cost and revenue issues have not been addressed almost always end in tears - viz. Iberia in Aerolineas, Alitalia in Malev, BA in Air Liberte, etc.. MAS's case is further complicated by the ongoing debt restructuring of its 29% shareholder, Naluri, an aviation holding company.

A model for the turn-around of beleaguered Asian airlines like MAS, Garuda and Air India may, slightly surprisingly, be tobacco magnate Lucio Tan's transformation of PAL from a relatively high cost, typically state-bureaucratic carrier with global pretensions to a streamlined, lower cost airline focused on its core market - in this case, the Filipino diaspora.

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### Aircraft market balance: from boom to bust again?

It is now seven years since the commercial aviation industry climbed out of its worst ever recession. Since then traffic demand growth combined with capacity constraints has meant that the jet aircraft market has remained more or less in balance. The Asian crisis threatened to create global over-supply but this was mostly averted by a switch in capacity from the Asia/Pacific markets to the Atlantic (which did cause over-supply in that sector) and by postponement and cancellation of deliveries.

However, observers of the aircraft market continue to wonder about the current buoyancy of jet orders and the increased production rates. Based mainly on current order-books the jet predication rate for the next five years is going to be around the 1,200 unit a year level in contrast to an average of just over 700 units a year during the 90s.

The sheer volume of orders announced at the Farnborough Air Show (see page 1923 for details) gave the impression of an over-heated market. The final total, according to a tally by Reuters was 824 aircraft valued at about \$41bn. As always, the firmness or otherwise of the orders is questionable - for example, Global Airlines, a paper company set up with the intention of acquiring TWA, placed a 250 aircraft order for the

Alliance StarLiner, a paper 70-100-seater.

But \$41bn is still a remarkable figure, almost equivalent to the expected annual global expenditure on aircraft. Moreover, the leasing companies played a prominent role in the Farnborough ordering spree, accounting for over half the value of the announced orders. This is superficially at least reminiscent of the mega-orders placed by the mega-lessors in the boom of the late 80s.

Ed Greenslet in his industry-standard ESG forecast, published in July, plaintively states that all his indicators that there are more than enough aircraft available yet production rate continue to rise. Factoring in a mild recession in 2002-03 (solely on the basis that there has got to be some form of slow-down in economic activity at some point) produces a global surplus of over 1,200 jets in 2002 and 2003. This compares with an estimated surplus of 1,094 jets in 1993 at the trough of last recession. Measured as a percentage of the global fleet, however, the surplus equates to about 7.2% as against 9%-plus in the early 90s and early 80s.

#### Key differences

What are the key differences between the early 90s and the early 00s?

The leasing companies are generally much less speculative now. They are aiming at the US replacement market as their core business, and can be fairly confident that the US majors will take their new generation 737s and A320s as they finally retire elderly and noisy 727s and DC-9s over the next few years. The gap in the market has appeared because of the refusal of key US majors to commit themselves to re-equipment programmes at a time when they were battling their unions and restoring their financial fortunes.

This is a very different market from that of the early 90s when lessors concentrated on

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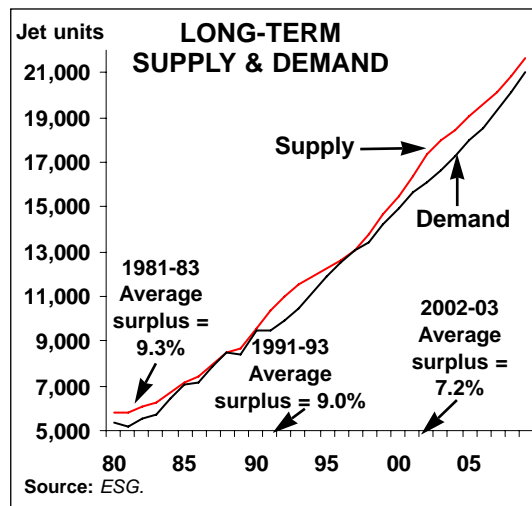
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under-capitalised start-ups, developing-world carriers and generally mediocre credit risks. Then, the strategy of lessors like GPA was highly speculative: to block off production slots and rely on increases in the prices of new and second-hand aircraft, regardless of the financial state of the airlines. That strategy ended in disaster for GPA and other lessors.

Today there is not the same opportunity to bet on inflating new and second-hand prices. This is largely because cost savings achieved by the manufacturers have been passed on to purchasing airlines through discounts to list prices. Indeed, it could be argued that the increased demand for new jets is partly the result of the reduction in unit prices.

Aircraft retirement remains an infuriating problem for market analysts. The ESG forecast pushes up the scrapping rate to 300-440 units a year for the period 2000-04 from an estimated 1999 level of 213 units. The scrapping level has almost always been overestimated, but the new level seems rea-

sonable, maybe even low, given the implementation of Chapter 3 noise rules and the probability that as many as 400 aircraft currently listed as parked may never return to airline service.

Returning to ESG's assumption of a mild recession, it should be pointed out that at present there is no sign of a downturn. On the contrary, the OECD's latest *Economic Outlook* (June 2000) "economic prospects are brighter than they have been for some time". Globally, economic growth is projected at 4% this year and 3% next year. All the major economies are moving forward in harmony, with the exception of Japan, and even there there are clear signs that its long recession is coming to an end. However, the danger is that the economy is too strong, that inflationary pressures will exert themselves (as they already have done in oil prices and, until recently, Internet company stock prices), governments will be forced into deflationary policies, and the boom will turn to bust.

Structurally, the new element in today's

ESG Forecast of the Commercial Jet Transport Market, 2000-2020

Published in *The Airline Monitor*, July 2000

### ESG DELIVERY FORECAST : BOEING

	717	737 Classic	737 -600	737 -700	737 -800	737 -900	747- 400+	757- 200	767 -200	767 -400	777 -200	777 -300	Total Boeing
1990		174					62	77	60				515
1991		215					62	80	62				589
1992		218					61	99	63				568
1993		152					56	71	51				409
1994		121					40	69	40				310
1995		89					25	43	36		13		256
1996		76					26	42	42		32		269
1997		132		3			39	46	41		59		374
1998		116	8	85	65		53	50	47		60	14	552
1999	12	42	24	96	133		47	67	44		66	17	595
<b>Forecast</b>													
2000	30	2	25	80	140	5	20	45	30	20	55	14	466
2001	40	0	30	120	150	30	25	35	20	20	30	30	530
2002	45		30	100	110	40	25	35	20	30	40	40	515
2003	15		25	65	70	40	30	30	25	30	35	35	400
2004	15		20	50	60	30	25	20	25	30	30	35	340
2005	15		15	50	60	30	30	25	20	30	30	40	345
2006	15		15	45	55	35	25	25	20	30	30	40	335
2007	15		15	40	50	35	20	25	25	40	35	45	345
2008	15		20	50	60	40	20	30	25	40	35	50	385
2009	20		25	65	75	50	25	30	25	45	40	50	450
2010	20		20	55	70	50	25	30	25	40	45	50	430

Notes: 737 Classic = -300,-400,-500; 747-400 includes stretches; historical deliveries include other Boeing types not shown in this table

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market is the regional jet market sector of 35-100 seats, which will account for around a third of all jet deliveries according to ESG.

Orders for these types at Farnborough accounted for \$4bn. If there is a speculative bubble in the aircraft market, it is in this sector. GECAS certainly seems to have taken a serious punt through its order for 50+100 CRJs and 50+100 728JETS announced at the Berlin Air Show in June, a transaction that could be worth nearly \$5bn.

In this sector much depends on the attitudes of the unions in the US and Europe to the scope clauses in their contracts - whether they will agree to operation of jets of less than 50 or less than 100 seats by pilots who are not in the main airline. The regional jet sector was able to grow so rapidly because flying was outsourced to lower cost operators. Recently, the Majors have been trying to reassert control over their regionals (Delta's purchase of Comair, Air France's of Regional, for example), which almost inevitably will lead to higher operating costs. Whether this cost escalation will bring to a

halt or even slow the regional jet bandwagon is not at all clear, but there is a risk here.

And there are risks for the overall supply/demand balance in the aircraft market. Overall though, *Aviation Strategy's* tentative conclusion is that the combination of factors needed to cause serious global overcapacity are probably not in place at the moment.

