

Eastern adaptations of the Western LCC model

The LCC model is working in the Asian context as evidenced by the rapid growth of Malaysia-based AirAsia, the emergence of Air Arabia in the Middle East market and the ambitious plans of Air Deccan, Kingfisher and others in the Indian market. The most basic question facing these LCCs is how to adapt US/European models to local conditions.

AirAsia

For AirAsia in Malaysia, the core strategy is clear: stick as closely as possible to the Ryanair model, using high-density 737-300s, high aircraft and personnel utilisation, secondary airports where possible, rigorous cost control, very aggressive pricing (including promotional fares at less than 1 Ringitt or 25 US cents), internet-based distribution, and high profile marketing featuring the media-friendly chief executive, Tony Fernandes. This does not mean that there are not major obstacles to LCC development in Southeast Asia. As Tony Fernandes points out, the airports, initially at least, hate AirAsia, many local politicians and regulators still regard the airline with deep suspicion, and traditional full-service competitors don't have to worry about niceties like antitrust legislation.

AirAsia's main base is at the new Kuala Lumpur International Airport (KLIA), which is not only expensive but also further from the city centre than the old Subang airport. The airline would love to relocate to Subang, and Fernandes is lobbying the government to this effect. The government, however, still seems to prefer the option of an LCC-dedicated terminal at KLIA.

The airport strategy is imaginative. For example, AirAsia uses Senai airport just across the Malay/Singaporean border as its alternative to Changi (though the Singaporean authorities have so far blocked a bus service from Senai to the Singapore city centre). AirAsia flies to Macau airport although the large majority of passengers are actually travelling to/from Hong Kong. Cost-conscious passengers are clearly not deterred by the ferry trip between the two ports.

International expansion will almost certainly come through more franchise deals, enabling it to develop from new bases in Southeast Asia, maybe the Indian subcontinent and eventually China. Early this year, the carrier set up Thai AirAsia in Bangkok, in which it holds a 49% stake. Thai AirAsia operates domestically within Thailand and internationally to Macau, Malaysia and Singapore.

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PUBLISHER

Aviation Economics

James House, LG2,
22/24 Corsham Street
London N1 6DR

Tel: +44 (0) 20 7490 5215

Fax: +44 (0) 20 7490 5218

e-mail: info@aviationeconomics.com

Acceptance of AirAsia by those in power follows traffic trends - AirAsia is on schedule to carry 3m passengers this year. Vested interests can be mollified by pointing to the fact that almost all of AirAsia's growth appears to have come from stimulated traffic rather than stealing from the flag carrier MAS, which has also grown in recent years. Airports can be made to appreciate that volume growth can be guaranteed by AirAsia and persuaded to concede on landing fees. Security forces have to be educated about ticketless travel in places where travellers have previously been unable to get into terminals without the correct travel documentation.

Investors see in AirAsia the possibility of a Ryanair-type growth in revenue and profits and so in valuation. An IPO on the Kuala Lumpur stock exchange is planned for late November, which will see about 30% of the airline floated at around 1.40 Ringgit (\$0.37) a share, which should raise between \$230 and \$310m, according to local analysts' estimates.

The total value of AirAsia therefore is being put at about \$900m. This compares to Ryanair's current stockmarket valuation of just over \$4bn. Ryanair has a fleet of 71 737s (57 -800s and 14 -200s) with 98 737-800s on firm order. AirAsia intends to use the funds from the IPO to finance an order for at 50+50 737-800s or possibly A320s, to supplement and replace its current fleet of 20 737-300s.

Air Arabia

Air Arabia has pursued more of an easyJet approach. Based in the Emirate of Sharjah, which is the Emirate just north of Dubai, all its 14 routes are by definition international. It flies to main city airports (there generally being no secondary alternatives) and pays rack rates and expensive ground handling charges (there being no choice), but Sharjah Airport is a key asset. Located just 30 minutes away from the centre of Dubai, not much further than Dubai international, Sharjah Airport is uncongested and low cost, as Sharjah Airport Authority owns 60% of Air Arabia.

Air Arabia is unique in being the first flag carrier to have been designed on clear LCC principles - in terms of its point-to-point net-

work, its aircraft utilisation, its crewing ratios, its internet-based distribution, its simple pricing structure and yield management system, its standardised A320 fleet, its slim management structure and its outsourcing of the maintenance function to GAMCO. Adel Ali, the CEO, is also a media-friendly personality.

In its first year of operation (to November) Air Arabia will have carried about 0.5m passengers at an average load factor of 77%, which is well above budget (Aviation Economics was responsible for the business planning for the airline which went from concept to first flight in eight months). It is clear that there is strong demand for budget air travel within the Middle East from various sources - Middle Eastern and expat leisure travellers attracted by Dubai, cost-conscious businessmen, students, migrant workers, etc. - which Air Arabia is managing to fulfil. It is an intelligent flag-carrier for the Emirate, which has limited oil reserves - in contrast to the new flag-carrier of the Emirate of Abu Dhabi, Etihad, which appears to be aiming for global A380 dominance, replicating the full-service, long-haul models of Emirates, Gulf Air and Qatar Airways.

However, Air Arabia does face constraints on its growth, related to the bilateral regimes of the region. Most of the Gulf Cooperation Council (GCC) countries adhere in theory to an open skies regime, which means that there should be no barriers to expansion on services to Qatar, Bahrain and Muscat. Lebanon also has a liberal regime. But countries like Saudi Arabia and Kuwait, also GCC members, stick to restrictive, traditional air service agreements with frequency and capacity caps. Sri Lanka stipulates minimum turn-around times of 90 minutes at Colombo (Air Arabia mitigates this by scheduling Sharjah-Colombo flights during the night). Rights to India, a potentially huge market, have not yet been granted. The airline currently cannot get into Jordan, another important market.

As with AirAsia, Air Arabia's approach is to grow wherever possible, in the process proving the attractiveness of the LCC product to the Middle East market. The regulatory barriers are frustrating but eventually they will be lowered. Investors, meanwhile, are starting to look at the carrier with interest, and a fund

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Editor:

Keith McMullan
kgm@aviationeconomics.com

Contributing Editor

Heini Nuutinen

Subscription enquiries:

Julian Longin
jil@aviationeconomics.com

Tel: +44 (0)20 7490 5215

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Registered No: 2967706
(England)

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

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raising exercise may well be need in the next few years as the carrier expands with new A320s.

Air Deccan and Kingfisher

India should be the next big LCC market. The country's middle class is variously estimated at 150-200m out of a total population of over one billion yet domestic air travel is anaemic - this year total domestic traffic will be about 15m passengers, and a large percentage of those will be connecting to international flights. With the major population centres (Mumbai, Delhi, Bangalore, etc) located 1.15-1.30 hrs flight time apart, and with a slow and overloaded rail system (which nevertheless manages to transport 15m passengers a day), the market would seem ripe for LCC entrants. Currently the market is divided up among three full service, interlining carriers - Indian Airlines, Jet Airways and Sahara - but there are also new entrants - Air Deccan and Kingfisher.

