Aviation Strategy

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Airlines and Internet stocks: total opposites?

Airline stocks are now so out of favour that the stockmarket is coming up with some bargain valuations at the opposite end of the spectrum to the Internet miracles.

Currently, the trendiest of stocks, in the TMT (Technology, Media and Telecoms) sector, are trading at a price to cash flow ratio of around 58 in Europe. The rest of the market is rated at 9.3 times cash flow, while airlines are languishing at about 5.7. The ratings are even lower in the US at 3.8 and slightly higher in Asia/Pacific, 6.0, where the outlook is improving quite rapidly. (Tables showing the key ratios, as estimated by Goldman Sachs, are on page 2.)

Consequently, market capitalisations are feeble compared to fashionable stocks. BA has a market capitalisation of the equivalent of $5.8bn; Lufthansa, the most successful of the Euro-majors, is being traded at around $8.8bn. Ryanair at least commands the respect of investors: its value, $2.2bn, is the equivalent of 17 times cash flow. This is an even higher rating than Southwest, currently 10 times cash flow, but Southwest has now bypassed American and United to become the most valuable airline stock in the US - valued at $9.2bn.

These valuations compare with, for example, $11.3bn for Priceline.com, the new and as yet unprofitable ticket auctioning service. They are dwarfed by the Internet giants like Amazon.com ($22.8bn) or Yahoo.com ($90bn)

The situation is even worse for some airlines, including BA, Air France, SAir, American, Delta and Continental. Their stockmarket valuations are the same or very close to their book values - in other words, the stockmarket does not appear to be attributing any value to non-tangible assets like slots, routes and brands.

Not old economy

Yet airlines are not just "old economy". They are driven by many of the same forces that impact TMT companies. Demand for business travel, for instance, is closely connected to the global demand for communication. Demand for leisure travel is derived from the expansion of the whole entertainment business. Demand for VFR travel will presumably not be replaced by electronic messages.

E-commerce depends on the timely physical delivery of goods, a service that is provided not just by the specialists like UPS and FedEx but also by airlines with integrated cargo systems like Lufthansa and KLM.

Airlines have tried various tactics to get in on the high tech stock boom. Emulating high tech start-up companies by not producing profits has proved to be fruitless for airlines as far as the stock market is concerned. More seriously, the stock- *(continued on page 2)*

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market does not seem to have paid much attention to the airline industry's initiatives in, for example, Internet sales, the creation of multi-airline portals, etc.

In this regard the stockmarket is probably correct. Clearly, significant savings can be made by selling through Internet sites rather than using traditional travel agents, but there are no, or very low, barriers to setting up such a B2C (Business to Consumer) Internet sales operation for other airlines. So, as the Internet becomes the main medium for airline distribution, all the cost savings will be passed on to the consumer.

There may be more potential in the B2B (Business to Business) sector where electronic markets being planned by the major manufacturers. Boeing, BAE, Lockheed Martin and Raytheon have announced the establishment of an electronic exchange in which they will conduct most of their purchasing of supplies and sales to airlines. Airbus is setting up a competing exchange.

Even at today's prices there is little sign of a surge in M&A activity. Foreign ownership restrictions and golden shares have put a severe dampener on transactions in Europe and Asia; in the US opposition from the regulators is preventing further consolidation. And the most successful airlines are those that have followed clear independent growth strategies.

But what about airlines as part of one of the TMT empires? This might be one way of unlocking value in the airlines. Admittedly, there are few indications that this will happen, but buying an airline might be a tempting hedge for a highly-rated, cash-rich Internet company.

A slightly strained analogy would be AOL's purchase of Time Warner - the US-based Internet provider deciding to absorb the traditional entertainment company whose films, publications, television programmes etc. will all be marketed via the Internet.

AIRLINE VALUATION RATIOS 2000

Operating margin		Price/Cash flow		Price/Book value	
Southwest	14.6	Southwest	10.0	Southwest	2.8
American	11.8	Delta	3.8	US Airways	1.6
Air Canada	8.9	United	2.9	United	1.3
Alaska	8.4	Air Canada	2.8	Air Canada	1.1
AmWest	7.8	Alaska	2.6	American	1.0
US Airways	7.2	AmWest	2.5	Continental	1.0
United	6.4	American	2.5	Delta	1.0
Continental	6.2	Continental	2.4	Alaska	0.7
Delta	4.1	US Airways	2.3	AmWest	0.6
TWA	-3.9	TWA	-3.4	TWA	nm
Average	**8.5**	**Average**	**3.8**	**Average**	**2.5**
Ryanair	21.7	Ryanair	17.3	Ryanair	7.3
SAir	5.8	Lufthansa	5.6	Lufthansa	2.6
Lufthansa	5.2	SAS	5.3	SAir	1.1
Air France	3.5	BA	4.9	Air France	1.0
BA	1.3	SAir	3.1	BA	1.0
SAS	0.6	Air France	2.8	SAS	0.7
KLM	-0.7	KLM	2.1	KLM	0.5
Average	**5.2**	**Average**	**5.7**	**Average**	**2.1**
Thai	14.4	SIA	8.3	ANA	3.4
SIA	13.3	Cathay	6.8	Thai	2.4
Cathay	12.5	JAL	4.7	JAL	2.2
Qantas	9.0	ANA	4.7	Cathay	1.4
Korean	8.5	Thai	3.5	SIA	1.4
ANZ	7.1	ANZ	2.7	Qantas	1.2
JAL	4.4	Qantas	2.4	ANZ	0.5
ANA	2.6	Korean	0.6	Korean	0.1
Average	**9.9**	**Average**	**6.0**	**Average**	**1.7**
World	**7.9**	**World**	**5.9**	**World**	**1.6**

Source: Goldman Sachs Note: Data as at end Feb., Averages include other airlines

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US Airways - is anybody interested?

News that its biggest shareholder, Tiger Management, is liquidating the bulk of its investments could not have come at a worse time for US Airways, which is trying to win back customers and rebuild investor confidence after narrowly avoiding a shutdown on March 25 due to threatened job action by flight attendants.

Tiger's owner Julian Robertson decided to close down his hedge funds after suffering losses of 19% in 1999 in what he called "an irrational market where earnings and price considerations take a back seat to mouse clicks and momentum". But, in order not to disrupt the market and to get a better price, the five largest holdings, including 16.5m shares in US Airways, will be sold more gradually.

Tiger bought its initial 22.4% stake in US Airways for $450m in 1996 and has stuck with it through bad times, despite warning last August that the stake may be sold. Since May 1999 the share price has plummeted by 55%, valuing Tiger's current 24% holding substantially below the purchase price.

The low share price will make many potential investors take a closer look at US Airways. But is there enough upside potential to attract a purchaser?

Short term prospects are not promising. Despite the fact that there was no strike or shutdown, the scale of the disruption caused by the flight attendant dispute led to extensive frequent-flyer offerings and fare sales, which will depress yields. There are also concerns about excessive capacity growth. US Airways is expected to report a net loss of around $1.15 per share for the quarter ended March 31, compared to profit of 49 cents per share a year earlier.

In the longer term, US Airways continues to be under pressure due to intensified competition in its key markets. Its unit costs remain punitively high. It also has substantial capital expenditure commitments due to fleet renewal over the next few years.

The key question is: can US Airways get back on track to executing the impressive strategic plan initiated a couple of years ago? The management's record in that respect has so far been rather weak, but recent strategic changes with MetroJet and the tentative flight attendant contract are moves in the right direction. If the contract is ratified, as is expected (vote ballots are due to be counted on May 1), US Airways will have secured new deals with all of its unions.

Tiger Management's preferred strategy would be to secure a takeover, and selling to another hedge fund would obviously be the easiest solution. However, given its own experience with the stock, it is hard to imagine other hedge funds being seriously interested.

In theory at least, US Airways could buy the stock itself - after all, it has been repurchasing its stock in the past two years ($800m-plus in 1999 alone) and continues to have healthy cash reserves. But it was actually "punished" for that strategy in January, when its credit ratings were downgraded by S&P, which criticised the company's "very aggressive financial policy" during a period of financial losses.

A strategic investor would be another possibility, but the problem is that an equity link between US Airways and its marketing partner American would probably be frowned on by the regulators. Foreign carriers might attracted by US Airways' strong East Coast franchise, but former partner BA is completely out of the picture.

Airbus prepares to bet the company

Airbus has now received £530m ($850m) from the UK government as a contribution to the $12.5bn to launch the A3XX. The French, German and Spanish governments will later provide a further $3bn in launch aid.

That the notoriously stingy British Treasury under Chancellor Gordon Brown has allowed the money to be advanced is being taken as a sign that this ambitious project really has a commercial future. In private government ministers are less than ecstatic about having to provide risk finance to a huge company which already makes good profits as a near-monopoly supplier to the Ministry of Defence. But the prospect of securing 22,000 new jobs is politically appealing at a time when the UK government is facing embarrassment over severe job losses in the car manufacturing sector.