Two points are worth highlighting about the ESG detailed delivery forecast reproduced below. First, Boeing is shown as losing market share to Airbus, which is an interesting viewpoint from a US analyst. Second, the A3XX appears in 2006 and meets its sales targets.

ESG has decided that there is a market for the A3XX. It has done this by looking at the 747 capacity flown by the top 20 airlines in 1979 then extrapolating forward to 2015 in order to estimate the amount of capacity the top 20 airlines might be providing with A3XXs, and hence the number of A3XXs needed to supply that output. The final demand figure is 520 units.

### ESG DELIVERY FORECAST: AIRBUS AND OTHERS

	MD-80/ MD-90	MD-11	A300/ A310	A319/ A318	A320/ A321	A330	A340	A3XX	Total Airbus	RJs+ Avro	TOTAL
1990	139	3	37		58				95	25	777
1991	139	31	44		119				163	26	948
1992	85	42	46		111				157	16	868
1993	43	36	44		72	1	22		139	37	664
1994	23	17	25		64	9	25		123	54	527
1995	32	18	19		55	30	19		123	62	491
1996	36	15	16	18	54	10	28		126	81	527
1997	42	12	8	47	80	14	33		182	114	724
1998	42	12	14	53	115	23	24		229	157	992
1999	39	8	8	88	134	44	20		294	216	1,152
<b>Forecast</b>											
2000	3	6	9	104	135	40	23		311	319	1,105
2001			13	115	149	39	20		336	339	1,205
2002			12	160	150	45	36		403	327	1,245
2003			4	171	135	40	35		385	255	1,040
2004			4	140	116	35	35		330	180	850
2005			4	130	111	45	35		325	130	800
2006			4	110	101	45	40	20	320	90	745
2007				110	105	45	40	60	360	95	800
2008				120	120	55	45	80	420	95	900
2009				130	140	60	55	70	455	95	1,000
2010				120	140	65	60	50	435	85	950

Notes: RJs =CRJ, Emb 145, Do328; Historical TOTAL includes jets not listed in this table

### EADS: a case of Euro-over-complexity

On July 10th the single entity that encompasses most of the European aerospace industry came into being, with the launch of European Aeronautics Defence and Space (EADS), a \$22bn revenue company, with 96,000 employees and world-leading positions in markets such as jet airliners, helicopters and satellite launchers. It is number three in the world aerospace and defence league behind only Boeing and Lockheed Martin, and aims rapidly to overtake Lockheed.

The English acronym EADS sounds awkward, but unfortunately it accurately reflects the awkward and unwieldy structure of the new European venture. The share-ownership formed through the union of DASA (the aerospace part of DaimlerChrysler) and Aerospatiale Matra (with a dash of Spain's CASA bought up and folded in by DASA) is overly complicated (see chart), largely because of the need to satisfy certain French government interests.

The corporate governance is worse, flowing as it does from the political need to keep a head office in Munich and another in Paris. National governments, frequently being asked to supply civil aircraft subsidies and opportuned to indulge in big military aerospace orders, demand local head offices.

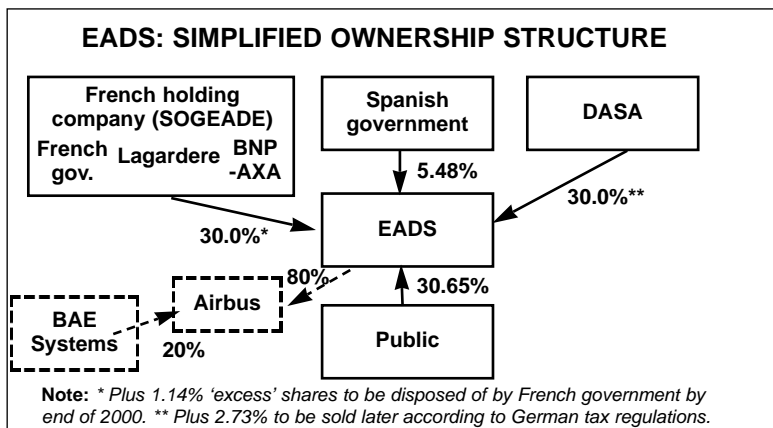
The management structure of EADS reflects all this politicking: two chairman, two chief executives, and so on. A real merger would have thrown everything in the air, opened the top jobs to competition across the talent from the companies coming together and genuinely tried to forge a new European enterprise rather than one that, its formidable capabilities notwithstanding, has its hands tied behind its back when it comes to rationalising its operations and organising itself to deliver maximum shareholder value.

Nevertheless, the CEOs, Philippe Camus and Rainer Hertrich, are both polished and

reasonable people, well aware of the political and business minefield in which they are working. The pair have devised a rough-and-ready way of dividing up the people who report directly to them: Germans report to the Frenchman and non-Germans report to Hertrich. They claim that they can handle joint responsibility because they speak to each other on the video phone every day, and rely on utter frankness and no hidden agendas to resolve differences. Both are ensconced for five years, as things stand at present.

EADS has several divisions: Airbus; Military transport (really another new part of Airbus); Aeronautics (that means military aircraft and helicopters); Space; Defence and Civil Systems (which includes missiles, defence electronics, some telecoms and some services). An impression of the complexity can be gained from the fact that there are no fewer than three missile companies in this structure.

So, apart from an over-complicated European company, what is EADS and where is it going? Before counting in the huge \$17bn order for the A300M military transport outlined at the Farnborough Air Show, it is 54% Airbus (which will become the Airbus Integrated Company, 80% owned by EADS and 20% by BAE), 18% military aircraft and helicopters, 16% defence and



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civil systems (that means electronics and missiles), 11% space (which means satellites and launcher systems).

A problem is that many of these programmes are themselves joint ventures, mainly with BAE Systems. The potential for conflicts of interest, clashes of objectives, political realities and simple unmanageability across EADS is enormous. The spread of shareholders from German private company to French government is guaranteed to produce tension.

Still, EADS has one clear strategic aim. It wants to overtake Lockheed Martin to become the number two defence and aerospace company worldwide behind Boeing. It boasts of being number two in civil jets (behind Boeing) and missile systems (behind Raytheon); number one in helicopters and in satellites launchers; number three in satellites. But it comes a poor fourth in military aircraft, despite the Eurofighter orders being placed by European governments.

Camus and Hertrich talk about more than 400 integration projects and their aim of industrial integration within two years. There are McKinsey consultants on hand to tell them when managers are disagreeing because of cultural differences or because of substantive differences. There will be no shortage of training seminars and top managerial meetings.

### The subsidiarity principle

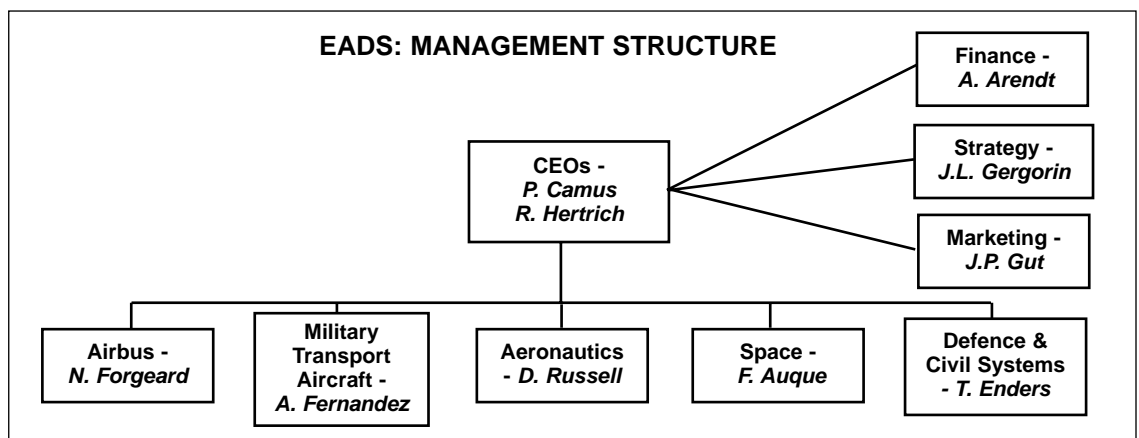
But the guiding principle of management in this grand new European enterprise is

summed up by one word: "subsidiarity", the EU principle that decisions on integrations and harmonisation should be taken at the lowest possible level. Expect, therefore, the integration of EADS to be about as simple and straightforward as the construction of an integrated European Union.