Air Deccan is based at Bangalore, the centre of India's booming IT industry, which attracts young, relatively affluent workers from all over the subcontinent. Air Deccan's mission is to link the regions and it has done this recently with a fleet of six ATR 42s. However, this August it leased three A320s from SALE, the first of which is now operating Bangalore-Delhi. Its fleet plans include another two A320s and another 15 ATR 72s.

Kingfisher is a start-up with clear ambitions - its fleet plans call for 12 A320s by the end of 2005, and it has already committed to four new aircraft from GECAS. Although its headquarters are in Bangalore, its base will probably be Mumbai. Kingfisher is flirting with frills like IFE on its aircraft and will cooperate with Indian Airlines in several areas, outsourcing maintenance to the flag-carrier and apparently sharing some check-in facilities.

This new airline is part of the whole Kingfisher lifestyle concept. Kingfisher beer is India's leading brand (and has a following in the UK) but direct advertising of alcohol is prohibited in India. So the Kingfisher Group has created a lifestyle brand by, for example, sponsoring Bollywood movies, and the airline will be designed to be compatible with the

IT AND THE LCCS

An obstacle to LCC development outside Europe and North America was supposed to be low internet penetration and low credit card usage. This has been rather painlessly overcome. The reservation system is core to any LCC project: it must allow real time booking via the internet, but be adapted to multiple distribution channels. A yield management system can then be attached either from a standard package or customised. The whole IT system should be fully integrated including, for example, flight despatch, crew rostering and financial reports.

Navitaire, with its Open Skies product, usually sold on an ASP (Application Service Provider) basis, is the Microsoft of the LCC business. There are alternatives, however: Air Arabia uses Amelia provided by the Canadian company Intellysis; Air Deccan has gone for a local solution using InterGlobe, an Indian company. Unisys and Sabre also have LCC-adapted products.

AirAsia, for example, has worked with Navitaire to adapt Open Skies to the Asian market. There are four ways to pay for an AirAsia ticket, but the important thing is that they all go direct through the Navitaire system:

- Via the AirAsia website using credit cards;
- Via the call centre using credit cards, cash payments up to 24hrs after booking at any Alliance Bank branch, or internet banking through Maybank2u.com;
- At walk-in airport stations or sales offices using cash or credit cards;
- At a preferred travel agent who will make direct charge to the passenger but will use the standard AirAsia website to make the booking, so AirAsia does not deal with any commission charges.

A new booking channel is imminent in Asia - booking via mobile phone texting. Mobiles are ubiquitous in the Middle East and Southeast Asia and texting is now a widespread skill.

marketing message. Sahara Airlines has a similar role - it is a highly visible symbol of the huge Sahara micro-banking empire in India, which specialises in small-scale loans and saving accounts.

So it could be argued that neither Kingfisher nor Air Deccan (because of its split fleet) is a pure LCC start-up. There are other plans for Ryanair-type airlines, which one might think would be ideal for India, but these may or may not materialise.

The downside of India's huge demand potential is its bureaucracy and regulation. Start-up carriers have to negotiate the traffic allocation rules, whereby if an airline flies a metro route like Delhi-Mumbai, it has to allocate a certain percentage of the metro ASKs on other inter-state routes and a further percentage on regional routes in the northeast and a further percentage on intra-regional routes. Earlier this year a government commission recommended the replacement of this absurd system with a Public Service Obligation subsidy system, but since then the government has changed, with the Congress Party unexpectedly gaining power. There is also the excessively high price of jet fuel in India and the restoration of an import tax, which could add 48% to the cost of operating lease rentals.

Chapter 11 and pension laws: can the loopholes be fixed?

Recent developments at United, US Airways and Delta have highlighted some potentially serious deficiencies in US pension and Chapter 11 bankruptcy laws. If the loopholes are not fixed, the consequences could be dire for airline workers and taxpayers - and the US legacy carriers' post-September 11 restructuring process could end up in total disarray.

Little surprise, therefore, that Chapter 11 and pension issues are again at the top of Congress' agenda and hotly debated at industry gatherings (for a detailed analysis of the background to the pension crisis, see *Aviation Strategy*, December 2003). In early October, a Senate commerce committee held a hearing on the effect of pension policy and bankruptcy law on the airline industry, as a result of which there are likely to be new legislative proposals. But can anything be done quickly enough to avert a crisis?

Some of the problems should probably have been foreseen - after all, the flaws in US bankruptcy laws have been widely acknowledged in the past. In particular, it has long been obvious that Chapter 11 is way too helpful to failed airlines. The process has enabled carriers that are clearly not long-term survivors to continue operating for many years - through long-drawn out or serial Chapter 11 filings - and wreak havoc on the rest of the industry through irresponsible capacity addition and price-cutting.

Pension reform, in turn, has been on Congress' agenda since the Pension Benefit Guaranty Corporation (PBGC), the federal agency that insures corporate pensions in the US, had to bail out large steel industry pension plans a few years ago.

There is also a legal precedent for airline pension plan termination in Chapter 11. US Airways terminated its expensive defined-benefit pilot pension plan near the end of its first Chapter 11 visit in early 2003, opting for a cheaper plan and saddling the PBGC with

\$2.2bn in liabilities. But that never became a public issue, because the impact on the PBGC was relatively small and because wider industry implications were not expected.

Also, it has been known for at least a year that the largest US carriers have significantly underfunded pension plans and might find it difficult to meet those obligations in the future. Congress provided some temporary relief in April, allowing airlines to delay some of their near-term obligations. The measure represented a potential saving of \$1.3bn for the five largest airlines.

What is new now is that the two legacy carriers in bankruptcy - United and US Airways - have shelved and are considering shedding their pension obligations. They have decided that such actions are an acceptable part of the Chapter 11 restructuring process and appear to be getting away with it - notions that have shocked Washington lawmakers. Concerns are all the greater because of the size and number of the potential plan terminations and the likely impact on solvent airlines.

The bankrupt carriers' actions

United started it all in the summer when it announced that it would not make any more contributions to its four employee pension plans while in bankruptcy. It has missed \$570m of pension payments since July (including amounts due in October). It has also warned in court filings that it expects to have to cancel and replace all of its pension plans.

United's motive is to maintain adequate cash reserves - first, to meet the minimum cash requirements set by its recently amended interim DIP financing deal, which doubled the funding to \$1bn and extended loan maturity to mid-2005. Second, the airline needs to attract Chapter 11 exit financ-

ing from the private sector, having had its final federal loan guarantee application turned down.