However, although the partners in Airbus (BAE, plus the members of the new EADS) have already spent nearly $600m on the new aircraft, they have yet to commit themselves to a bet that, in effect, puts the whole company at stake. Airbus's chief executive, Noël Forgeard, is still sounding out airlines on whether they will be legally bound to buy the new aircraft. Depending on the response, the board of Airbus will decide in June whether to proceed with the marketing launch.

Even then, production (more or less certain to take place in Toulouse) would start only if enough airlines bought into the project. At the earliest, the first aircraft would not be delivered until late 2005. It would take around five top-class airlines and 30 orders to get the green light. Positive news is beginning to leak from Airbus headquarters in Toulouse: either this is all rose-tinted hype, or the project really does seem to have about 30 orders in the offing.

Under the 1992 US-Europe bilateral defining the conditiions for government or quasi-government support for large aircraft projects, the Europeans agreed to cap launch aid for new aircraft to 33% of project cost. The rule is that the interest rate for three-quarters of the total 33% aid is the government-bond interest rates plus one per cent, with another quarter of the launch aid at one percentage point above short-term government-bond yields.

The fact that the terms are being kept secret, plus BAE's assertion that it wanted continental European rates (lower than British rates at present), suggests that the rate may be lower than the rules allow. Privately, senior executives accuse the Americans of breaking the their side of the agreement (by receiving funds from NASA greater than the 3% of the company's turnover as stipulated in the 1992 bilateral).

The implication is clearly that the terms could be very sweet for BAE Systems. BAE put pressure on the government by threatening to build the A3XX wings in Italy or Canada, whose governments, it claims, were willing to offer attractive deals.

The Americans, who have tried hard to talk European governments out of backing this project, could now turn nasty. American trade officials are fuming that they have fared badly in recent disputes with the EU. The US could now up the stakes again by taking the EU to the WTO over its subsidies to Airbus, claiming it obtained an unfair advantage, irrespective of the bilateral aid pact.

Awkward questions

The case against gambling Airbus's future (just as it is about to become a company with a value of about $20bn, 80% owned by EADS) is quite strong.

First, Airbus must convince customers that its planned savings in unit operating costs for the A3XX really are in the 15-20% range promised by the engineers. Some European airliners, normally prime prospects, state thatthey do not want the aircraft in the near-future. Normally, Air France and Lufthansa would be expected to be

among the first buyers of a new Airbus. British Airways, an esrtwhile fan, is no interested until Heathrow's fifth terminal gets planning permission. United, which was supposed to be one of the launch customers, now says it has no plans to buy.

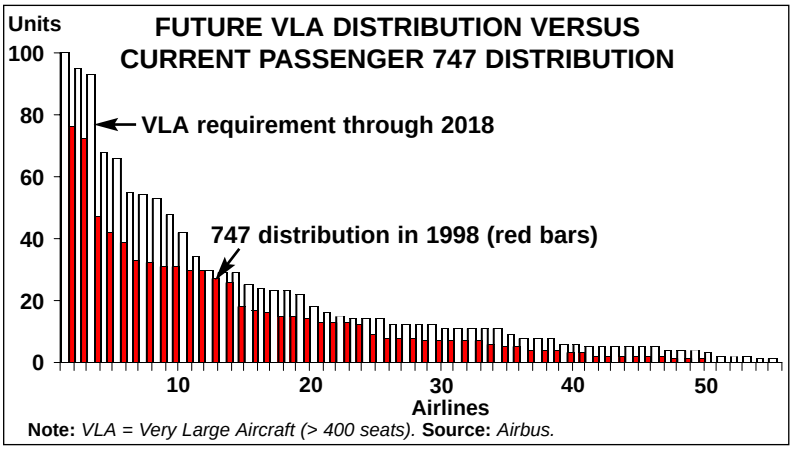
Second, the regular argument against launching the A3XX is, as Boeing never ceases to point out, the fragmentation of air travel markets and the associated downsizing from 747s to 777s and so on. Large aircraft suited a regulated market, in which the number of flights was artificially restricted.

Back in 1987 there was only one flight a day by a US airline between Chicago and Europe, a TWA 747 to London. And 60% of US carriers' transatlantic flights were by 747 operated by Pan Am and TWA in and out of East Coast gateway airports. Today United and American operate 21 daily flights from Chicago to 11 different European destinations, using 767 and 777 aircraft. The 747 share of a much expanded market is down to 40%. Boeing sees further fragmentation of the transatlantic market, with up to 160 addition direct routes identified for 777 and A330 types.

Moreover, Boeing predicts a similar fragmentation in the Pacific market. Currently two out of three Americans flying to Asia are destined for places other than Japan, yet 80% of flights are to Tokyo, where travellers then have to change. As Asia grows and deregulates, more point-to-point routes will open, especially as longer-range versions of the 777 and A340 come along.

In essence, Boeing is saying that this changing market means that demand for aircraft of 400 seats and above is limited to 900 between now and 2018. Airbus acknowledges the fragmentation of the market, but argues that this development is complementary to potentially strong demand for large aircraft flying between key international hubs. It puts the market for aircraft of 400 seats and more is 1,200, and is confident it can win half of that from Boeing, even if launches a successor to the 747.

Airbus uses the standard 5% a year global traffic forecast to produce some startling extrapolations. For instance, the average annual traffic volume over the next 18 years traffic will be eight times the average of the past 30 years. The traffic increase between 2017 and 2018 could be the equivalent of total world air travel in 1969, the year the 747 was launched.



Note: *VLA = Very Large Aircraft (> 400 seats).* **Source:** *Airbus.*

So the need for aircraft such as the A3XX is almost self-evident. Airbus speculates thaat the pattern of ownership of vary large aircraft in 2018 will be close to that for 747s today (see chart above).

Also, Boeing's dismissal of very large aircraft seems at odds with its latest project, working with NASA, to build a flying scale model of revolutionary "flying wing" futuristic aircraft to try out whether a real aircraft of this time would fly, carrying 880 passengers. The $25m project is part funded by NASA.

And should the A3XX get underway, don't be too surprised if Boeing itself finds an involvement through its close ally BAE.

According to John Leahy, the marketing director, Airbus hopes to win launch orders from two Asian carriers, one European or Middle Eastern airline and one American. At least one of the airlines would have to be in Star or oneworld. He says he is encouraged by the response from SIA, Cathay MAS and Emirates. Broad agreement seems to have been reached on these airlines each ordering 12-15 aircraft if formal commercial offers are made.

Also, FedEx, Cargolux, Lufthansa Cargo and Atlas Air are keen on a freight version of the A3XX because, with its ability to carry 150 tons over 6,000nm, so cutting a day off transport between Asia and North America. Given the big role of air cargo in feeding tight supply chains in electronics companies, this could be a powerful competitive weapon.

Latin America: the impact of open skies

The US government's active global pursuit of open skies aviation agreements has met with considerable success in Latin America and the Caribbean. No less than 12 countries in that region have signed such agreements in the past three years, accounting for almost 30% of the worldwide total of 42 secured by the US.

The idea was easier to introduce to a region that had eagerly embraced the free-market system, even to the extent of allowing flag carriers to fail - a concept that has been totally unpalatable in Europe. Many countries had already deregulated domestic markets and Peru had even granted cabotage rights to foreign operators. All flag carriers in Latin America had been privatised by 1996.

But the biggest incentive has been to secure better access to the US and ensure longer-term survival through alliances with the US majors, which have expanded aggressively in Latin America since the early 1990s.

TACA went to great lengths to persuade six Central American governments to sign open skies ASAs with the US in 1997, because without such agreements its code-share alliance with American stood no chance of being approved by the regulators. And LanChile lobbied its government to agree to open skies as it wanted to secure antitrust immunity in the US for its alliance with American.

However, in recent months the DoT's open skies efforts in Latin America have suffered several setbacks. First, in October El Salvador requested new bilateral talks as it wants to modify its open skies ASA to include a mechanism for dealing with unfair competition. This followed TACA's complaint to the DoT that Continental had flooded the Central American market with extremely low, unpublished "net fares" that were draining off important ethnic traffic from TACA.

Then in late January the Argentine government announced that it would not ratify the open skies ASA signed in December, to enable Aerolineas to restructure itself with the protection of the existing highly restrictive bilateral. The new ASA would have phased in an open skies regime by June 2003.

Although Colombia agreed to a new ASA in mid-March that will allow additional service to be phased in over 30 months, it was not the open skies deal that the US had been hoping for. And there is no sign of major countries like Brazil or Mexico being willing to open up their skies.

Argentina's current stance is understandable in the light of Aerolineas' blight. The heavily indebted carrier, which lost about $125m last year, plays a vital role in linking different parts of a vast country. A thorough one-off financial restructuring (if accomplished) seems the smartest thing to do after all the half-hearted attempts made in the past decade.

While American's relationship with Aerolineas is up in the air at present (after its bid to buy the carrier over 10 years was turned down), it seems likely that Aerolineas will have to forge some kind of an alliance with one of the US carriers simply because

US-LATIN AMERICAN OPEN SKIES AGREEMENTS

Country	Date signed	Remarks
Costa Rica	1997	
El Salvador	1997	Wants additional mechanisms to deal with predatory pricing
Honduras	1997	
Nicaragua	1997	
Panama	1997	
Aruba	1997	
Peru	1998	
Neth. Antilles	1998	
Chile	1999	Provisional agreement in 97
Argentina	1999	Postponed while Aerolineas restructures
Rep. Dominicana	1999	

the US market is so important. This will bring the subject of open skies back to the negotiating table.