None of this would matter all that much if EADS had the potential to evolve its various components into an ideal whole, worth more than the parts. Its structure may prevent that ever happening. The ideal structure would have been for DASA and BAE to have merged and then folded in the French later (along with Italy's Finmeccanica and CASA). That, at least, would have brought together the main Eurofighter partners and created a solid base for Airbus. But BAE rather arrogantly assumed it could strengthen itself by absorbing Marconi Defence Systems (part of GEC) before going on to merge with the Germans. DASA would have none of this and chose to link up with Aerospatiale to form EADS.

Apart from the politically imposed complexity of its ownership and management structure, EADS is left with other weaknesses, including the following.

- A basic imbalance of its business, depending so heavily on Airbus;
- The lowly position it enjoys in fighter aircraft;
- Its incompleteness, without a strong position in defence electronics;
- Its dependence for more than two-thirds of its turnover on joint ventures with BAE Systems, for example, in missiles.
- The barriers to forming links with US aero-



space companies, given the reluctance of the American government to share technology with non-British European businesses.

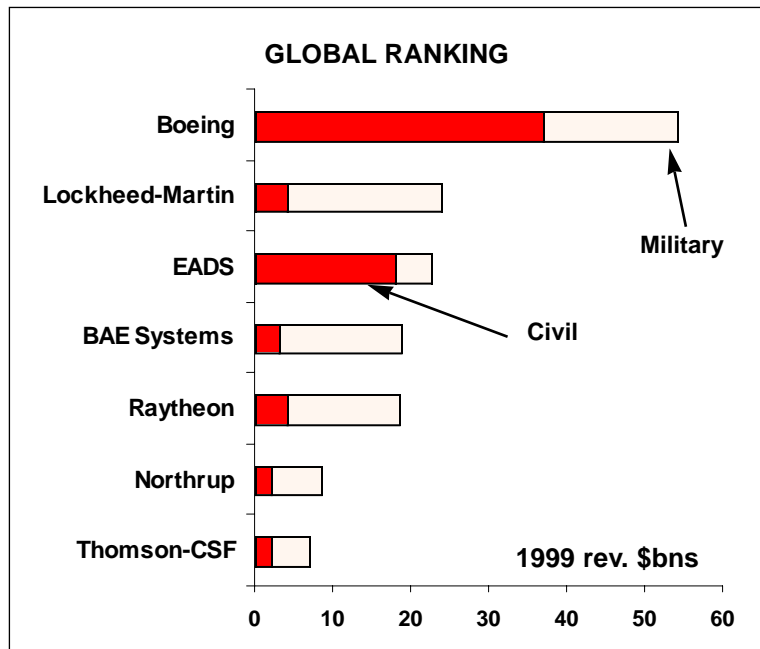
EADS aims to move from a pre-tax margin of 6.4% last year (on a pro forma basis) to one of 8% by 2004; it would have been 10% but EADS will be expensing the development costs of the Airbus A3XX during this period. The decision not to capitalise that investment means it will pay back faster if sufficient aircraft are sold at reasonable prices, as the programme develops.

Break-even for the A3XX is some 230 units, but EADS expects it to repay its investment with a handsome return when it sells 780 aircraft; the company thinks it can win two thirds of the market for aircraft over 400 seats, because its offering will be superior to the upgraded 747X that Boeing will offer in competition. This ignores the fact that Boeing could have its futuristic blended wing body aircraft (currently on its second-scale model) on the market halfway through the life of the A3XX. This revolutionary aircraft-virtually a flying wing-is being designed in three versions carrying 250, 450 and 650 seats. Boeing reckons it could be on the market inside ten years, with aerodynamics and operating costs that would revolutionise the industry.

Back on earth, EADS reckons about half of the synergy to improve its margin is expected to come from joint purchasing, with a further third to come from internal reduction in costs base in areas such as R and D and production. Finally, 15% is expected from boosting sales, because collectively EADS should win business that separately the partners could not.

### Delivering synergies

Again the key question: can this amalgam actually be bashed into shape to deliver some these synergies? The main obstacles to that is going to be resistance in France to rationalisation that would lead to job losses in what is seen as a strategic industry. The presence of the French government as a 15% direct shareholder militates against any effective action on that front.



Then there is the fact that EADS is heavily dependent on BAE Systems for many of its programmes. And BAE is way ahead in terms of establishing itself as a transatlantic aerospace and defence company. Although BAE's chairman Sir Richard Evans rules out any merger with Boeing, it is clear that the two companies can only get closer, through joint ventures such as on the American Joint Strike Fighter (JSF) programme. There is no love lost between BAE and, in particular, the German component of EADS.

### Too negative?

This review may seem unduly negative, but the history of aerospace mergers in the more straightforward US market is not very encouraging. Lockheed Martin never really got to grips with integrating the various businesses it brought together, and customers and projects suffered as a result. Raytheon attempted a full integration while keeping a customer focus, but still lost the plot. The jury is still out on Boeing/McDonnell Douglas. In Europe, with its fragmented national defence markets, only slowly being integrated with orders such as the Meteor missile and the A400M military transport aircraft, everything is infinitely more complex.

### Trans-Tasman market: unexploited business opportunities

Analysis by Clinton McKenzie, Peter Harbison & Ian Thomas of the Centre for Asia Pacific Aviation

[www.airportasiapac.co.au](http://www.airportasiapac.co.au)

The Single Aviation Market (SAM) between Australia and New Zealand now has its first cross-border airline group following Air New Zealand's takeover of Ansett. Air NZ itself has been 25% owned by Singapore Airlines since April. On a more limited scale, Qantas has established a franchise arrangement with Ansett New Zealand, now to be called Qantas New Zealand. With a combined market of 35m passengers a year, there are major potential; benefits for both groups (and possibly for Australian start-ups, Virgin Blue and Impulse), but there are also still business hurdles to a fully open market.

For Qantas, the way would now be clear to construct a wholly-integrated Australasian network, comprising domestic, trans-Tasman and regional services, with New Zealand domestic operations now to be accounted for by Qantas New Zealand. But Qantas already has in place most of the services it needs and will not be the main beneficiary of the Single Market.

The potential advantages are greater for the ANZAS partnership, including:

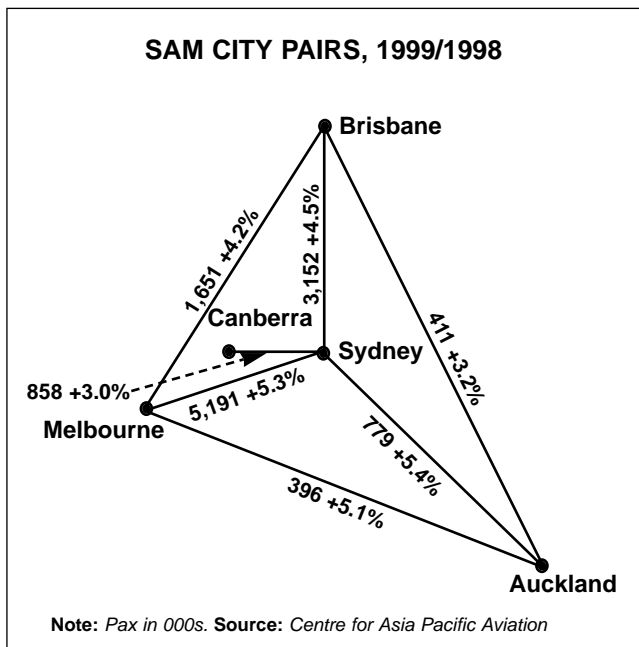
- Establishing a combined regional/transTasman operation, capitalising on international routes out of Australia and New Zealand, and domestic networks within the countries;
- Creating a seamless service by operating between Australia and New Zealand, possibly out of domestic terminals on either side of the Tasman;
- Significantly improving aircraft utilisation and yields by setting up an interchangeable fleet system; and
- Further rationalising the joint cost base.