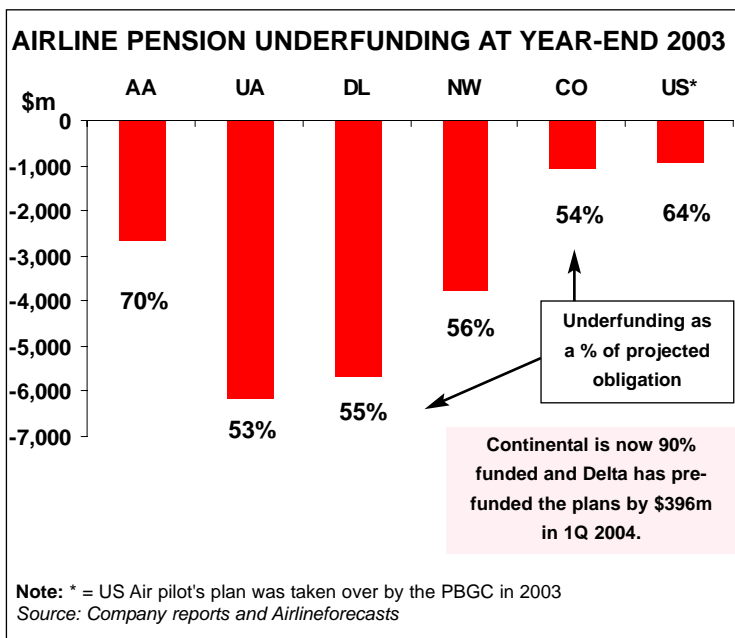
The request to stop pension payments was debated in bankruptcy court in late August. Despite fierce opposition from United's unions, the PBGC and the US Labor Department, Judge Eugene Wedoff approved it. United's lawyers had argued that federal bankruptcy laws take precedence over employee-benefit legislation, and that in Chapter 11 company pension plans hold the same status as any other unsecured creditor.

The Labor Department may still bring a lawsuit to force United to make its pension payments, once United has breached certain minimum funding rules set by the IRS. Skipping pension payments transgresses the Employee Retirement Security Act and the Internal Revenue Code. The PBGC made the point that it also "violates bankruptcy principles".

One Washington lawmaker who has taken an active interest in this matter, Senator Peter Fitzgerald of Illinois, noted that despite defaulting on its pension payments, United remained committed to proceeding with the expansion of Chicago's O'Hare Airport. Its share of the project cost (including debt service) is estimated to reach \$522m annually, assuming that it retains its current 47.5% share of operations at O'Hare. Fitzgerald's view: "It is unbelievable to me the bankruptcy laws are so weak".

Under Chapter 11 rules, a company is free to accept or reject any contract or obligation, as long as it can justify the action to the bankruptcy judge. It is obviously totally unfair to competitors if United is allowed to divert funds to major capital projects, but such actions may be essential to its long-term survival.

United poses a unique dilemma to the government. If it terminates its four pension plans, it would be the largest-ever pension default by a US company, involving almost 120,000 workers and retirees. But United's pension obligations - \$7.5bn in underfunded liabilities, plus \$4.1bn in contributions needed through 2008 - are viewed as such a huge burden by the capital markets that



there is no way the airline can secure exit funding without terminating the pension plans.

When filing for Chapter 11 for the second time last month, US Airways told the court that it would not be able to survive if it met its pension obligations. It expects to terminate its two remaining defined-benefit pension plans (flight attendants and mechanics) which need at least \$531m in contributions over the next five years. The airline skipped a \$110m pension payment on September 15, but apparently intends to make two much smaller (\$14.5m) payments due on October 15 and January 15.

US Airways ruffled many feathers in Washington when it said in its Chapter 11 filing that it would be "irrational" to make pension contributions because such action "provides no benefit to the estate".

However, as a promising sign, Judge Stephen Mitchell (who also presided over US Airways' first Chapter 11) postponed ruling on the pension and wage cut proposals at a key hearing on October 7, citing "too complex" legal issues. This indicated that the bankruptcy court might be taking note of the legal manoeuvring in Washington.

Of course, there is a high likelihood that the US Airways pensions are already a lost cause. Even if pension and wage relief is

obtained, the airline is still headed for a cash crisis in January or February. Public confidence is eroding, there are no unencumbered assets and the chances of attracting Chapter 11 exit financing seem slim.

Industry implications

The biggest fear is that there might be a domino effect in the rest of the airline industry. If United and US Airways terminate their pension plans, they will have a significant cost advantage over the other legacy carriers. However, terminating pension plans is probably not possible outside the bankruptcy process, so solvent carriers like American, Continental and Northwest could in theory have no choice but to file for Chapter 11 themselves.

Delta, of course, is a likely Chapter 11 candidate anyway. If it files, which analysts currently suggest could be by year-end, the situation would worsen for the solvent carriers. It would mean 42% of the US industry capacity flying under Chapter 11.

Delta itself has already been affected by United's and US Airways' actions. In recent months, fears that Delta too might terminate its pension plans led to an exodus of senior pilots, who decided to take early lump-sum payments in lieu of full pensions (an option that few other airlines offer). That way they at least secured half of their retirement benefit. Delta managed to avert a potentially serious pilot shortage by securing a deal with the union that will allow it to re-hire retired pilots on temporary contracts. It reportedly assured the pilots that their pension plan would not be terminated before February.

The problem is that preserving pension benefits is the number one priority for US legacy airline pilots. Surveys have shown that American's pilots agreed to significant wage concessions in early 2003 only to protect their pensions, which they knew could be at risk in bankruptcy.

Delta may not be able to accomplish what American did because it may have to file for Chapter 11 anyway, to restructure debt and leases. Citigroup Smith Barney analyst Daniel McKenzie suggested in an

October 7 research note that Delta may not get its \$1bn pilot concessions outside Chapter 11 simply because it cannot promise the pilots that their pension plan will be safe. McKenzie saw a "high probability" of a Chapter 11 filing by the end of October.

The impact on workers and taxpayers

The PBGC has confirmed that it would take over the airlines' defined-benefit pension plans if they were terminated. How would airline workers and retirees be affected? And could the agency really afford it?

When the PBGC takes over a pension plan, it does not assume 100% of the liabilities, only the maximum guaranteed benefit which is currently about \$44,400 a year at age 65. Since airline employees are relatively modestly paid, it would appear that most workers would receive full pension benefits. Pilots, a highly paid group, are the biggest exception - they would lose out significantly.

The PBGC has estimated that it would be liable for \$6.4bn of United's total \$8.3bn pension plan underfunding. Therefore United's employees would lose \$1.9bn in aggregate.

According to the PBGC's testimony to Senate, US Airways' pension plans would add \$2.1bn in liabilities to the \$6.4bn United figure. The agency's deficit would increase but it would continue to be able to make payments in the short term. However, its long-term solvency is already at risk without additional airline liabilities, suggesting that higher premiums from healthy companies or even a taxpayer bailout may be necessary at some point. That point would come sooner if all the US airlines defaulted on their defined-benefit pension plans, which are underfunded to the tune of \$31bn.