However, it is a point of concern for the US that the new government, which took office in December, has signalled a tougher approach to foreign ownership and bilateral negotiations. Aerolineas' struggles have sparked a political debate and moves in favour of protecting national enterprises - something that could influence thinking in other Latin American countries.

These developments come at a time when the US government seems more determined than ever to press for open skies. In December the DoT held a major international conference on that subject in Chicago and published a new report hailing the benefits of open skies to consumers. In a subsequent speech to the WTO, Transportation Secretary Rodney Slater talked of hopes that the entire US-Latin America region would have a liberalised aviation regime by 2005, to coincide with the aim to create a free market in the Americas.

According to Slater, by 2010 Latin America and the Caribbean will be a larger market for the US than Europe and Asia combined. US-Latin America routes, the world's fastest-growing aviation market in the 1990s, already generate more O&D traffic than US-Europe routes. The region offers vital growth opportunities for the "big four" US carriers - American, United, Continental and Delta.

Many now view open skies regimes as inevitable. So how should Latin American countries balance the arguments for and against, and what should they press for in negotiations with the US?

Some timely insights and advice on this subject came recently from Bob Booth, president of consultancy firm AvMan and a prominent expert on Latin American aviation, in a report titled "Impact of open skies between the US and Latin America".

The report illustrated that the effects of US-Latin America open skies ASAs are likely to be very similar to those of the US domestic deregulation - increased competition, lower air fares, significant traffic growth, airline failures, industry consolidation and hub domination - but that the playing field is definitely not level.

NORTH-SOUTH ALLIANCES

US airline	Latin American partner	Remarks
American	Aerolineas	8.5% equity, may unravel
	Grupo TACA	
	TAM	
	LanChile	See Briefing
	AVIANCA	Not implemented
	Aeropostal	Not implemented, codehares with Delta
Continental	COPA	49% equity, due to join Wings
	ASERCA	
	Air Aruba	
	VASP	
	ACES	Not implemented
	AVANT	
Delta	Aeropostal	
	Transbrasil	
	Air Jamaica	
	Aeromexico	Due to join Air France/Delta alliance
	AerPeru	Field for bankruptcy Mar 1999
United	Varig	Star member
	Mexcana	Due to join Star
	BWIA	

Even without open skies, the US majors have achieved dominance in Latin America because of their size, domestic feed, lower costs, powerful FFPs and sophisticated yield management systems. They are able to put in more capacity, frequencies and lower fares. They already control more than 60% of US-Latin America and 75% of US-Caribbean traffic.

Unrestrained competition could have dire consequencies for Latin American operators that lack the domestic feed and have typically 30% higher unit costs, "substantially" lower yields, 30% older fleets and relatively weak balance sheets. The report cautions that countries should "enter open skies with open eyes" and realise that their flag carriers may not be able to survive.

Of course, the problem of relying on foreign operators is that "if a specific market is not profitable, they will pull out without giving it a second thought", as has often happened

"The Impact of Open Skies in Latin America", Feb 2000, by AvMan Inc. Tel: US + 305 876 9339. e-mail: norma@avman.com

in the Caribbean and most recently in Peru and Venezuela.

Nevertheless, the benefits of signing an open skies agreement are believed to outweigh the disadvantages and risks. Without an open skies agreement, a Latin American carrier may miss an opportunity to participate in global strategic alliance, let alone an alliance with a US carrier. But the latter is considered to be absolutely vital in an open skies environment.

The AvMan report recommends that countries negotiating open skies ASAs with the US seek to incorporate the following as part of the talks:

• Antitrust immunity in the US

This is extremely important as it will enable alliance partners to fully coordinate their operations and prices. Without antitrust immunity, they could coordinate schedules but would not be able to even discuss fares.

Of the US-Latin America alliances, only LanChile and American have so far secured antitrust immunity, though the US-Argentina ASA (now on hold) makes such as provision for Aerolineas/American. TACA and American were initially told that there was no way they could get antitrust immunity, but the US government seems to have revised its position as in late March the two submitted their application.

This suggests that antitrust immunity may be more freely available as part of an open skies ASA, but the parties must obviously ask for a provision to be included.

• Phased-in agreements

Any open skies ASAs should be phased in over a number of years to give Latin American carriers time to prepare for unfettered competition with the US majors. Recent examples include bilaterals with France and Argentina.

• Language to deal with unreasonably low fare levels

The US government has always resisted the inclusion in bilaterals of any mention of unfair competition and certainly not "predatory pricing". The problem foreign carriers face, when filing complaints through the regular DoT channels, is that their cases do not get the congressional support that, say, Frontier gets when it files a complaint about United. TACA's complaints about Continental did not get very far at all (though Continental has apparently voluntarily cleaned up its act).

Consequently, Robert Papkin of the Washington law firm Squire, Sanders & Dempsey, which represents TACA, recommends two things. First, Latin American countries should try to include language in the ASA's pricing provision to deal with "unreasonably low fare levels" that could undermine the economic viability of their carriers. This would give foreign governments the opportunity put some political pressure on the US government to deal with any complaints filed to the DoT.

Second, since the US is likely to resist any such language in the bilateral, Papkin suggests that countries should strengthen their own legal mechanisms for dealing with unfair competition and predatory pricing. Many countries in Latin America do not yet have effective antitrust authorities, with Chile being an exception.

• Ownership and control issues

These should be clarified in an ASA to enable national carriers to seek foreign investors while maintaining their nationality. For example, the US-Argentina ASA went quite far in expanding the circumstances of foreign ownership and control.

• Waivers for "Fly America" traffic

Obtaining waivers to carry US government-funded traffic, which under the 1975 "Fly America Act" must normally travel on US carriers, can help level the playing field in an open skies environment. The matter must be dealt with in the context of ASA negotiations.

The AvMan report also recommends negotiating US immigration pre-clearance facilities in Latin American capital cities, which would enhance hub operations in those countries for both national and US operators. And any open skies agreements should, of course, include 7th freedom cargo rights for Latin American carriers.

LanChile: fast reaction to crisis restores investor confidence

Since its successful IPO in November 1997, LanChile has brought only grief to its initial US investors. Its net earnings have plummeted from $64.1m in 1997 to $21.8m (excluding special gains) last year. And its share price, after virtually collapsing in 1998, is still some 40% below the IPO offer price of $14.

Investors had welcomed the opportunity to buy into the first Latin American carrier to be listed on the New York Stock Exchange and one that was clearly among the region's most promising operators. Lan's net earnings had increased strongly and steadily, despite 40% annual capacity growth in the mid-1990s. It had a strong balance sheet, streamlined fleet, favourable labour contracts, low unit costs and high efficiency. Smart management strategies had helped secure strong positions in different market segments. A new marketing alliance with American looked set to ensure success in the important Chile-US market.

However, investors should take heart as the past two years' problems have stemmed entirely from external factors. First, the Asian crisis in late 1997 precipitated economic problems throughout Latin America. Chile, which had been recording 7% annual GDP growth, plunged into economic recession in late 1998. Conditions worsened last year and Chile is still struggling to find the momentum to pull out of recession.

The timing of the IPO was unfortunate in that the Asian crisis happened about halfway through the LanChile roadshow. Instead of postponing the offering, Merrill Lynch, the leading underwriters, decided to go ahead under a revised pricing and marketing strategy.

The other new problem faced by LanChile in 1998 was sharply increased competition on US-Chile routes. In particular, Continental's entry to the New York-Miami-Santiago market with significantly lower fares had a devastating impact on yields in one of LanChile's most important markets.

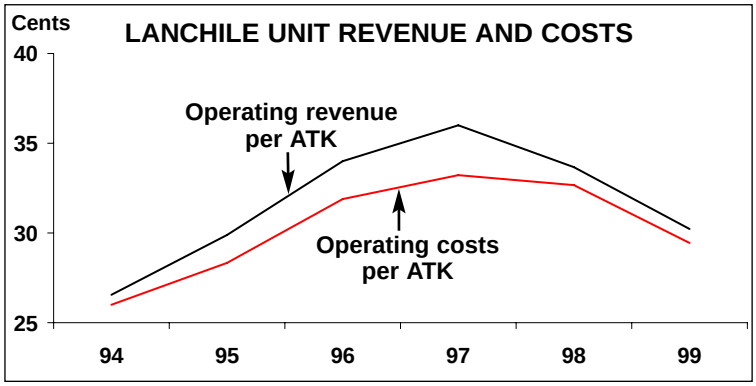
In fact, the Chilean carrier should be commended for containing the crisis so well. A 2% net margin is no mean feat in such a challenging economic and competitive climate, when also fuel prices are at an extraordinarily high level.