Air NZ has estimated a NZ\$256m (US\$130m) increase in annual profits will result from its combination with Ansett.

With Singapore Airlines standing by to provide capital and management support and additional fleet resources, the Air NZ group is set for a radical restructuring that should accelerate earnings growth and strengthen regional market share by 2003. Played properly, the merger of the two international/domestic businesses could become a model for future cross-border airline partnerships.

Meanwhile, Ansett is well on the way to streamlining to a core airline with its operations stripped back to those directly related to flying and ticket sales. It has sold off its catering, express freight and other non-core-businesses over the past 18 months, outsourced its IT requirements, and established establish a joint venture engineering company with Air NZ.

Yet, as the competitive environment heats up, the risk of internal disruption increases, in both the Australian and NZ markets, and on international routes. Air NZ's task in bringing together two workforces with 22,000 employees, greatly differing corporate cultures and incompatible union agreements should not be underestimated. As a warning, Qantas's merger with Australian Airlines in the early 1990s resulted in four years of employee conflict before





the new relationship was bedded down. The Air NZ-Ansett evolution will not be helped in the short term by the recent sudden departure of experienced CEO, Jim McCrea.

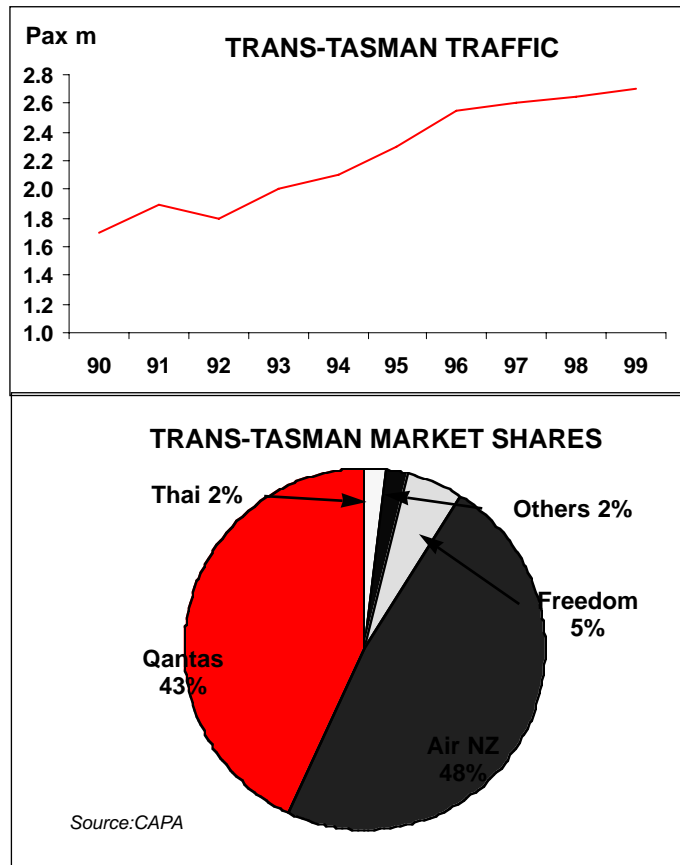
Air NZ has however made a commitment to continue operating two separate brands within the one group - a sound decision given the strength of the Ansett brand in Australia. But, in the longer term, beyond 2003, the development of a joint image could provide a more effective group marketing presence.

Also, the Australian government has protected the Ansett brand, at least in a corporate sense, through the conditions laid down for Air NZ to acquire the second 50% of Ansett Holdings. Under these terms, Ansett and 49%-owned Ansett International will remain incorporated in Australia, and retain "substantial headquarters" there.

There is no specific mention in the approval as to which brand should be used commercially in domestic markets, although Ansett International will continue to serve most of the international routes into and out of Australia for the group.

The SAM provides the bilateral basis for an extension of beyond (fifth freedom) privileges to the other country's airlines, though these have been resisted by Australia in the past. Air NZ remains subject to limits on its services out of Australia - a point reaffirmed by another of the approval conditions which requires international growth opportunities into and out of Australia to be "primarily exercised" by Ansett International (although that may not necessarily mean using their own aircraft). Air NZ has also agreed, under the terms set by the government, to support Ansett International's expansion "consistent with commercial opportunities available to it".

Other approval conditions control the impact of the merger by ensuring that there are no "significant reductions" in employment at Ansett, and that regional services must be maintained. Only with Ministerial approval can regional (domestic) routes be withdrawn (an interesting evolution of "deregulation meets regional politics"). Australian interests also secure a sizeable presence on the Ansett-Air NZ board with at



least one quarter of seats required to be held by Australian citizens.

Otherwise, within the scope of the government restrictions, Air NZ will have carte blanche to operate the two airlines as one in a combined domestic/trans-Tasman market.

### Fleet integration

As the respective airline groups merge their operations into a single entity, the commercial demarcation which limits the Australian domestic market to Ansett and the New Zealand market to Air NZ should disappear. Both markets and the Tasman should be operated as one extended domestic system, with each airline group's aircraft freely operating throughout the borderless market.

The resulting integration would permit innovative route structures and higher aircraft utilisation. With a sympathetic regulatory environment, the joint utilisation of fleets between alliance partners in this region

could go even further than the Air NZ-Ansett collective. SIA could supply additional aircraft to Air NZ or Ansett.

Qantas and British Airways are also well-placed to interchange aircraft (an example being Qantas' recent decision to take six 767s from BA).

At present, there are no economic regulatory hurdles to this, but there are technical regulatory problems. The SAM agreement does not yet provide for mutual recognition by Australia and New Zealand of aircraft safety regulatory controls and certification: a seemingly minor hurdle, but to date an intractable one.

### Australian domestic terminals for trans-Tasman flights

A further enhancement would be to allow trans-Tasman flights to operate into and out

of domestic terminals (at present, Australia-New Zealand traffic is classified as international and must use international terminals). Some 96% of Australia-New Zealand passengers pass through three gateways, Sydney, Brisbane and Melbourne.

This would allow the development of competitive services from Australian secondary points to New Zealand. Air NZ's subsidiary, Freedom Air, has been relatively successful in developing services from secondary point in New Zealand to Australia.

If domestic status were conferred on the Tasman, then it would be logical to remove existing customs and immigration requirements for passenger processing. Australia and New Zealand could ultimately agree to making either country a single point of entry for overseas travellers to the Australasian market, as has occurred among the EU's Schengen states. However, these remain distant prospects.

## US financial results: pretty robust

Second quarter results from the US airlines generally portray a picture of robust financial health, with exceptions as usual.

Overall the top six plus Southwest reported a 13% growth in revenues to \$24bn. In the period capacity overall was restrained to a growth of 3% while traffic grew by 8% and the load factor improved by nearly 4 points to 76.6%. At the top end of the range,

Southwest generated a 20% growth in revenues on the back of a 14% increase in capacity while at the bottom of the range US Airways achieved only a 6% increase in revenues despite a near 10% jump in capacity.

Both American and United registered decreases in seat capacity as they rolled out the new aircraft configurations giving passengers more space - and in United's case

### US MAJORS: SECOND QUARTER 2000 RESULTS (\$millions)

Revenues	% chg	EBITDAR	% chg	Margin	Net	% chg	EPS	% chg	
AMR	5,011	10.4%	962	14.0%	19.2%	321	19.8%	1.96	44.1%
Delta	4,469	14.0%	1,179	10.8%	26.4%	460	26.4%	3.51	46.3%
Continental	2,571	17.9%	587	12.0%	22.8%	149	12.9%	2.46	42.2%
Northwest	2,927	12.7%	479	2.4%	16.4%	115	-4.2%	1.26	-2.3%
USAir	2,433	6.4%	385	-16.5%	15.8%	80	-48.0%	1.17	-72.5%
UAL	5,109	12.5%	1,075	24.3%	21.0%	408	16.9%	3.47	21.3%
Southwest	1,461	19.7%	432	18.8%	29.6%	191	20.8%	0.36	24.1%
<b>Total</b>	<b>23,981</b>	<b>12.7%</b>	<b>5,099</b>	<b>11.1%</b>	<b>21.3%</b>	<b>1,724</b>	<b>11.6%</b>		