Possible solutions

There will be attempts to tackle the pension issues on many different fronts. As regards to legislative fixes, the focus will be on ensuring that corporations meet their pension obligations whether they are in bankruptcy or not.

Under one new bill introduced immediately after the hearing, companies that terminate their underfunded pensions in bankruptcy would be prohibited from paying special pensions to their top executives for the following five years. Delta and United have set up special bankruptcy-proof pension trusts for their top executives in recent years.

There has also been talk of giving the PBGC some powers to make companies pay, as well as higher stature in bankruptcy claims. Senate commerce committee chairman John McCain promised at the hearing that "Congress will act" if the PBGC recommends specific measures.

Hopefully more concrete measures will follow. The problem, of course, is that it will take time to get the legislation approved. The threat of closing the loopholes could spur additional Chapter 11 filings before Congress can act.

In the near term, there is probably nothing much that can be done other than try to appeal to the bankrupt airlines and Chapter 11 judges to do the right thing. One such letter, authored by Senator Edward Kennedy and signed by 140 lawmakers, went to UAL CEO Glenn Tilton in late September.

Defined-benefit pension plans will almost certainly disappear at some point at the US legacy airlines - they are too expensive and LCCs do not have them. The industry will be working to try to find orderly ways to transfer to more affordable alternatives, such as 401Ks or defined contribution plans, but that may have to be a very gradual process (at least with the pilots).

Abolish Chapter 11?

American's ex-CEO Bob Crandall, a pioneer of many new aviation concepts and an outspoken critic of the industry, has a simple solution: abolish Chapter 11. In a late-September speech at New York's Wing's Club, and in subsequent testimony to Congress, Crandall blamed the industry's ills on lax US bankruptcy laws. He said that the laws have allowed "failed ventures to continue operating until the last dollar of available cash has been spent" and that they have acted as a "fail safe for imprudent managements and unions". The laws have allowed failed ventures to maintain excess capacity in the market - one of the industry's key problems at present - and to impose cheaper contracts on unions and to dump pension plans, thus punishing solvent companies with uncompetitive operating costs.

Crandall made the point that tougher bankruptcy laws would weed out weak airlines, thus removing excess capacity from the market, and force unions and managements to cooperate to avoid bankruptcy. "The specter of liquidation would provide some real incentive to work together", he observed.

Lax Chapter 11 laws distort and nullify the work of free-market forces. When filing for Chapter 11 for the second time, US Airways repeated the reason it gave for its previous Chapter 11 filing two years ago, namely that "the industry has really transformed". So what? If US Airways is not able to adapt and keep up with the pace, maybe it does not deserve to be there.

By Heini Nuutinen

New search engines post-Orbitz

Orbitz, which when it was set up in 1999, threatened to revolutionise booking and ticketing systems on both full service and low cost carriers, has now been absorbed by the travel and property conglomerate, Cendant. On September 29, Cendant Corp. agreed to pay \$1.25bn for Orbitz in a deal that is likely to close before the year-end.

Cendant has also taken over the long-term contracts that Orbitz had in place with Worldspan, which was the GDS that Orbitz used, and with airlines regarding direct connections and commission payments.

This appears to consolidate the online travel industry into three: Sabre/Travelocity, Cendant/Orbitz and Expedia. Cendant's

acquisition gives it a counterpart to the Travelocity offering of its chief rival Sabre.

According to Merrill Lynch analyst Mike Linenberg, American Airlines and United Airlines are likely to receive about \$185m each for their respective 16.7% stakes, Delta Air Lines is due about \$143m for its 12.9%, Northwest is looking to get \$139m for its 12.5% share and Continental Airlines is in line for \$98m for its 8.8%. The five airlines owned almost 68% of Orbitz. The airlines have already received a payout from their original \$215m investment following last year's IPO - however, given today's conditions, these cash sums could be burnt through very quickly.

During 2000-03 the US Department of Justice carried out a major antitrust investigation concerning biased selling of the airline shareholders' tickets via Orbitz. Now there are worries that Cendant/Orbitz will be used to promote sales of hotel rooms in the Howard & John and Ramada chains that are owned by Cendant.

Meanwhile, the search for a neutral, universal online booking system continues. Alex Zoghlin, one of Orbitz's founders, who resigned as chief technology officer last year), has unfolded a new company that

looks to compete against Cendant/Orbitz and their competitors. He, like the airlines should also benefit from Cendant's acquisition - at the time of the IPO he owned 356,000 shares in Orbitz, a stake now worth around \$9.8m on paper. Zoghlin's new start-up - G2 SwitchWorks - has letters of intent with a handful of airlines (Northwest, Alaska, Continental, Delta, United and US Airways and perhaps American) to build a new, low-cost distribution network. G2 claims, that when launched, its "TrueConnect" model will offer "unbiased shopping capabilities for over 450 airlines".

As for prospective passengers, it seems that choice and ease of functionality are going to become more abundant, as the GDSs' grip on airline ticket sales is diluted. Kayak.com, a new travel search company launched very recently, headed up by "veterans" of Orbitz, Travelocity and Expedia, is part of a new generation of providers that is more akin to a search technology player such as Google, than a travel agent. Another example of this newest approach to "fare-hunting" is Skyscanner.net, a leading search engine for European budget airline flight prices that is about to go live in the US with a beta version of its site.

European and US traffic trends

This snapshot of recent traffic trends (right) shows that total traffic this year has now just about recovered to pre-September 11 levels for the ATA carriers (though yields are about 13% below those of 2000) while the AEA RPKs (excluding dynamic LCCs like easyJet) are 6.4% above 2000 levels.

With the structural changes that are taking place in the industry and the inexorable long-term yield decline, traffic results and load factors from the main industry bodies are probably less useful than they used to be. Nevertheless, a substantial rebound from the Gulf War and SARS-impacted 2003