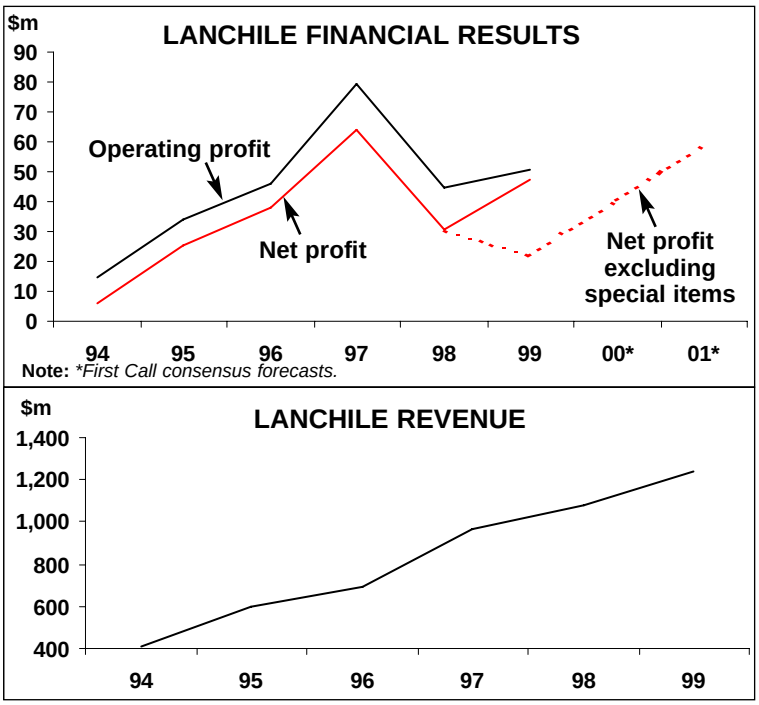
Lan's ability to cope reflects two special attributes - flexibility and the ability to react quickly. For example, in 1998 the airline was quick to slash domestic capacity by 15% and to diversify into new profitable international markets.

The full integration of its passenger and cargo businesses has given LanChile flexibility to adjust to market conditions. In 1998, when passenger demand weakened but the cargo market remained strong, the airline swapped one of its passenger aircraft orders for a freighter. Last year, when the passenger yield fell by 10% and passenger revenues inched up by just 1.9%, cargo revenues rescued the situation with 35.5% growth.

Thus virtually all of Lan's 14% total revenue growth in 1999 came from cargo. This was possible because of new cargo routes and higher cargo yields, reflecting a fuel surcharge introduced in October and increased presence in high-yield markets.

Despite a 22% surge in fuel expenses last year, operating costs per ATK fell by





9.7%. This was attributed to general cost controls, as well as savings derived from a closer integration of Ladeco and Fast Air Carrier. The two subsidiaries were formally merged in 1998, eliminating duplicate functions and creating additional operating synergies and tax benefits.

As competition intensified in 1998, LanChile invested $30m to upgrade its product and corporate image. This included new seats and entertainment systems, a new logo, refurbished aircraft interiors, improved catering and an upgraded FFP. The airline has continued to rank high in international passenger surveys and has either improved or maintained its market shares in all of its geographic regions.

Last year's important investments for the future included the launch of 49%-owned subsidiary LanPeru (an $1.8m loss related to start-up costs was recorded in the fourth quarter). Lan also signed a joint venture agreement with Lufthansa to create a world-class flight training centre in Chile.

Much of this has to be credited to a strong management team, which consists of professionals of many nationalities and is led by Enrique Cueto as CEO. Cueto, who headed Fast Air for 12 years before his family acquired a controlling stake in LanChile in 1994, was last year voted the most admired head of a Latin American airline in a survey conducted by a US research firm.

Of course, Lan was a well-administered and soundly structured state-owned company in the first place. One of the biggest handicaps suffered by many of its regional counterparts is that their privatisations were botched affairs, leaving them with unacceptably high levels of debt. In Lan's case the sale proceeds were used to strengthen its already healthy balance sheet. It got its first private-sector owners in 1989, when the government sold a 51% stake to a consortium that included SAS. The sale of the government's remaining holding and the SAS stake to the Cueto Group completed the privatisation in 1994.

Since the IPO, LanChile's strong financial profile has been reflected in its credit ratings. In 1998 Duff & Phelps gave it investment grade BBB ratings. These were reaffirmed only a few months ago, when DCR specifically noted the company's "ability to manage difficult economic conditions and leverage its own capital resources in order to strengthen its competitive position in Latin America".

The investment grade ratings have given Lan access to lower-cost financing and more flexibility in terms of financing sources. This and the $70m IPO proceeds, the $60m raised through the securitisation of credit card receivables last year and continued profits have enabled Lan to finance a major capital expenditure programme over the past two years.

Its balance sheet remains relatively strong, with total assets of $971m, long-term liabilities of $467.4m and shareholders' equity of $261.3m at the end of 1999. Both assets and long-term debt have increased substantially over the past three years due to the outright purchase of five new 767-300ERs.

Nevertheless, the two recent rallies in LanChile's share price - in the second quarter of 1999 and at year-end - are just as difficult to explain as the collapse of the price from $14 to $3-$4 within six months of the IPO. For the past year, Chile's recession has probably been at or near its bottom, while fuel prices are now a major concern for a

carrier that has hedged only a small percentage of its fuel requirements. Most analysts now rate it as a "hold" (given the recent escalation of its share price).

While analysts continue to be bullish about LanChile's longer-term prospects, rating it as a "long-term buy", the range in earnings forecasts is rather wide. This reflects uncertainty about fuel prices and the timing and strength of Chile's economic recovery. The First Call consensus estimate is a net profit somewhere between $32m and $49m for 2000 and $49m-$70m for 2001.

A recent report from Merrill Lynch listed four main positives. First, Lan will benefit from Chile's and the region's economic recovery. Second, the codeshare deal with American will boost traffic. Third, capacity reductions stemming from leased aircraft contract expirations will boost load factors. Fourth, cargo operations will continue to substantially benefit the carrier.

Diversified revenue base

One of LanChile's greatest strengths is its highly diversified business, both in terms of route areas and market segments. In 1998 (the latest year for which a breakdown is available), 46% of its operating revenues came from Chile-US routes, 23% from domestic operations, 15% from the rest of South America, 14% from Europe and 3% from the Pacific.

The 1997 acquisition of Ladeco gave the two carriers a combined 74% domestic market share, which has been maintained. While Lan has long dominated the Southern Cone, its market share between Chile and the rest of Latin America was a healthy 59% in 1998. On the highly competitive US routes, Lan slightly improved its market share to 44%.

Freight accounted for 38.4% of operating revenues last year, up from 31.6% in 1998. The unusual strategy of integrating passenger and cargo dates back to the 1994 arrival of the new CEO with extensive cargo experience. Cueto had built Fast Air from scratch into a major regional force before others realised the potential value of cargo. Consequently, the LanChile/Fast Air combine now dominates the region's booming cargo market and has a large lead over the nearest competitor.

The airline recently launched Houston as its fourth US cargo gateway (the others are Miami, New York and Los Angeles), carrying mainly perishables northbound and high-tech goods southbound. Its worldwide cargo headquarters are in Miami, where it is building a new $52m cargo facility due to open later this year.

Flexible fleet strategy

The new management's initial priority was to streamline the fleet (from six aircraft types in the early 1990s to just three by 1997) and to expand and modernise the long haul fleet. The fleet is now standardised on the 767-300ERs/freighters on long haul routes and the 737-200s in short haul markets, while the DC8-71Fs operated by LanChile and Fast Air are in the process of being phased out.

The past two years have seen the addition of three more 767-300ER passenger aircraft, which Lan has long favoured especially for their capacity to carry both passengers and cargo, and two new 767-300 freighters. The third and final 767 freighter is due to arrive in August.

In early 1998 the airline decided to switch to the Airbus A320 family to replace its 737-200 short haul fleet over the next five years, with deliveries beginning in the fourth quarter of this year. The $840m firm order for the initial 20 aircraft was part of the famous $4bn joint purchase negotiated with TACA and TAM, which gave the small operators the sort of prices and flexibility usually only

LANCHILE FLEET PLANS

	Current fleet	Orders (options)	Remarks
737-200*	25	0	To be replaced by A320 family
767-300EREM	13	0	
767-300ERF	0	1	
767-300F	2	0	
DC8-71	3	0	Being phased out
A319	0	11 (9)	First 4 in 4Q 2000
A320	0	11 (9)	
A340	0	7 (7)	Deliveries in 3Q 2000
Total	**43**	**30 (25)**	

Source: *ACAS. * Includes 10 Ladeco 737-200s*

enjoyed by the largest carriers. LanChile especially valued the flexibility with regard to aircraft types and delivery dates.

As part of its plans to modernise the long haul fleet, in August 1999 LanChile placed an $800m firm order for seven A340-300s, which it will take on operating lease beginning in the third quarter. The type enjoys commonality benefits with the A320s, is ideal for ultra long flights over the Pacific and will facilitate a major upgrade in product and service quality on European and US routes.