Note: EBITDAR = operating cash flow; EPS = Earnings per share

# Aviation Strategy

## Analysis

### UNIT REVENUE AND COST TRENDS

	RPM % chng	ASM % chng	Pax LF	Pt chng	Yield (cents)	% chng	RASM (cents)	% chng	Unit cost (cents)	% chng
AMR	5.3%	-0.8%	75.9%	4.4	13.75	6.0%	10.44	12.5%	10.24	10.0%
Delta	7.1%	3.1%	77.8%	2.9	12.83	-0.3%	11.00	13.3%	9.38	4.9%
Continental	10.5%	6.1%	77.1%	3.1	13.38	5.4%	10.32	9.9%	9.85	10.3%
Northwest	8.5%	3.7%	79.7%	3.5	11.92	4.2%	9.50	8.9%	9.24	9.1%
USAir	11.5%	9.7%	74.7%	1.2	16.24	-5.6%	12.14	-4.0%	12.62	2.0%
UAL	6.8%	-0.9%	75.6%	0.5	13.62	7.3%	11.57	13.5%	10.09	14.4%
Southwest	15.7%	13.9%	74.3%	0.1	12.93	4.0%	9.91	5.1%	7.77	4.2%
Total	8.2%	3.0%	76.6%	3.6	13.40	3.5%	10.76	4.9%	9.89	5.5%

the introduction of the Economy-plus cabin. The top carriers managed to persuade passengers to pay for some of the increase in fuel costs with a 3.5% increase in passenger yields in the period giving a near 5% improvement in RASM (revenues per ASM).

American and United achieved the highest rate of growth in RASM at 12.5% and 13.5% respectively - showing that their low capacity strategy works - while US Airways suffered a decline of 4%. ( US Airways had suffered a strike at the end of the first quarter, which had a carry-over effect into the second quarter as passengers refrained from booking in fear of a continuation).

The adoption of SAB 101, regulating the reporting of the sale of FFP miles to third parties as a part of Passenger revenues rather than the catch-all "other", has distorted the prior year comparisons to a modest degree, but is only a cosmetic change.

On the cost side, the main story for the period remains the high cost of fuel. Jet kerosene spot prices continued their upward trend in the quarter and despite hedging activities represented a severe extra burden to the top seven of some \$990m, with a fuel price per gallon some 50% higher on average.

With the exception of the position at United, the cost bases excluding fuel remain reasonably well contained. At United however, non-fuel unit costs jumped by 11%, mainly as a result of wage snap-backs as the ESOP plan put in place at the time of the employee buyout comes to an end.

The various hedging activities of the major carriers to smooth the impact of fuel price movements have had a significant impact - with American and Delta reporting savings for the quarter of over \$100m each. While the US economy remains strong, it should be reasonable to expect that the industry will be able to recoup the higher fuel cost from passengers over time.

Meanwhile, the process of attacking distribution costs continues apace. This is one of the principal benefits to the industry of the "new" economy. Internet and on-line sales are growing at a significant pace - although still remaining a relatively small part of the total. The start up of the industry-wide portal Orbitz to counter the other on-line agents should help to accelerate the trend.

For the major carriers as a group, gross operating cashflow (EBITDAR) grew 12% to \$5.1bn. It is interesting to note that both American and United achieved a modest increase in EBITDAR margins showing again the successes of their low growth strategy. Net profits increased overall by 12% to \$1.7bn, with American, Delta and Southwest all achieving growth above 20% a year.

Following the spate of recent share buy backs and capital manipulation, the earnings per share for the quarter continued to show very strong improvements for all except USAirways. On a simple average EPS grew by 15% - but by 29% if US Airways is excluded.

## American: response to threat of UAL/US Airways

American's earnings look likely to continue to surge this year and in 2001 as the carrier is well-hedged for fuel and is enjoying strong fundamentals in all of its geographic regions. Longer-term outlook is further enhanced by a new FFP alliance with America Online (AOL) and the prospect of improved labour relations following the recent tentative deal with the pilots.

However, apart from the AOL deal, the successful integration of Business Express and an immunised alliance with Swissair and Sabena, little else has gone right strategically for American in recent years. The setbacks have included a bitter pilot dispute following the purchase of Reno Air, loss of Canadian as a potential Pacific partner, loss of a management role at Aerolineas

Argentinas and the stalling of the transatlantic alliance with BA. On top of all that, the carrier faces new competitive pressures at its main hubs and many key domestic markets.

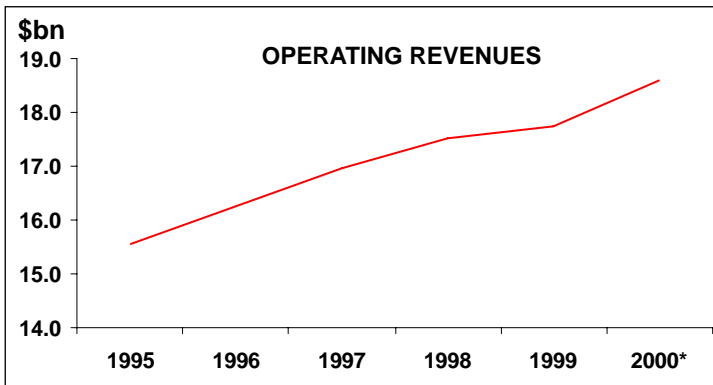
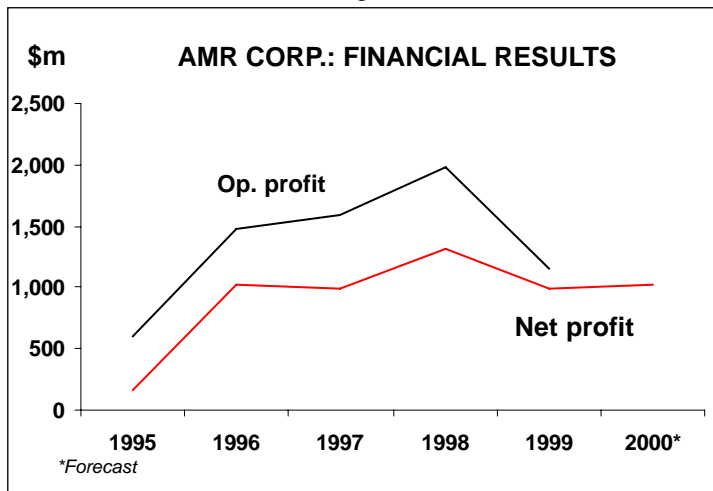
Therefore American already had a lot on its plate when UAL revealed its plans to buy US Airways. Since the proposal would threaten American's competitive position on the East Coast and accentuate existing weaknesses elsewhere in its network, there is considerable pressure to respond with a merger proposal that would mitigate those effects.

AMR is now widely expected to announce some kind of a merger with Northwest before the end of the summer, but it is by no means certain. The two have remained wide apart on price, reflecting AMR's reluctance to offer a large premium. Its leadership has repeatedly stressed that any deal would have to make financial sense. But these issues will, of course, be weighed against the risk of domestic network erosion and adverse implications for international alliances.

But AMR is now in a better position to tackle the unusually complex issues involved and make the right decisions. First, the successful spin-off of Sabre in mid-March meant that the company can now focus all attention on the airline business. Second, any merger negotiations will benefit from peace on the labour front if American's pilots ratify the tentative agreement reached in late July to extend the current contract by a year.

### Strong fundamentals

This year American has really stood out among the US major carriers in terms of its strong earnings growth. It reported the best year-over-year improvements in profit margins for both the March and June quar-



ters, even though the actual margins are not among the highest in the industry.

In the latest period, AMR's operating income surged by 25%, while net earnings before special items rose by 32% to \$285m, accounting for 5.7% of revenues. The company is now expected to see its earnings increase from last year's \$3.45 per diluted share (excluding special items) to \$4.70 in 2000 and \$5.15 in 2001.

The results reflect a recovery from the effects of the early 1999 pilot dispute, which led to extensive service disruptions and reduced last year's earnings by an estimated \$225m. In addition to a strong US economy and a favourable domestic pricing environment, American has been fortunate to experience healthy fundamentals also in all of its international regions.