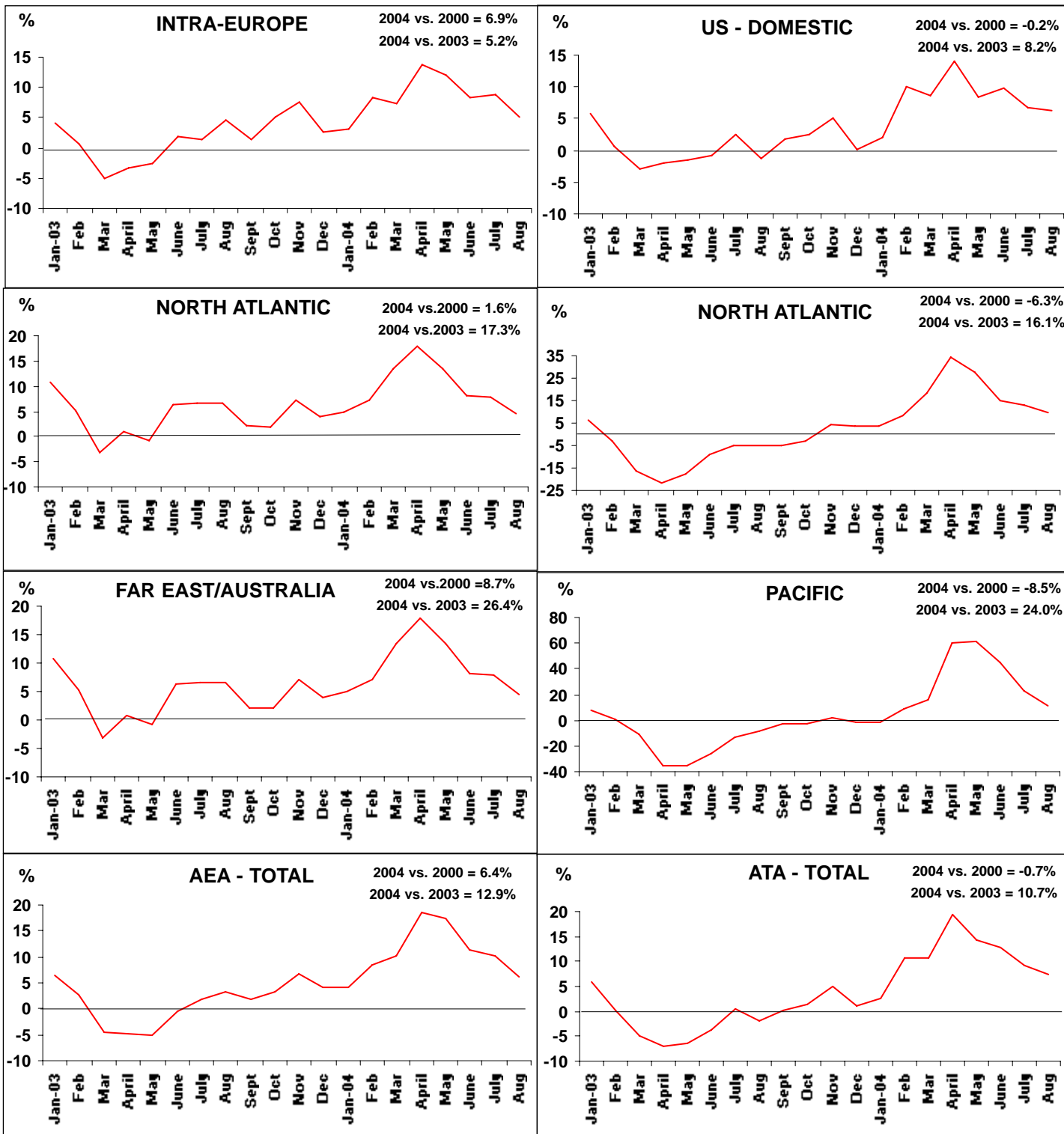
is evident, although the traffic growth trends have moderated in recent months. There has been a strong resurgence in Asian routes (Europe-Far East and Pacific) this year and also a noticeable recovery on the Atlantic. But the US Majors have yet to return to pre-September 11 volumes on the Atlantic or Pacific, though this should change next year as their recovery plans indicate a concentration on international service, the domestic market having become so difficult. The European network carriers will inevitably respond which will lead to interesting market conditions on the Atlantic next year.

Aviation Strategy

Analysis

AEA AIRLINES
(Annual change in RPKs)

ATA CARRIERS
(Annual change in RPMs)



China: Big Three dominate, expand and ally

After a tough 2003, dominated by the effects of the SARS epidemic, Chinese airlines are looking forward to a profitable 2004 as the Chinese government finally begins to liberalise the aviation regime.

Virtually all China's airlines saw passenger traffic plunge after SARS, with April-July 2003 being the worst affected months, but traffic recovered quickly from August onwards - particularly domestically - and international traffic returned to pre-SARS levels by the beginning of 2004.

But at the same time as the industry was battling the effects of SARS, the Chinese government came round to the view that China's economy would benefit greatly from a faster liberalisation of the aviation regime. This change in policy was probably motivated by increasing pressure from the US in the light of China's WTO entry, though the need to prepare an adequate infrastructure for the 2008 Beijing Olympics and the 2010 World Expo in Shanghai also played a part.

In April 2004 the government introduced pricing reforms to domestic fares, allowing airlines greater leeway to set their own fares. And in the same month - in a surprise move - the government followed up the "open skies" policy on the island province of Hainan (though only for international airlines) by announcing that from 2005 it was opening up Shanghai's two airports to all domestic airlines, without restriction.

This was followed in July by the signing of an amended bilateral between China and the US. This allows an extra 160 frequencies a week on routes between the two countries and an extra 10 designated airlines, though the increases will be introduced gradually over the next six years. Under the previous amendment (agreed in 1999) China and the US were each allowed up to four designated airlines operating between the countries (currently United, Northwest, UPS, FedEx, Air China, China Eastern, China Southern and China Cargo Airlines), with no more than 54

frequencies per week.

Although talks between the two sides had been long and tortuous, political pressure combined with commercial lobbying from airlines such as Shanghai Airlines and American - which were blocked from operating between China and the US by the limits of the previous deal - was enough to achieve the breakthrough. The two sides also agreed to talk again in 2006, which could lead to a further speeding up of the liberalisation timetable agreed in the latest amendment.

A new bilateral was also signed with New Zealand in May 2004, allowing routes between all cities in China and New Zealand, as opposed to the four-city limit allowed under the previous air services agreement. Though there are no currently direct routes between the two countries, the amended bilateral will encourage services via stopovers in Australia, for example. And in July 2003 an expanded bilateral between China and Japan allows three more Chinese airlines - Hainan Airlines, Xiamen Airlines and Shanghai Airlines - the right to operate to Osaka, which had previously only been served by the Big Three - Air China, China Eastern and China Southern.

But it's not all good news for China's airlines. With fuel accounting for 25-30% of Chinese airlines' total costs, the rise in fuel prices over the past year is one worry that all airlines share. The government has imposed two fuel price increases in 2004 - a 13% rise in March and a 12% rise in August - and as a result all the Big Three airlines introduced fuel surcharges during the year. However, in the long-term the Big Three will benefit from China's WTO membership, a condition of which is that the Chinese government's monopoly on aviation fuel end by 2006, by which time the state fuel price has to fall back to world market prices.

And some vestiges of state interference appear to be as strong as ever. In August 2004 the Civil Aviation Administration of China (CAAC) replaced all three general

managers at the Big Three - Li Jianxiang took over at Air China, Liu Shaoyong at China Southern and Li Fenghua at China Eastern. The official reason for the change was that the outgoing general managers were in their early 60s and that the government was following a rule that senior managers at state-owned companies have to retire when they reached 60 (the replacements are aged 55, 46 and 54 respectively).