These orders indicate that LanChile's capital needs over the next few years will be substantial (even when taking into account that some of the aircraft will be leased). However, risk has been minimised by securing flexible purchase contracts, which will come in handy if Chile's economic recession continues.

Global alliance prospects

LanChile and American had a frustrating two-year wait before being able to start properly implementing the codeshare alliance signed in September 1997. But they were able to link their FFPs in April 1998, which has no doubt helped Lan retain market share in the face of new competition from Continental and Delta. And Chile limited the damage by making the open skies deal with the US contingent on the DoT granting antitrust immunity for the Lan/American alliance.

While waiting for the final regulatory approvals, LanChile began codesharing with American's partner Canadian, as well as oneworld member Qantas, in 1998. It has also significantly expanded its own services from the US West Coast and recently signed a codeshare agreement with Alaska to extend its reach in that region.

The first phase of codesharing with American began in October, covering both carriers' Santiago-Miami services. This was followed by the formal signing of the Chile-US open skies ASA. The second phase in November saw the addition of American's flights from six or so other major gateways, and the third and final phase is expected to be completed during the first half of this year.

LanChile believes that the codesharing should begin to have "material impact" on passenger traffic by the end of 2000. However, perhaps the biggest potential benefit is that the deal has paved the way for Lan to join the oneworld alliance later this year.

The invitation to join was a recognition of LanChile's quality and potential as a world-class carrier. It will have the prestigious role of being oneworld's sole representative of South America. In preparation, it recently signed a contract with Amadeus to obtain the reservations and distribution capabilities that will make its systems easier to integrate into those of other oneworld members.

Continued regional emphasis

The imminent oneworld membership seems to have made LanChile more determined than ever to consolidate and further strengthen its position within the Southern Cone (Chile, Peru and Argentina) and elsewhere in Latin America.

In the first place, this has meant cooperative deals with other Latin American operators. Codesharing with Aeromexico, Mexicana and Brazil's TAM began in 1998. This was followed by codesharing with Varig last year on Santiago-Brazil routes and on Brazil-Japan services routed via Lima and Los Angeles. (Varig, of course, is a member of the Star alliance, but the cooperation may be route-specific enough to survive.)

LanChile has been on the forefront of pressing for liberalisation and open skies ASAs in the region, as it believes it can only benefit from more opportunities to compete. Within the all-important Southern Cone, it is pleased with the way things are working out in Peru but is having problems in Argentina.

A new liberal agreement between Chile and Peru two years ago facilitated a substantial increase in Santiago-Lima flights and enabled LanChile to serve New York and Los Angeles from Lima. It was able to get a foothold in a market that offered significant potential for tourism and business travel growth.

LanChile subsequently decided to consolidate its presence there by teaming up

with Peruvian partners to launch LanPeru. After a long wait while the Peruvian government tried to sort out flag carrier AeroPeru's fate, the new venture finally took off in July on two domestic routes with 737-200s leased from LanChile.

In November LanPeru entered the lucrative Lima-Miami market with a daily service utilising a 767-300 wetleased from LanChile, and it hopes to get more international routes when the government starts reallocating more of AeroPeru's licences. This month (April) it plans to add its third domestic city.

LanPeru has reportedly secured 30-40% initial market shares on its three routes, which sounds very promising as it faces intense competition from the US majors on the Miami route and other new entrants and established operators domestically.

Speculation is now mounting that LanPeru might provide the blueprint for similar ventures elsewhere in Latin America. According to the March issue of AvNews, sources in Santiago say that LanChile has "filed in a number of countries" to replicate LanPeru and that it has initiated paperwork to create "LAN Argentina".

Over the past year, LanChile has been frequently mentioned as a potential investor in Aerolineas Argentinas. Both are American's codeshare partners and Argentina is a very important market for Lan. Last summer the two forged a cargo cooperation agreement which envisaged Lan purchasing cargo space on all of Aerolineas' flights.

But Aerolineas' owners have put the deal on hold while the carrier is being restructured. According to AvNews, Aerolineas' board has also vetoed any equity injection by Lan. There are concerns about market domination and about the failure to agree on an open skies regime. Also, Argentina has suspended its liberal foreign ownership rules in an apparent effort to keep unwanted foreign investors at bay. However, as AvNews points out, LanChile only needs to find like-minded Argentine investors, prepared to participate to the tune of 51%, to go forward with LAN Argentina.

By Heini Nuutinen

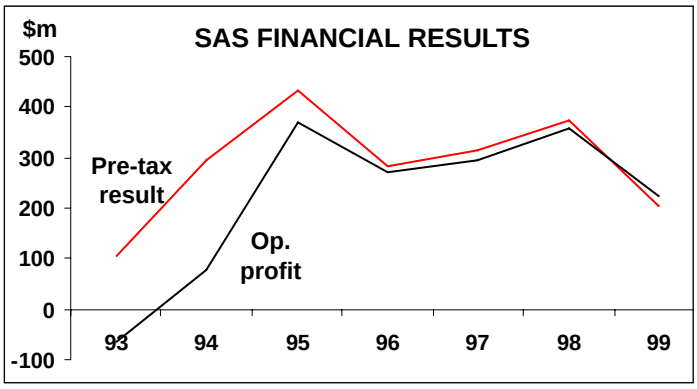
SAS: more pragmatic version of Carlzon's dream

Under the charismatic leadership of Jan Carlzon, SAS in the 80s was at the forefront of airline strategy and thinking. Today's pre-occupation and obsession with global alliances and seamless service had its foundation at SAS. However, SAS itself, despite its innovativeness, has yet to find a consistent profit formula.

Carlzon's dream was for SAS to escape the confines of the relatively small domestic Scandinavian market and become a global player. A strong balance sheet supported these expansionist ideals, and a spending spree saw SAS taking stakes in Continental Airlines, British Midland, LAN Chile and entering a close co-operation agreement with Thai. SAS set out to build a network of intercontinental routes that linked its equity partners.

Carlzon believed that SAS should not just be an airline but offer its passengers a total travel experience - hence the airline's continuing passion for airport lounges and its own hotel chain. He was also obsessive about service levels and his employees recognising the importance of morale, a lesson that many of today's CEOs would do well to re-visit. His book on the subject was a best-seller in Scandinavia (though it was a bit of a dull read), and Carlzon became the most sought after speaker on the aviation conference circuit.

But the dream foundered on the harsh economic realities of the recession of the early 1990s. SAS was forced to re-trench and more hard-headed businessmen replaced the visionary Carlzon. Carlzon was undoubtedly ahead of his time and ahead of where politicians, shareholders, bankers and regulators would allow his airline to go.



The post-Carlzon version of SAS was a far more pragmatic airline with a less glamorous strategy. The issues facing the airline in the early 1990s were:

- A high cost base;
- European liberalisation;
- An affluent but small domestic marketplace;
- The failure of the global strategy;
- A heavily unionised workforce

The new strategy for the 1990s veered away from expansion and concentrated on defence. Accepting its high natural cost base, SAS was to adopt a strategy of offering a high product level which would generate high yields. It was a standing joke that the curtain on an SAS flight was always nearer the back of the aircraft than the front. The network between the three capitals- Oslo, Copenhagen and Stockholm - was known as the "golden triangle" and allegedly produced some of the highest yields in the industry.

The product offered by the airline remained as high as during the Carlzon era. Relaxed, stylish and informal were the buzzwords used by the airline to describe its in-flight and on the ground product, and very importantly this was backed up with a generous and innovative frequent flier programme. Also SAS chose to be at the leading edge of developments such as ticketless travel.

Unfortunately for SAS, the high yields generated in Scandinavia were always going to attract other carriers. SAS has done its best to discourage competition, with an understanding that it would always carry amount of its assets in liquid form (i.e. cash) which would enable it to match any fares available in the marketplace.

Jan Stenberg, President and CEO, confirmed this in 1997, stating that "I wish to make it entirely clear that SAS intends to defend its home market with every means at its disposal, and that it we will do so aggressively." It not altogether surprising that Braathens Sweden has complained so bitterly that SAS has been guilty of predatory pricing on certain domestic Swedish routes (see Braathens *Briefing*, March 2000).

Defensive cooperation

The second part of this defensive strategy has relied upon SAS either co-operating or acquiring competitors or potential competitors. SAS itself has acquired:

- 63.2% of Norwegian regional Wideroe Flyveselskap;
- 36.5% of Latvian carrier Air Baltic;
- 100% of Finnish regional, Air Botnia;
- 26% of Danish carrier, Cimber Air;
- 37.5% of Greenlandair;
- 49% of Spanair, based in Palma:
- 20% of British Midland (down from 40% having sold half its stake to Lufthansa); and
- 25% of Skyways, based at Linkoping.

In turn Skyways has taken control of four other Swedish regional carriers in the past two years:

- Flying Enterprise which is a direct competitor to Braathens Malmo Aviation at Stockholm's Bromma Airport;
- Air Express based at Norrkoping;
- Highland Air (91% owned) based at Hultsfred; and
- City Airline, thereby inheriting orders and options for five ERJ-145s.