The carrier has performed particularly well in the transatlantic market, where unit revenues rose by 15% in the June quarter despite 6.4% capacity expansion. This was possible because BA has been cutting capacity in the UK-US market, which accounts for 60% of American's total European revenues. Also, American has eliminated or reduced service in less profitable markets in favour of new services to capital cities like Paris and Rome.

Latin American routes have also improved as economic recovery has gathered pace in many parts of the region. American's unit revenues there rose by a healthy 7.5% in the June quarter.

American's domestic unit revenues surged by 13% in the June quarter and the carrier claims to have attained a domestic revenue premium over competitors. However, United actually reported slightly higher unit revenue growth. Around three percentage points of American's unit revenue improvement was attributed to the "More Room Throughout Coach" initiative, which began in February and entails taking out 6.5% of the total seats to increase coach class legroom.

Overall unit revenues rose by 12.5%, yield by 7% and the load factor by 4.4 points to a record 75.9% in the June quarter. Systemwide capacity declined by 0.8% and domestic capacity by 2.7% (of which

around 2.5 points was attributed to the seat removals).

Another reason why American's profits have surged is that it has been well hedged for fuel. Nevertheless, unit costs rose by 10% to 10.24 cents per ASM. Excluding the seat initiative and the fuel price hike, unit costs were up by around 3.5%.

American is well-positioned to continue to post strong profit growth, first, because it remains well hedged for fuel. It has hedged 70% of its requirements for the second half of this year at just under \$20 per barrel and 30% of next year's needs at around \$21 per barrel.

Also, short term fundamentals look good. American has continued to report strong forward bookings in both domestic and international markets and is likely to gain from United's evidently worsening labour-related service problems. American estimates that in the second quarter it derived \$10-15m additional revenues due to United's flight cancellations.

Capacity will continue to decline in the third and fourth quarters as the additions from the delivery of new aircraft will be more than offset by the coach class seat removals. As the conversion of the narrow-body fleet nears completion, American is hoping for some market share gains.

Conversion of the widebody fleet will begin this autumn and is due to be completed by mid-2001. Separately, American is also expanding business class seat pitch on certain international and transcontinental flights, mainly to keep up with competitors' standards.

In one of the most notable recent Internet strategy initiatives, American is linking its FFP with AOL through a three-year exclusive agreement. According to Salomon Smith Barney, the deal could generate \$300-400m in annual incremental revenues in three years' time. The alliance is expected to be launched later this summer.

This and other possible innovative distribution alternatives are easier for AMR to implement now that Sabre is an entirely separate entity, and they should more than make up for the loss of Sabre's earnings. However, without Sabre's stable profit

stream, AMR's future earnings may be somewhat more volatile.

### Financial flexibility

AMR has one of the industry's strongest balance sheets, with \$2.6bn cash reserves and a debt-to-capitalisation ratio of just 64% at the end of June. Also, according to chairman/CEO Don Carty, by the end of the year the company will have an unencumbered aircraft fleet worth in excess of \$9bn and is "in excellent shape to pursue any alternative".

Carty, who spoke at a recent Merrill Lynch conference, put it even more explicitly: "If we were to go buy virtually any airline in the US except for Delta, our debt-to-capitalisation would still be under 80%".

But a ratio approaching 80% may not in

the end be judged acceptable by the company. The Sabre transaction, which boosted AMR's cash reserves by \$560m, made the balance sheet more leveraged. It also led to the temporary suspension of AMR's aggressive share repurchase programme, which has seen \$2.6bn worth of buybacks over the past three years.

In a conference call to announce AMR's second quarter earnings, CFO Tom Horton acknowledged the need to manage the balance sheet carefully at present. However, in addition to pursuing strategic investment opportunities, the company remains committed to returning cash to shareholders and expects to "revisit" the subject late this year.

### Benefits of the pilot deal

American and its pilots reached a tentative deal on July 21 to extend the union's contract for one year past August 2001, when the current contract becomes amendable. The deal includes a 3% pay rise and wiping out the \$45.5m "sickout" fine imposed on the union by a federal judge last year. In return, the union will provide almost \$1m for an employee scholarship fund and charity projects and has made concessions about the use of regional jets.

This significant breakthrough came after some ten months of efforts to rebuild a working relationship and develop ways to resolve past and future disputes. Many company officials have held the view that last year's dispute was not about Reno but related to a whole host of other issues going back for five or six years. When entering the latest round of talks, the two sides had agreed that there would be no harm or foul if the contract extension could not be settled.

The pilots agreed to lift most restrictions on the use of small regional jets, in return for exclusive rights to fly future 50-plus seat RJs, which American Eagle does not yet operate but has on order. Eagle's fleet size would be tied to American's, but it could increase at an accelerating rate, from 40% to 56% of American's fleet size, as the latter expands. This would provide significant growth opportunities as Eagle's fleet is cur-

#### AMERICAN FLEET PLANS

	In fleet	On order	Options	Remarks
727-200	66			Stage 3
737-800	34	74	400	Delivery 2000-04
757-200	92	20	3	Delivery 2001-02
757-200EM	10			
767-200	8			
767-200ERM	22			
767-300ERM	49			
777-200ER	20	23		Delivery 2000-01
A300-600	35			
DC-10	10			
F100	75			
MD-11	9			
MD-82	237			
MD-83	36			
MD-87	4			
MD-90	5			
<b>TOTAL</b>	<b>712</b>	<b>117</b>	<b>403</b>	

#### AMERICAN EAGLE FLEET PLANS

Emb 135	17	78	115	Delivery 2000-05
Emb 145	50			
Saab 340	138			
ATR 42	37			
ATR 72	37			
CRJ-700		25	25	
<b>TOTAL</b>	<b>279</b>	<b>103</b>	<b>140</b>	

Source:ACAS

rently limited to 67 RJs of 45 seats or more.

If the deal is ratified (an early September vote is expected), American will gain a welcome respite on the labour front for any merger negotiations. This could also be a turning point for improved labour relations in the longer term.

However, apart from obtaining the pilots' blessing for a codeshare relationship with Horizon Air, the talks did not cover any merger issues (which for an American/Northwest combine would be difficult because there is no commonality in terms of representation). And American still has to secure a new contract with its flight attendants, who rejected a tentative deal last year.

### Domestic challenges

A UAL/US Airways merger would be a major blow for American because, in the first place, it would mean losing US Airways as an FFP and marketing partner. Although the two have not codeshared, the mere linking up of their FFPs is believed to have produced substantial revenue benefits. The deal has given American access to US Airways' captive high-yield customer base in key East Coast business markets.

However, AMR's top management was neither surprised at UAL's announcement, nor does it express any regrets about not trying to outbid UAL for US Airways. This is because the issue first surfaced five years ago, when UAL considered bidding for US Airways, and has been on the table on and off for both UAL and AMR ever since. As AMR has never wanted to buy US Airways, it has sought alternatives. As Don Carty explained recently, five years ago AMR decided to "take some steps to reduce our exposure, because we didn't like being exposed to an acquisition that we viewed and have consistently viewed as largely defensive".

Carty was referring to a major effort undertaken to strengthen East Coast operations in the key cities of Boston and New York with numerous new services, extensive facility improvements, the acquisition of New England-based commuter carrier Business

### AMR CORP. BALANCE SHEET (\$m, March 31, 2000)

Current assets	4,999	Current liabilities	6,279
Flight equipment, etc.	14,810	Long term debt	4,183
Capital leases and other assets	3,603	Shareholders funds	12,950
Total assets	23,412	Capitalisation	23,412

Express and substantial RJ expansion by Eagle. Since 1995 AMR has added 400-plus new daily departures and service to 40 new destinations from Boston and New York.

While this is impressive, it obviously pales in comparison with US Airways' extensive presence along the East Coast. A merger with Northwest would do little to help American in that respect.

But there may be alternatives. American says that the most valuable part of Business Express, which has now been fully integrated into Eagle, were the new slots and facilities acquired. Consequently, the "do nothing" option just may be possible for American if enough "unique assets" are stripped from the UAL/US Airways transaction.

But UAL/US Airways could also jeopardise American's position in important markets like the West Coast and Chicago where it already faces many challenges. American has been relatively weak in the West since closing its San Jose hub in 1993, but United's build-up there has made it desirable to try to get back in. This led to the Reno Air acquisition and a codeshare pact with Alaska and Horizon.