One of the first strategic decisions the new general managers will have to make is which global aviation alliance to join. It's likely that Air China will join Star, China Eastern link with oneworld and China Southern enter SkyTeam, as all three airlines have close ties with the respective members of these groupings. It would also suit the CAAC to have each of its main airlines in the three alliances. The global alliances will boost the Big Three's refocus on international expansion, which is becoming more of a strategic priority now that they dominate the Chinese domestic market; all three are adding international routes and capacity as fast as their resources allow.

The Chinese fleet

As the Chinese government's consolidation plan takes effect, the Big Three airlines are becoming ever more dominant, with half a dozen carriers disappearing into the Big Three over the last 12 months. In 2002 the three airlines (excluding non-integrated partners) accounted for 36% of the total mainland Chinese commercial fleet, but this rose to 38% in 2003 and jumped to 52% in 2004.

The battle between Boeing and Airbus for orders from the Chinese government is continuing - Boeing's latest forecast is that Chinese airlines will need 2,391 new aircraft over the next 20 year, worth an estimated \$197bn, while Airbus forecasts 1,530 new aircraft over the same period, worth \$176bn.

Today the order book stands at 156 aircraft - almost double the outstanding orders as of a year ago (79) - and the total is likely to rise further over the next 12 months. The China Aviation Supplies Import & Export Group is close to placing a \$2bn+ order for more than 50 7E7s. An MoU was signed with

Boeing earlier this year, and detailed negotiations are now taking place. It is believed that each of the Big Three, as well as Hainan Airlines, want at least 8-10 7E7s, and further aircraft may be ordered for smaller carriers such as Shanghai Airlines and Xiamen Airlines (which China Southern owns 60% of). Many of the aircraft are likely to be the long-range 7E7-8 version, which Boeing aims to deliver from 2008 onwards.

A 7E7 order will build on the major contract of November 2003, in which the Chinese government ordered 30 737s for delivery in 2005 and 2006 - five 737-700s for Air China, eight 737-800s for Hainan Airlines; three 737-700s and four 737-800s for Shandong Airlines, five 737-900s for Shenzhen Airlines and five 737-700s for Xiamen Airlines. This came just a couple of months after a Chinese government order for five 757-200s, for Shanghai Airlines.

Altogether, of the outstanding order book, Boeing accounts for 37% (58 aircraft) and Airbus 49% (76 aircraft), compared with 30% for Boeing and 62% for Airbus in 2003. Of the current Chinese fleet of 869 aircraft (785 in 2003), Boeing models account for 520, or 60%, and Airbus 243, or 28%. 737s continue to be the most popular model, accounting for 34% of the fleet, followed by A320 family aircraft, with 17%.

Boeing is determined to close the gap with Airbus, and may be starting to benefit from the greater political pressure that the US now appears to leverage compared with the EU. The US administration has long been pressing China to reduce its \$100bn a year trade deficit, and is urging the Chinese to revalue the Yuan, which it believes is artificially kept low in order to boost exports and restrict imports. But currency revaluation appears to be out of the question at the moment, and the Chinese government may prefer the less painful step of placing large manufacturing orders with US companies in order to relieve the political pressure from the Bush administration.

Yet Airbus is confident it can keep its order book ticking over in China. It is in talks with the Big Three and Hainan Airlines over potential A380 orders, which should be placed before the end of the year - though specula-

AIRLINE FLEETS IN CHINA																			
	737- 2/300	737- 4/500	747- 737NG	747- 2/300	747- 400	757	767	777	A300/3 10	A320 fam	A330	A340	MD1 1	MD8 0	MD9 0	Rus	Chi	Other	Total
Air China	34		25 (12)		12	13	14	10		14 (6)		6				4			132 (18)
Air China Cargo				4	1 (2)														5 (2)
Air Hong Kong				1					(6)										1 (6)
Air Macau									2	11								2	15
Cathay Pacific				6	24 (1)			15 (2)			23 (3)	18							86 (6)
Changan AL																		2	2
China Cargo AL													6						6
China Eastern AL	12		13 (7)						16	63 (9)		10		3	9	8		10	144 (16)
Flying Dragon AV																		4	4
China Northern AL									6	11 (15)				15	10	4			46 (15)
Northern Swan AL														4	3				7
China Postal AL	2																		2
China Southern AL	28	12	16 (4)		2	20		10		24 (21)	(4)						2		114 (29)
China United AL	6		2													2		5	15
China Xinhua AL	6	3	2																11
China Xinjiang AL	2		4			9										4		5	24
CR Airways																		1	1
Dragonair				4						16 (1)	10 (6)								30 (7)
Guizhou AL	1																		1
Hainan AL	6	7	20 (11)				5											27 (20)	65 (31)
Shandong AL	11		(7)															11	22 (7)
Shanghai AL	1		14			11 (3)	5											4	35 (3)
Shenzhen AL	7		18 (5)																25 (5)
Sichuan AL										13 (5)								5	18 (5)
Xiamen AL	4	6	10 (5)			8 (1)													28 (6)
Yangtze Express	4																		4
Yunnan AL	13		4				3											6	26
Total	137	28	128 (51)	15	39 (3)	61 (4)	27	35 (2)	24 (6)	152 (57)	33 (13)	34	6	22	22	22	2	82 (20)	869 (156)

tion is mounting that an initial order for 10 aircraft, worth \$2.5bn, will be announced during President Chirac's visit to China on October 8. The A380s would be used for international routes, and domestic services between major cities

Over the next 12 months there may also be an upsurge in regional jet orders. The Chinese government is encouraging domestic airlines to buy locally-produced regional aircraft - ACAC's 85-seat ARJ21 and the Embraer ERJ-145. The purchase of foreign regional aircraft has been blocked by the Chinese government since 2001, but with domestic routes expanding fast airlines face little choice but order the newly-available local aircraft. China Southern wanted to buy 20 Brazilian-built Emb-145s in 2001, but was not allowed to carry out the purchase, and

instead ordered six locally produced ERJ-145s. Just 8% of the Chinese fleet are regional aircraft, but Embraer forecasts demand for more than 200 30-50 seat aircraft over the next two decades, while Boeing forecasts deliveries of 260+ regional jets in the same time period.

Air China

Beijing-based Air China recovered well in the second-half of 2003 after responding to the SARS crisis by targeted cost-cutting. For 2003 the airline reported a 34% increase in revenue, to \$2.7bn, but net profit fell to \$11m, compared with a \$89m net profit in 2002 (no operating figure was released). In 2003 Air China carried 18.05m passengers, down

0.5% on 2002. Half-year results are not available, but Air China is aiming for a net profit of Yuan 1bn in 2004 (\$118m).