These developments have also raised concerns. Sweden's competition board, the Konkurrensverket, in a general report on Swedish competition issues, recommended that SAS be forced to sell its 25% holding in Skyways holdings.

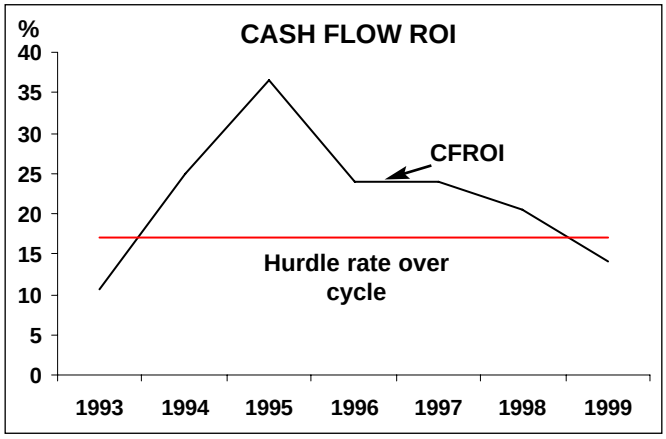
The cooperation strategy is best exemplified by SAS's decision in 1995 to take Lufthansa as its major European partner. Speculation ahead of SAS's announcement had suggested that Lufthansa was too big

and too close to be a partner and KLM was most people's favourite contender. However, SAS chose Lufthansa, and most commentators agree that the two airlines benefited from a favourable ruling by the European Competition authorities. Although SAS and Lufthansa were informed that they must give up slots if necessary to allow new competition on certain Scandinavian to German routes, so far no airline has been brave enough to step forward to make a meaningful challenge to the two carriers. In the light of this experience, last year the Commission conceded that in future policy making in this area it might consider guaranteeing a new entrant market share to encourage competition. The co-operation agreement between the carriers has according to SAS "strengthened the profitability of traffic to and from Germany".

The route networks of the two carriers fitted together well. In the early 90s SAS had cut back heavily on its unprofitable long-haul services, so the entry into Star enabled it to again market a wide range of US destinations, albeit on aircraft operated by Lufthansa. From Lufthansa's perspective, SAS's feed traffic was an important element in the rapid growth of its Frankfurt hub. The alliance with Lufthansa was extended in 1996 to United and Thai, and Air Canada in 1997.

While accepting SAS would never be at the lower end of the scale of European airlines on a straight cost comparison (even after stripping out its natural disadvantage of a short-haul route network), the management has tried to lower unit costs. This has proved a difficult task because SAS is heavily unionised, Scandinavian culture is scarcely workaholic, and the 50% of the capital of the airline remains under tri-government ownership. Nevertheless, the management have been prepared to, when necessary, endure strike action to improve unit costs.

The now politically incorrect claim to be the "Businessman's Airline" has remained the company philosophy. SAS put yield before capacity utilisation, with destinations, frequencies and flight times planned to satisfy the full fare business traveller.



The impact of competition

SAS was certainly right in believing that its home markets would attract new competition. For example, in 1996, SAS faced eight new competitors in the Scandinavian market. More competition, more capacity and lower fares were the inevitable conclusion. The result for SAS was that for the first time in its history it experienced stagnation in yield due to competition rather than from external causes such as economic slowdown.

The fiercest competitors for SAS have been Braathens and Finnair. The former, backed by a 30% stake held by KLM has been keen to expand from its historical role serving primarily the Norwegian market. Finnair too wanted to expand its sphere beyond its home market, and somewhat understandably it looked west rather than east.

Battles fought between these carriers have been fierce and bloody, but there are some signs that some stability may return. In the Norwegian domestic market, where Braathens and low cost operator Color Air (now bankrupt) have fought hard for market share in recent years, capacity fell by 15% last year. SAS was also able to increase its load factors in both the Danish and Swedish domestic markets.

Gloom and disappointment

SAS reported its 1999 full year figures in March this year, and in its own words has a

"disappointing 1999". Overall traffic grew by just 1.6% but of far more significance business class traffic fell by 5%. Passenger load factor fell by 1.9 points and passenger yields continued their slide with a 2.4%.

In operating cash flow terms, EBITDAR (earnings before interest, tax, depreciation, amortisation and aircraft rentals) fell by 26% on 1998. Operating income fell from SKr 2.99bn ($346) to SKr 1.66bn ($190m). Worryingly, in terms of Return on Capital Employed (ROCE) SAS managed only 9%, well below the hurdle rate (see chart) and the third year in succession to see a fall.

One of the few bright spots for SAS was the performance of its hotel division, Radisson SAS Hotels & Resorts (RSH). Loss-making in 1993, RSH has shown consistently improving levels of profitability ever since, and in 1998 contributed pre-tax income of over SKr 500m. This has been achieved even more impressively without recourse to the SAS balance sheet. In 1993 RSH had a balanced portfolio of over 30 hotels roughly equally split between owned, managed and leased. In 1999, although the RSH portfolio of hotels has increased to over 120, SAS owns fewer hotels in 1999 than it did in 1993. The spectacular growth in the hotels in the group has been achieved through managing and franchising, exploiting the recognised quality levels associated with the SAS brand. Returns measured by WACC (weighted average cost of capital) at RSH have now overtaken those achieved by the rest of the SAS group.

The joint venture with Lufthansa continues to reap rewards. In 1999, traffic between Scandinavia and Germany rose by 4.8%, and the passenger load factor increased 3.3 points to 62.0%. Most significantly net revenues improved by a very respectable 9.1%.

Long-haul reversal

A reversal in policy for SAS is that it has decided to expand its long haul business. The decision has been supported by acquisition of A330/A340 aircraft that will be delivered from the second quarter of 2001 onwards. Four factors support this decision:

First, in its core home market, continuing yield erosion has reduced profit margins and SAS needs to look elsewhere to generate returns for its shareholders.

Second, the worst is probably over in the home market with some signs of a stable capacity/pricing structure emerging, which allows SAS to stop fire fighting and defending its niche position and consider expansion elsewhere.

Third, the Star Alliance continues to be the world's leading global alliance, and the nine existing members will be joined by five new members in 2000. The Star Alliance brand has now gained global recognition, SAS now feels in a better position increase its exposure to the intercontinental marketplace.

Fourth, SAS feels its current market share of long haul traffic (because of the previous strategy of concentrating on the domestic market) is artificially low at 25%. The planned increases in the long haul fleet seek to gain a market share of about 30%.

SAS's timing may be good. Asian traffic is recovering fast, and SAS will want to build an effective relationship with new partner SIA. The overcapacity in the Transatlantic market should ease in 2000 and a reinvigorated Air Canada (post Canadian acquisition) alongside United make very strong North American partners.

The balance sheet will see a boost from the sale of half of its 40% stake in British Midland to Lufthansa that will produce a cash inflow of £91.4m ($150m). SAS will able to show a pre-tax profit of SKr 1000 gain on the sale of the stake.

Cost control

Cost control, as with all airlines remains a priority at SAS. The SAS programme, aptly or perhaps ominously, is named the Result Improvement Programme (RIP). Started in 1999 the aim of RIP is to achieve savings of SKr 3,000m ($330m) by early 2001. In 1999 savings of SKr 1,030m were recorded in areas such as distribution, air crew, overhead, maintenance, catering, IT and ground handling.

Alongside reduced fuel costs and lowered commissions, the RIP produced a 5.4% fall in unit costs in the fourth quarter of 1999. Taking 1999 as a whole SAS made the most progress in terms of cost savings in reducing commissions. Despite volume growth (albeit with a fall in business class traffic), SAS paid commissions of SKr 1,597m in 1999 versus SKr 2,175m in 1988, a 26.6% fall.

Fleet renewal programme

Further cost savings are expected from SAS's fleet renewal programme. The 141-seat MD-81 fleet is being replaced by the 174-seat A321s which as well as giving SAS more capacity are forecast to produce cost/ASK savings of 12 to 15%. Similarly the 72- seat Q400s which are replacing 46-seat Fokker 50s are expected to give unit cost savings of 22%.

Fleet rationalisation

One area that is overdue simplification is the SAS fleet (see table).

The current fleet has two types of turboprops, which will be replaced with the Q400. The widebody fleet of 767s will in time be replaced by a combination of A330s and A340s. The real need for simplification is in the narrowbody fleet. SAS currently operates three principal types - DC-9s, MD 80/90s and 737NGs (and up until this winter a fourth type, the Fokker F28, could be added to the list).

With the DC-9s being phased out this year and next as the 737NG are delivered, this would have simplified the narrowbody fleet to two types. In something of a surprise move however SAS decided that it needed additional larger narrowbodied aircraft and that the A321 would be the replacement aircraft for its MD80 fleet. The aircraft will be used for long haul business expansion and for use into constrained airports.

SAS has also off-loaded some of its exposure through its joint venture with GECAS on 30 MD-80 aircraft. The joint venture gives SAS increased operating and financial flexibility. The deal releases capital, produces lower lease rentals today for the airline in return for giving up future book profits, and reduces residual value risk, whilst giving SAS long term access to the aircraft.