This summer American has been restructuring its West Coast operations. It has discontinued many leisure-oriented routes out of Reno and Las Vegas in favour of boosting service in key California business markets out of Los Angeles and San Jose. Since this represents a major shift away from Reno Air's markets, it is hard to see what the acquisition has done to help American in the West.

The phasing out of slot controls at Chicago O'Hare by July 2002 will give both United and American some good growth opportunities. The initial phase, implemented on May 1, increased American's domes-

tic slots there by 21% and United's by 15%, which they can benefit from until they come up against gate constraints. However, in a recent report, Salomon Smith Barney analyst Brian Harris argued that in the long run American is likely to lose out to United, because the number one hub carrier typically wins at two-carrier hubs.

In another recent report, Harris argued that American is at a competitive disadvantage generally because, given its large overall size, it is not dominant enough in markets that really matter. It is only the second or third largest carrier in key cities like Chicago, LaGuardia, Boston and Los Angeles. This reflects its relatively high percentage of non-hub flying - 19.3% last year, compared to the industry average of 11.5%.

A UAL/US Airways combine would obviously weaken American's position in all of those key cities. A merger with Northwest would help in that American would gain two more hubs in the Midwest (Detroit and Minneapolis) and make up for the loss of Canadian as Northwest has a very strong Pacific presence.

All is not well at DFW either because of Legend's debut at nearby Dallas Love Field. After years of fighting in the courts to prevent Legend from introducing long haul service from Love Field, American conceded defeat and dropped all legal actions in July. It is now focusing on mounting the most effective competitive response. Following Legend's start-up in April, American began 56-seat executive class Fokker 100 service from Love Field to Chicago O'Hare and Los Angeles in May, and LaGuardia will follow at the end of August.

Analysts now believe that the Love Field RJ expansion will negatively affect DFW business traffic and yields. But CFO Tom Horton explains that because much larger numbers of American's premium-fare passengers live close to Love Field than DFW, the carrier had to do something about it. However, beyond the three routes already operated or planned, traffic apparently gets pretty thin, so that may be the extent of American's Love Field expansion.

American still faces a DoJ antitrust lawsuit, filed in May 1999, alleging that it

attempted to drive out small new competitors from DFW with large capacity additions and fare-cutting. This was the first-ever and so far the only such lawsuit filed by the DoJ against an airline, and American intends to "defend it vigorously".

American Eagle is playing an increasingly vital role in AMR's success, because of its rapid regional jet expansion in key markets. Eagle had 71 ERJ-135s/145s in its fleet at the end of June, having added 17 this year with 12 more to come. At DFW, its largest hub, it is currently building a satellite terminal for RJ expansion. Chicago O'Hare will be an all-RJ operation by year-end, and now that most restrictions on smaller RJ numbers have been lifted, Eagle could prove instrumental in helping American retain market share in that important hub.

### International setbacks

AMR has recently had much bad luck with strategic investments both north of the border and in South America. First, in December 1999 it had to sell its 25% stake in Canadian and lost a potentially valuable partner, when Canadian was acquired by Air Canada and switched to the Star alliance. Next, in January it lost its management role at Aerolineas Argentinas, in which it still holds an 8.5% stake, amid allegations that it had mismanaged the airline.

Of the two, the loss of Canadian was a bigger blow as American had hoped to build Pacific service through Canadian's routes. The deal did ensure continuation of North American codesharing and FFP cooperation for ten years and permitted AMR to continue supplying management services.

As regards Aerolineas, American will now have to decide whether or not to contribute to a proposed \$650m rescue plan due to be discussed at a mid-September board meeting. The plan, which proposes laying off 30% of the workers plus 20% pay cuts, is fiercely opposed by the workers.

There is speculation that American will refuse to contribute, which would mean its stake falling to less than 1% and a possible loss of board representation. Its main concern is probably defensive - retaining the



lowest possible stake necessary to prevent other major US carriers getting in.

But the biggest disappointment has been the stalling of the transatlantic alliance with BA, which was announced way back in June 1996 but got tied in US-UK aeropolitical red-tape. The alliance could not secure antitrust immunity in the US in the absence of an open skies ASA, which has made cooperation possible only on a very superficial level.

The relationship has stalled also because of BA's financial problems, which have prompted the UK carrier to put more emphasis on European partnerships. And there is speculation that, because American would be the biggest loser from a UAL/US Airways merger, it may now be less attractive as a partner to BA.

This and BA's merger talks will KLM, which has a lucrative and well-developed alliance with Northwest, have obviously put pressure on American to seriously consider linking up with Northwest. Northwest's extensive Asian services and rights are also a strong attraction.

In the meantime, American has continued to develop cooperation with other European carriers, including Swissair, Sabena, Finnair, Aer Lingus, Iberia and Turkish and TAP, and is rumoured to have also talked to Alitalia. Significantly, it has secured antitrust immunity in the US for its alliance with Swissair and Sabena, effective August 6.

American has also continued to actively develop cooperation with LanChile, which recently joined oneworld, and has signed a codeshare agreement with old-established member Cathay Pacific.

Don Carty said recently that he believed American lost out to competitors on the transatlantic last year due to the alliance delays, but that things are now looking up because of the immunised partnership with Swissair and Sabena and because the US and the UK "may be on the verge of a breakthrough".

But what about the impact of the American/Swissair/Sabena alliance on oneworld? Carty said that this summer the critical element for American was to get access to more markets. Although the issue would need to be reconciled in the longer term, "these alliances as brands do not have much marketing pull yet". In any case, all oneworld members would welcome Swissair into the alliance (though getting both KLM and Sabena to join would require "homework").

With so much going on in Europe, American is obviously waiting for the dust to settle a little. The picture may also become clearer once the next round of US-UK talks gets under way in September. The way in which international combinations could alter the US merger dynamics is clearly a factor being carefully considered.

By Heini Nuutinen

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# Aviation Strategy

## Macro-trends

### EUROPEAN SCHEDULED TRAFFIC

	Intra-Europe			North Atlantic			Europe-Far East			Total long-haul			Total international		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
1992	129.6	73.5	56.7	134.5	95.0	70.6	89.4	61.6	68.9	296.8	207.1	69.8	445.8	293.4	65.8
1993	137.8	79.8	57.9	145.1	102.0	70.3	96.3	68.1	70.7	319.1	223.7	70.1	479.7	318.0	66.3
1994	144.7	87.7	60.6	150.3	108.8	72.4	102.8	76.1	74.0	334.0	243.6	72.9	503.7	346.7	68.8
1995	154.8	94.9	61.3	154.1	117.6	76.3	111.1	81.1	73.0	362.6	269.5	74.3	532.8	373.7	70.1
1996	165.1	100.8	61.1	163.9	126.4	77.1	121.1	88.8	73.3	391.9	292.8	74.7	583.5	410.9	70.4
1997	174.8	110.9	63.4	176.5	138.2	78.3	130.4	96.9	74.3	419.0	320.5	76.5	621.9	450.2	72.4
1998	188.3	120.3	63.9	194.2	149.7	77.1	135.4	100.6	74.3	453.6	344.2	75.9	673.2	484.8	72.0
1999	200.0	124.9	62.5	218.9	166.5	76.1	134.5	103.1	76.7	492.3	371.0	75.4	727.2	519.5	71.4
May 00	17.8	11.8	66.2	20.4	16.5	80.9	11.6	8.7	75.2	43.7	33.6	76.9	64.8	47.6	73.4
Ann. chng	4.4%	11.2%	4.1	7.0%	11.1%	3.0	1.2%	7.7%	4.6	3.5%	10.2%	4.7	4.0%	10.7%	4.4
Jan-May 00	83.5	50.3	60.2	90.7	67.4	74.3	57.0	43.5	76.3	206.5	155.0	75.1	305.2	215.7	70.7
Ann. chng	6.6%	8.3%	0.9	8.5%	10.0%	1.0	3.2%	5.8%	1.9	5.3%	8.7%	2.3	6.0%	9.0%	2.0