Air China has been busy strategically over the last 12 months. In February 2004 Air China agreed to pay a reported \$60m for a 22.8% stake in Jinan-based Shandong Airlines (as well as 42% of Shandong's parent company) with which Air China already codeshares. Shandong is based in the north-east of China and operates 22 aircraft on domestic routes, so its acquisition will boost Air China's national network, which is poor compared with China Southern and China Eastern.

Air China is also making disposals. In 2003 it separated out its cargo operations into Air China Cargo, selling 25% to Hong Kong conglomerate CITIC Pacific and 24% to Beijing Capital International Airport (which owns the cargo terminal at Beijing airport) for \$423m earlier this year. Air China Cargo currently operates five 747s and in August ordered two 747-400 freighters for delivery in 2005 and 2006. Air China is also selling its majority stakes in two in-flight catering companies to CNAC for \$44m.

Apart from the Shandong acquisition, Air China's other major domestic move in the last 12 months is its plan to set up a hub at Guangzhou's new Baiyun airport, which follows closely behind the launch of Air China operations in Shanghai. The Guangzhou hub will attract feed from southern China and is a direct challenge to Big Three rival China Southern.

More controversially, Air China will launch a subsidiary in Tibet by the end of 2004. With five A319s and two 757s, the Lhasa-based airline will target business and tourist travelers to the country, though this will attract criticism as Tibet has been occupied by China since an invasion in 1950.

Internationally, in June 2003 Air China ended its codeshare with Northwest, replacing it in October 2003 with a wide-ranging alliance with United, to include codesharing on international and national flights, and an FFP link-up. Initially the airlines codeshared on a limited number of routes, but at the end of the year the US DoT later gave blanket approval for codesharing to all beyond-gate-

way destinations in the US and China.

New international routes included Beijing-Milan, Beijing-Dubai, Beijing-Kuala Lumpur, Dalian-Beijing-Munich and Chengdu-Beijing-Paris (the latter is the first route between western China and Europe). In February 2004 Air China started codesharing with Dragonair on routes between Hong-Kong and four mainland destinations, while in May Air China signed a codeshare deal with Air Macau. From March 2004 Air China began codesharing on more than 105 flights a week with Star's All Nippon Airways (ANA), to go alongside existing codeshares with Star members SAS and Asiana Airlines.

Air China is not a quoted company (unlike its Big Three rivals, which went public in 1997), but has plans for a long-delayed simultaneous IPO in Hong Kong and New York before the end of 2004 - though this is now likely to slip into 2005. China International Capital Corp and Merrill Lynch will underwrite the IPO, but are keeping quiet about details and timing. Up to 30% of the airline will be floated, raising between \$500m-\$800m (valuing the company at up to \$2.7bn). There is also a strong possibility that instead of a direct IPO, a holding company will be listed, which would contain equity in both Air China and Hong Kong-listed China National Aviation (CNAC). CNAC owns 51% of Air Macau and 43% of Hong Kong's Dragonair, and is owned by China National Aviation Holdings (CNAH), which is also the parent of Air China.

This structure would avoid fears that an Air China IPO on its own may not be particularly attractive. While Air China has the kudos of being China's main international airline, many of the non-domestic routes are not profitable, and its brand lags far behind its international competitors in attracting lucrative business passengers. Prospective investors also know that China Southern's shares have yet to recover to their IPO price, while China Eastern's are only slightly higher than the IPO price.

Reports from China in September 2004 also suggested that codeshare partner Lufthansa may buy 10% of Air China prior to the listing, though this was denied by the German airline. More likely is the sale of a strategic stake to Hong Kong-based investors

with relationships to the Beijing government, such as CITIC Pacific, although an investment by a US or Asian airline can't be ruled out - the most likely candidates being Cathay, Singapore, United and Northwest.

Part of the IPO proceeds will be used to pay for new aircraft. Air China operates a fleet of 132 aircraft and has 18 737NGs and A320 family aircraft on order, with the likelihood of A380 and 7E7 orders to come. The latest order came in September 2004, for another seven 737-700s, with delivery by mid-2006. Incidentally, as its fleet increases Air China is following the lead of Hainan Airlines and recruiting foreign pilots, initially A320 rated aircrew from New Zealand.

Air China remains the Chinese airline most likely to become a member of the Star global alliance. Air China codeshares with Star's United and Lufthansa, and since 1989 Air China has also been a joint venture partner with Lufthansa in Aircraft Maintenance and Engineering (Air China owns 60% and Lufthansa 40%). The maintenance company is profitable, and in August the two airlines agreed to extend the joint venture until 2029 as well as injecting \$100m in capex investment into the Beijing airport-based company.

China Southern

China Southern was particularly hard hit by SARS as it is based in Guangzhou in the south of China, the centre of the epidemic. In April, May and June 2003 RPKs fell by 40%, 84% and 62% respectively, but domestic traffic returned very quickly and by August RPKs had risen by 23% year-on-year. Nevertheless, in 2003 revenue dropped 3% to \$2.1bn and operating profit fell to \$55m compared with a \$245m operating profit in 2002, while at the net level China Southern racked up a loss of \$43m (compared with a \$70m net profit in 2002).

Total passengers carried in 2003 fell 4.8% to 20.5m. While international RPKs fell by 25.2% in 2003 compared with 2002, domestic RPKs were down just 3.6% in 2003. Overall, RPKs rose by 8.8% and ASKs fell by 7.6%, with load factors declining by 0.8 percentage points to 64.6% in 2003.

But recovery has been marked in 2004. For the first half of the year China Southern reported a 65% rise in revenue, to \$1.3bn, and an operating profit of \$91m, compared with an operating loss of \$166m in the first half of 2003. The net profit totalled \$40m, compared with a \$140m net loss in 1H 2003.

China Southern operates 114 Boeing and Airbus aircraft, and has 29 more on order. In April 2004 China Southern ordered 15 A320-200s and six A319s for \$1.2bn, for delivery by the end of 2006. In November 2003 the airline confirmed an order for four A330-200s for new long-haul routes, for delivery from 2005 - the first A330s that Airbus has sold in China. These were part of the 30-strong Airbus order announced by the Chinese government in April of that year.

In September China Southern also announced that it was amending an existing order for 23 leased A319s from ILFC made in 2003 into an order for at least 15 leased A320s instead. The aircraft will arrive by 2007 and replace a fleet of MD-82s and MD-90s at subsidiary China Northern. The first two ERJ-145s from an order for six of the type arrived at China Southern in June 2004. The others will be delivered by January 2005, with the 50-seat 145s replacing 737s on domestic routes run by a subsidiary out of Guangzhou.