SAS FLEET PLANS

	Current fleet	Orders (options)	Remarks
737-600	29	11	
737-700	0	6	
737-800	0	13	
767-300	13	0	
MD-80	75	0	8 phased out in 2000
MD-90	8	0	
DC-9-21/41	24	0	Phase-out in 2000/01
F.50	20	0	Gradual phase-out
DHC Q400	1	21	Replaces F50 and Saab 2000
Saab 2000	5	0	
A321	0	12(10)	From 2Q 2001
A330-300	0	4	From 2Q 2001
A340-300	0	6(7)	
Total	**175**	**73(17)**	

Source: ACAS.

The capital expenditure programme amounts to some US$3bn, with SAS committed to spend an additional SKr 850m annually on non-airline related capex.

SAS will add about 2-3% capacity in 2000, and is hoping that a background of solid economic growth in Scandinavia and strong growth in countries such as Germany and Italy will produce RPK growth of around 5-7%.

Although some markets such as Norway are expected to show a fall in capacity, and Finnair is expected to follow oneworld partner British Airways in reducing capacity in 2000, overall SAS expects that the main trend in its marketplace will remain that of overcapacity. So it expects that its yields will continue to suffer at some 1-2% although this would at least be an improvement on 1999. Offsetting this forecast fall in yields, SAS expects to be able to show a fall in unit costs of at least 1%.

As a result, SAS expects 2000 to produce an operating income that is "considerably better" than that achieved in 1999. In this SAS will be helped by the strong performance of the Swedish economy, which is forecast to grow by 4% this year.

Outsourcing E&M: the tricky issue of the contract

This article, the last in a series of three*, addresses perhaps the most difficult issue in outsourcing E&M - the contract. How should the contract be written to protect and encourage performance and service standards? What service levels should be included? Do incentives and penalties work?

These questions are not just valid in a real outsourcing arrangement. They also arise as airlines move their E&M functions to the profit centre and subsidiary organisation models. In these cases, the challenge of controlling, protecting and encouraging cost and service levels becomes even more difficult because the "walk-away" threat does not exist in reality (as compared to a real arms-length supplier contract). Additional thorny issues include: managing changes in fleet and the associated cost of divesting and/or building capability; the allocation of costs and responsibility for ramp damage, and the management of new aircraft during the warranty period.

The prime rationale used *not* to outsource is "we can't control service levels and look at the potential impact on operations". This raises two key issues. First, "Service Levels", the critical service level/performance standards that must be covered in an agreement. Second, "Contract Management", how the contract and supplier relationship should be managed in order to ensure that these service levels are delivered.

Service levels

"High-level" service levels are relatively obvious. For engine and component repair and overhaul, the critical measures are turntime, turntime reliability, and post-overhaul reliability. For engines, EGT margin is a well-established indicator of build standard, and of course, all airlines seek maximum (safe) "time-on-wing".

For buyers of component/inventory management services, the right measures include consignment stock performance, number of AOGs, number and duration of spares-driven defects, and "within time promise" delivery rates.

For airframe heavy maintenance, important measures include turntime, turntime reliability, completeness of work package, defects in/defects out, and the completeness of pre-check (plannable) spares stock. Some airlines use annual maintenance manhours (or conversely, aircraft availability for revenue generation).

Line maintenance has the greatest potential to impact an airline's sensitive spots, schedule integrity and customer service. Competitive technical despatch reliability is obviously critical and is a measure used by every airline. Genuine accountability for technical despatch reliability is often blurred, and only in reality only exists in those airlines where all maintenance is done either in-house or on a total turnkey, outsourced basis.

This is because many other factors impact line maintenance performance such as spares flow to the stations, spares stock, maintenance control effectiveness, and technical services support to name but a few. For smaller line maintenance contracts at non-base outstations, then other measures such as completion rate of requested work packs and time-on-stand performance should be used.

Defect levels have a significant impact on technical despatch reliability so they are monitored in a multitude of different ways: number carried, number of repetitive defects, average length of defect, fleet "defect days", analyses by defect category and clearance rates.

Are these "high-level" service levels enough? Many of the services being delivered and measured are outputs of a set of underlying processes. Well-managed suppliers should have in place measures to monitor the key drivers of their own business and the services they deliver. So, for example, a component management supplier should be actively monitoring items such as delivery times and fulfillment rates. Or a line maintenance supplier should be monitoring spares stock completeness and availability of technical cover. Since such measures in effect are the real underlying drivers of service performance, then perhaps these should become vital additions to service level agreement.

Contract management

A contract is likely to become unmanageable if it is set up wrongly in the first place. For longer-term relationships, interviews with managers who have experienced life under such contracts pointed towards some common themes and pitfalls:

•"The biggest mistake is for the buyer to adopt an adversarial role, to police the contract and to try to second guess or outsmart the E&M provider"

•"The trick is to negotiate a contract that encourages the right behavior and attitude between the parties"

•"The contract will be a failure if the buyer duplicates functions"

• "Keep it simple. A contract that legislates for every eventuality will be unworkable"

• "Make the invoicing transparent and easy to manage"

It is clear that a contract established on the basis of win-win and where a clear set of principles are set out provides the context for developing a successful relationship. It appears vital that the contracting process lays the basis for building trust and respect, which is easier where time and the environment allow (e.g., where the contract is internal between a parent airline and E&M). This takes a serious time investment by management - estimates of elapsed time varied from two to nine months.

The mutual dependency of the airline and its E&M organisation extends into how the relationship is structured, contracted and managed on a day-to-day basis. In a turnkey environment, the complexity and unpredictability of the services needed, particularly in line maintenance, requires significant flexibility. A detailed contract could try to anticipate each of the specific services needed for each aircraft and then price them. But this would create a wasteful bureaucracy.

Instead, the contracts should be kept simple. Establish specific prices and performance parameters to provide control and manage exceptions and unusual events through separate negotiation. For example, more and more contracts cover over basic maintenance services -- line, base checks up to and including C checks, component overhaul and engine overhaul -- on a flying hour basis. This cost driver has an obvious benefit. Airlines want aircraft in the air flying and the E&M provider focuses attention on doing the same - to earn more revenue out of the same input.

Invoicing clarity is very often a difficult problem to handle, and can cause frustration to the airline. One UK airline developed a simple two-page invoice pro-forma within the initial contract. For each type of maintenance input, there is an agreed price and volume driver, and the monthly check is straightforward. The 20-20 hindsight lesson learnt by this carrier was to minimise exclusions. Cabin interior parts and repair are often excluded from component management contracts. "We spend so much time looking at the individual invoices for these items and at the end of the day, when you see the bottom line it's just a few dollars on the flying hour rate".

Contracts are generally reviewed annually in order to allow for re-negotiation of prices and performance standards where one or other party may be hurting and to allow for flexibility and updating as each party gains more experience in how best to manage the contract. The length of contract (assuming this is not a spot market deal) will rarely be less than three years and many reach up to ten.

Do penalties and incentives work? The major criticism often leveled at such approaches is the disconnect between the corporate penalty/incentive and the individuals actually delivering the service. For example, the supplier may receive significant benefits if technical despatch reliability averages higher than a certain rate. The supplier's management has to motivate a large number of different people to achieve this target - the AOG desk, the inventory planners, the line engineers, the goods in/out team. But do the individuals feel motivated by the contracted incentive? Accountability, benefit and ability to impact become too watered down. That's why more detailed service levels - as discussed above - must be a better solution. At this level, accountabilities can be much more direct.

Contracts are the framework for a long-term relationship and provide the goals and objectives that support success. Real success will only be achieved when the two parties trust and respect each other, when the supplier aligns its objectives and motivation with those of its airline clients and when it succeeds in delivering and exceeding the targets desired. And that comes down to team and people management, not just a good contract.

* Previous E&M articles by David Stewart (dstewart@dial.pipex.com):
The outsourcing decision (Oct. 1999)
How to choose your supplier (Dec. 1999)

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 %
1991	114.8	65.2	56.8	120.9	84.3	69.7	80.0	53.1	66.4	267.6	182.0	68.0	397.8	257.9	64.7
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
Dec 99	15.7	8.47	54.1	17.0	11.3	66.3	11.2	7.7	68.3	39.9	27.2	68.2	58.5	37.5	64.0
Ann. chng	6.2%	4.7%	-0.8	7.0%	7.5%	0.3	1.3%	-2.9%	-3.0	4.3%	2.8%	-1.0	5.0%	3.3%	-1.0
Jan-Dec 99	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
Ann. chng	6.5%	4.6%	-1.2	12.7%	11.3%	-1.0	-0.6%	2.6%	2.4	8.5%	7.8%	-0.5	8.1%	7.4%	-0.5

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 %
1991	835.1	512.7	61.4	108.0	75.2	69.6	117.0	78.5	67.1	44.3	27.4	61.8	269.2	181.0	67.2
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
Dec 99	86.3	56.9	66.0										29.2	19.5	66.8
Ann. chng	4.5%	1.7%	-1.9										0.9%	-0.5%	-0.9
Jan-Dec 99	1,008.6	708.3	70.2										358.6	267.1	74.5
Ann. chng	5.0%	4.3%	-0.5										3.8%	6.0%	1.6

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	**Mar 2000**	0.633	2.051	6.881	1.67	0.953	105.0	6.53%***

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.