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	960.8	678.8	70.7	150.5	117.8	78.3	112.7	82.5	73.2	83.5	52.4	62.8	346.7	252.7	72.9
1999	1,007.3	707.5	70.2	164.2	128.2	78.1	113.2	84.7	74.8	81.3	54.3	66.8	358.7	267.2	74.5
May 00	86.7	63.9	73.6										32.3	25.1	77.5
Ann. chng	2.9%	8.5%	3.8										7.2%	11.0%	3.0
Jan-May 00	425.8	298.0	70.0										150.4	111.2	73.9
Ann. chng	5.2%	6.1%	0.6										5.2%	8.3%	2.1

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 %
1993	1,349	855	63.3	1,785	1,205	67.5	3,135	2,060	65.7	3.4	2.0	4.4	4.8	3.9	3.6
1994	1,410	922	65.3	1,909	1,320	69.1	3,318	2,240	67.5	4.6	7.9	6.9	9.4	5.9	8.8
1995	1,468	970	66.1	2,070	1,444	69.8	3,537	2,414	68.3	4.1	5.4	8.5	9.4	6.6	7.8
1996	1,540	1,043	67.7	2,211	1,559	70.5	3,751	2,602	70.9	4.9	7.4	6.8	8.0	6.0	7.8
1997	1,584	1,089	68.8	2,346	1,672	71.3	3,930	2,763	70.3	2.9	4.5	6.1	7.2	4.8	6.1
1998	1,638	1,147	70.0	2,428	1,709	70.4	4,067	2,856	70.3	3.4	5.2	3.5	2.2	3.4	3.4
1999	1,911	1,297	67.9	2,600	1,858	71.5	4,512	3,157	70.0	5.4	5.0	5.7	7.4	5.6	6.4
*2000	2,004	1,392	69.4	2,745	1,969	71.8	4,750	3,361	70.8	4.9	7.2	5.6	6.0	5.3	6.5
*2001	2,100	1,440	68.5	2,907	2,063	70.9	5,009	3,503	69.9	4.7	3.5	5.9	4.7	5.4	4.2
*2002	2,161	1,463	67.7	3,022	2,119	70.1	5,182	3,582	69.1	2.8	1.6	3.9	2.7	3.5	2.2
*2003	2,233	1,533	68.7	3,170	2,253	71.1	5,403	3,788	70.1	3.4	4.9	4.9	6.3	4.3	5.8
*2004	2,317	1,607	69.4	3,332	2,393	71.8	5,651	4,000	70.8	3.7	4.8	5.2	6.2	4.6	5.6

Note: \* = Forecast; ICAO traffic includes charters. Source: Airline Monitor, July 2000.

### 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, July 2000.

# Aviation Strategy

## Macro-trends

### FINANCIAL TRENDS (1990=100)

	Inflation (1990=100)					Exchange rates (against US\$)						LIBOR 6 month Euro-\$	
	US	UK	Germany	France	Japan	UK	Germ.	France	Switz.	Euro**	Japan		
1991	104	106	104	103	103	1991	0.567	1.659	5.641	1.434	0.809	134.5	5.91%
1992	107	107	109	106	105	1992	0.570	1.562	5.294	1.406	0.773	126.7	3.84%
1993	111	109	114	108	106	1993	0.666	1.653	5.662	1.477	0.854	111.2	3.36%
1994	113	109	117	110	107	1994	0.653	1.623	5.552	1.367	0.843	102.2	5.06%
1995	117	112	119	112	107	1995	0.634	1.433	4.991	1.182	0.765	94.1	6.12%
1996	120	114	121	113	107	1996	0.641	1.505	5.116	1.236	0.788	108.8	4.48%
1997	122	117	123	114	108	1997	0.611	1.734	5.836	1.451	0.884	121.1	5.85%
1998	123	120	124	115	109	1998	0.603	1.759	5.898	1.450	0.896	130.8	5.51%***
1999	125	122	126	116	108	1999	0.621	1.938	6.498	1.587	1.010	103.3	5.92%***
*2000	127	126	127	117	108	Jul 2000	0.665	2.110	7.075	1.670	0.927	109.6	6.84%***

Note: \* = Forecast. Source: OECD Economic Outlook, Jjuly 2000. \*\*Euro rate quoted from January 1999 onwards. 1990-1998 historical rates quote ECU. \*\*\* = \$ LIBOR BBA London interbank fixing six month rate.

### JET AND TURBOPROP ORDERS

	Date	Buyer	Order	Price	Delivery	Other information/engines
ATR	Jul 26	CSA	1 ATR 42-300			
	Jul 26	Airliner (France)	1 ATR 42-500			
	Jul 26	SLAM (Italy)	1 ATR 42-500			
	Jul 26	Cretan Airways	1 ATR 42-500			
	Jul 26	DHL Aviat. Africa	3 ATR 42-300 Cs			Launch order
	Jul 26	ACES (Columbia)	3 ATR 42-500s			
	Jul 26	South Asia AW	3 ATR 42-300s			
	Jul 26	GECAS	30 A318s, 12 A320s		2Q 2003+	CFM56-58 engines
	Jul 26	SALE	3 A319s, 8 A320s			
	Jul 26	Monarch	5 A321s		2002+	
Airbus	Jul 26	America West	4 A319s,		2001	IAE U2500 engines
	Jul 26	British Midland	2 A320s			
	Jul 26	Finnair	2 A319s, 4 A320s			
	Jul 26	Alasco	4 A320s			
	Jul 26	Air France	10 A3XXs			
	Jul 26	ILFC	7 A3XXs			Five previously announced
	Jul 26	Emirates	2 A3XXs			
	Jul 26	ILFC	20 A330-200s, 62 A320Family			
	Jul 26	British Midland	2 A330-200s			
	Jul 26	CIT Group	15 A330s, 35 A320Family			
Jul 26	Finnair	2 A320s				
BAE Systems Boeing	Jul 26	CityFlyer Express	6 Avro RJ100s	\$180m	4Q00-2Q01	+ 6 Avro options
	Jul 27	Turkmenistan	3 717s			
	Jul 27	GECAS	65 737NGs, 15 777s			+ options for 52 717s & 17 777s
	Jul 27	ILFC	7 737NGs, 33 777s			
	Jul 27	Korean	1 747-400F			
	Jul 27	Singapore Airlines	2 777-200ERs, 1 777-200			
	Jul 27	ANA	6 777s			
	Jul 27	Emirates	6 777-300s			
	Jul 27	ILFC	8 777Xs			
	Jul 27	GECAS	5 777-200ERs			
Bombardier	Jul 24	Brit Air	4 CRJ900s, 8 CRJ700s			+ 8 CRJ900 options
	Jul 24	Uni Air (Taiwan)	1 Dash 8Q300			
	Jul 24	SAS Commuter	6 Dash 8Q400s	\$138m	3Q2001	Conversion of 6 of 15 options held
	Jul 24	Shandong Airlines	10 CRJ700s			
	Jul 24	China Yunnan AL	6 CRJ200LRs			+ 4 CRJ200 options
	Jul 24	Delta Connection	79 CRJ100/200s, 25 CRJ700s		4Q00-4Q04	+ 396 options
	Jul 24	SkyWest	6 CRJ200s			
	Jul 24	Tyrolean	1 Dash 8Q400			
	Jul 24	Air Nostrum	8 CRJ900s			
	Jul 24	Tyrolean	12 CRJ900s			
Embraer	Jul 26	Air Caraibes	2 ERJ145s, 2ERJ170s		4Q2000+	+ 2 ERJ170 options
	Jul 26	Sichuan Airlines	5 ERJ145s		4Q2000	
	Jul 26	City Airlines AB	1 ERJ135			
	Jul 26	Rheintalflug	1 ERJ145			
	Jul 26	Continental Exp.	75 ERJ145XRs		2Q2002+	+ 100 options
	Jul 26	Swift Aviation	25 Legacy Business Jets			Joint launch customer
Fairchild	Jul 26	Hellenic Air Force	1 Legacy Business Jet	\$19m		Joint launch customer
	Jul 26	Air Aidriatic	2 328JETS			
	Jul 26	Grossman AS	1 328 JET			

Note: Prices in US\$. Only firm orders from identifiable airlines/lessors are included. MoUs/Lols are excluded. Italics indicated Farnborough announcements that are not yet confirmed as orders Source: Manufacturers.

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