NARROWBODY LEASE RATES

Model	Age	Rental ($m)	Model	Age	Rental ($m)	Model	Age	Rental ($m)
A319	1996-99	265,000	**737-500**	1994-99	230,500	**F100**	1987-96	150,000
A320-200	1988-93	280,000	**737-600**	1998-99	272,000	**DC-9-30**	1967-72	42,000
	1994-99	320,000	**737-700**	1997-99	396,000		1973-81	61,500
A321-100	1994-99	320,000	**737-800**	1998-99	335,000	**MD-81**	1979-85	160,000
A321-200	1997-99	350,000	**757-200**	1982-90	295,000		1986-92	190,000
727-100(CH)	1965-71	43,000		1991-99	345,000	**MD-82**	1981-87	182,500
727-200A	1977-83	72,000	**757-200ER**	1988-92	325,000		1988-95	205,000
737-200A	1971-76	41,000		1993-99	387,500	**MD-83**	1985-91	196,000
	1979-87	68,000	**BAe146-100**	1982-87	120,000		1992-97	220,000
737-300	1984-91	217,000		1988-93	140,000	**MD-87**	1987-93	166,500
	1992-99	255,000	**BAe146-200**	1984-93	147,000	**MD-88**	1987-92	197,000
737-400	1988-93	227,000	**BAe146-300**	1988-93	162,000		1993-97	225,000
	1994-99	270,000	**F28-4000**	1976-84	50,000	**MD-90**	1995-98	336,000

Source: Aircraft Value Journal, Jan/Feb 2000.

JET AND TURBOPROP ORDERS

	Date	Buyer	Order	Price	Delivery	Other information/engines
Airbus	Mar 31	Air France	8 A330-200s		4Q01+	CF6-80E1A3 engines. + 5 options
	Mar 29	Mouawad National	1 ACJ (Corporate Jetliner)		3Q00	IAE V2527 engines
	Mar 14	Frontier	6 A319s, 5 A318s			Options on 9 A320 family aircraft
						A319s - CFM-56, A318s - PW6000
	Mar 13	Egyptair	2 A318s		2003+	PW6000
	Feb 28	Sabena	4 A340-300s		2001+	CFM56-5C
Boeing	Mar 16	Alitalia	5 747-400s		1Q01+	Previously “undisclosed customer”
	Mar 7	Kenya Airways	3 767-400ERs, 2 737-700s		2Q04/4Q02	
	Mar 2	Hawaiian	13 717-200s	$430m	1Q01+	DC-9 replacement
	Mar 1	South African AW	21 737-800s		2Q00	
Bombardier	Mar 21	Air Nostrum	29 Dash 8-Q300s, 15 CRJ200s	$818m	4Q00+	Plus 40 options to be specified

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

	Group revenue US$m	Group costs US$m	Group operating profit US$m	Group net profit US$m	Total ASK m	Total RPK m	Load factor %	Group rev. per total ASK Cents	Group costs per total ASK Cents	Total pax. 000s	Total ATK m	Total RTK m	Load factor %	Group employees
American*														
Apr-Jun 98	4,497	3,889	608	409	64,471.8	46,075.9	71.5	6.98	6.03	20,901	9,512.3	5,317.6	55.9	87,076
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
America West														
Apr-Jun 98	534	457	77	41	9,787.8	6,899.1	70.5	5.46	4.67	4,643	1,228.9	733.0	59.7	11,645
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
Continental														
Apr-Jun 98	2,036	1,756	280	163	29,891.1	22,007.2	73.6	6.81	5.87	11,261	3,629.6	2,399.3	66.1	39,170
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				
Delta														
Apr-Jun 98	3,761	3,167	594	362	57,175.5	43,502.6	76.1	6.58	5.54	27,536	8,189.9	5,049.5	61.7	74,116
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				
Northwest														
Apr-Jun 98	2,475	2,355	120	49	38,332.7	29,533.7	77.0	6.46	6.14	13,676	6,102.8	3,745.5	61.4	51,264
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					
Southwest														
Apr-Jun 98	1,079	870	209	133	18,849.6	13,236.7	70.2	5.72	4.62	13,766	2,394.0	1,378.0	57.6	24,807
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
TWA														
Apr-Jun 98	884	838	46	19	14,142.2	10,787.3	76.3	6.25	5.93	6,417	1,979.0	1,186.2	59.9	22,147
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														
United														
Apr-Jun 98	4,442	3,972	470	282	69,101.7	50,152.2	72.6	6.43	5.75	21,935	10,453.0	6,202.6	59.3	94,064
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
US Airways														
Apr-Jun 98	2,297	1,923	374	194	22,818.3	17,567.1	77.0	10.07	8.43	15,302	3,107.6	1,895.9	61.0	40,846
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
ANA														
Jan-Mar 98	3,459	3,545	-86	-68	40,446.9	26,187.7	64.7	8.55	8.76	20,102				
Apr-Jun 98	SIX MONTH FIGURES													
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	29,032	65.7	10.28	9.80	21,970				
Cathay Pacific														
Jan-Mar 98	SIX MONTH FIGURES													
Apr-Jun 98	1,677	1,682	-5	-20	28,928.0	19,237.0	66.5	5.80	5.81		5,208.0	3,481.0	66.8	
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	3,581.6	68.0	
Jul-Sep 99														
JAL														
Jan-Mar 98	4,279	4,344	-65	-911	56,514.7	39,012.2	69.0	7.57	7.69	15,344	8,570.8	5,628.5	65.7	
Apr-Jun 98	SIX MONTH FIGURES													
Jul-Sep 98	4,463	4,262	201	133	58,439.5	40,413.9	69.2	7.64	7.29	16,008	8,959.7	5,725.4	63.9	
Oct-Dec 98														
Jan-Mar 99														
Apr-Jun 99														
Jul-Sep 99														

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

	Group revenue US$m	Group costs US$m	Group operating profit US$m	Group net profit US$m	Total ASK m	Total RPK m	Load factor %	Group rev. per total ASK Cents	Group costs per total ASK Cents	Total pax. 000s	Total ATK m	Total RTK m	Load factor %	Group employees
Korean Air														
Jan-Mar 98														
Apr-Jun 98														
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														
Malaysian														
Jan-Mar 98														
Apr-Jun 98	SIX MONTH FIGURES													
Jul-Sep 98	860	958	-98	-11			57.2							
Oct-Dec 98														
Jan-Mar 99														
Apr-Jun 99														
Jul-Sep 99														
Singapore														
Jan-Mar 98	2,336	2,080	256	258	39,093.6	26,224.3	67.1	5.98	5.32	5,822	7,303.0	4,951.5	67.8	
Apr-Jun 98	SIX MONTH FIGURES													
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	
Thai Airways														
Jan-Mar 98	631	558	73	610	12,211.0	8,522.0	69.8	5.17	4.57	4,000	1,715.0			
Apr-Jun 98	586	583	3	-121	12,084.0	7,963.0	65.9	4.84	4.82		1,700.0			
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														
Air France														
Jan-Mar 98	5,126	5,079	47	18										
Apr-Jun 98	SIX MONTH FIGURES													
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										
Alitalia														
Jan-Mar 98														
Apr-Jun 98														
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														
BA														
Jan-Mar 98	3,335	3,210	125	119	39,256.0	26,476.0	67.4	8.50	8.18	9,311	5,485.0	3,642.0	66.4	60,770
Apr-Jun 98	3,783	3,497	286	217	44,030.0	31,135.0	70.7	8.59	7.94	11,409	6,174.0	4,157.0	67.3	62,938
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
Iberia														
Jan-Mar 98														
Apr-Jun 98														
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														
KLM														
Jan-Mar 98	1,538	1,568	-30	528	17,595.0	13,240.0	75.2	8.74	8.91		2,995.0	2,259.0	75.4	33,227
Apr-Jun 98	1,702	1,572	130	105	18,600.0	14,290.0	76.8	9.15	8.45		3,177.0	2,365.0	74.4	35,666
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		3352.0	2,640.0	78.8	35,226
Lufthansa* **														
Jan-Mar 98	2,902	2,860	42	223	23,742.0	16,236.0	68.4	12.22	12.05	8,778	4,618.0	3,171.0	68.7	54,849
Apr-Jun 98	3,507	3,081	426	289	26,132.0	19,489.0	74.6	13.42	11.79	10,631	5,078.0	3,575.0	70.4	54,556
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	
SAS														
Jan-Mar 98	1,184	1,077	106	76*	7,761.0	4,628.0	59.6	15.25	13.88	4,863				24,722
Apr-Jun 98	1,323	1,149	174	107*	7,546.0	5,260.0	69.7	17.53	15.23	5,449				25,174
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
Swissair**														
Jan-Mar 98	SIX MONTH FIGURES													
Apr-Jun 98	1,907	1,780	127	86	18,983.8	13,138.7	70.5	10.05	9.38	6,922				9,756
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														

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

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