Though China Southern took out new loans for \$255m in 2003 - in order to pay loans due on aircraft financing - by the end of 2003 China Southern had built up a healthy cash pile of \$250m. China Southern appears to have so much cash that in July this year it engaged Centergate Securities, a Beijing-based investment house, to invest \$60m on its behalf. It was a decision that many analysts found bizarre (China Southern's share price fell by 6% in a few hours after the announcement) given that the airline may soon be committing itself to large orders for long-haul aircraft and is investing heavily in relocating its hub to the new Guangzhou Baiyun International airport.

China Southern's key northern subsidiary, China Xinjiang, has plans to add to its fleet of 24 aircraft by leasing four 757-200s and four 737-700s over the next 12 months. The aircraft will be used for an expansion of both domestic operations and international routes

into central Asia.

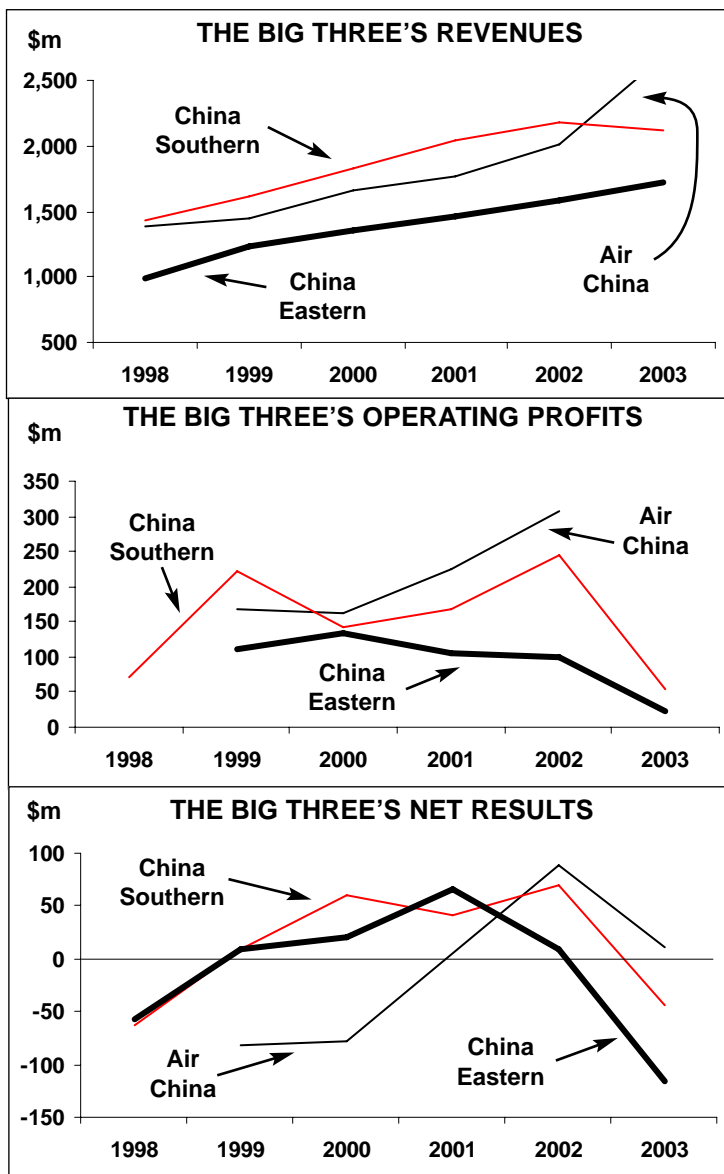
Other international moves include codesharing with Dragonair on Guangzhou-Hong Kong from December 2003, and codesharing is also planned with Pakistan International Airlines (PIA) - China Southern currently operates between Kashi and Urumqi (in northwest China) and Islamabad. China Southern is also the only one of the Big Three to operate to the Middle East - it operates Beijing-Dubai and Beijing-Sharjah services, both via Urumqi in northwest China, and in June 2004 added a Guangzhou-Beijing-Dubai route.

China Southern is expected to join SkyTeam in 2005 or 2006, after signing a preliminary agreement to join in August - the first of the Big Three to make an alliance commitment. China Southern has close ties with SkyTeam members already, codesharing with Korean Air and Air France.

China Eastern

Like its rivals, Shanghai-based China Eastern was hit hard by SARS but by August 2003 domestic RPKs were up 64% year-on-year, though recovery of international RPKs took several more months. For overall 2003 China Eastern saw a 6% increase in passengers carried to 12.2m. Overall RPKs rose 0.3% compared with 2002, but with ASKs rising by 7.8%, load factor fell by 4.5 percentage points to 60.6%. However, while domestic RPKs rose 24% year-on-year, international RPKs fell by 23%. This contributed to a net loss of \$115m in 2003, compared with a \$10m net profit in 2002. Revenue grew 9.2% to \$1.7bn in 2003, while operating profit fell from \$101m in 2002 to \$24m in 2003.

In January-June 2004 China Eastern recorded its highest ever net profit since listing in 1997, with \$57.9m in net profit compared with a \$150m net loss in the SARS-hit first half of 2003. Revenue rose 69% to \$1.1bn. Return on net assets was 9.9% in the half year, compared with a -27.1% return in 1H 2003. Passengers carried rose 57% in the period, to 13.3m, and the growth is continuing through the second half, with August traffic up 21.4% year on year. However, for the full year



China Eastern is warning that its costs will rise considerably due to higher fuel prices and aircraft leasing fees.

The turnaround in finances will help China Eastern reduce long-term debt of \$1.4bn as at the end of 2003 (compared with \$0.7bn a year earlier). In May 2004 the airline raised \$90m to "alleviate its capital deficiency" by selling and leasing back 24 engines to an undisclosed party.

Perhaps of more pressing concern to China Eastern is the Chinese government's announcement that from 2005 it is opening up Shanghai's two airports to all domestic air-

lines, without restriction. This decision reversed a 2002 decree that prohibited airlines not based at Beijing, Shanghai and Guangzhou from operating to those destinations (a move designed to overcome "disorderly competition"), and which also placed restrictions on flights from those cities to secondary destinations. The latest move is believed to be an experiment to see how liberalisation affects traffic to and from a major city, and if successful the government may open up some or all of China's other major cities. But while good for the industry as a whole, it's not such good news for China Eastern and the other local carrier, Shanghai Airlines.

Partly as reaction to this, China Eastern is pressing ahead with the full integration of profitable domestic airlines China Northwest and Yunnan Airlines into its operations, which is part of the Chinese government's industry consolidation plan. The two carrier's are helping boost China Eastern's fleet, which currently stands at 144 aircraft, with 16 737NGs and A320 family aircraft on firm order. The airline plans to increase the fleet to 209 by the end of 2005 and at least 250 by 2010. In June China Eastern signed an MoU for 20 A330-300s (via the government's China Aviation Supplies Import & Export Group), for delivery from the first quarter of 2006 onwards. If confirmed, the aircraft will be used to replace A300-600Rs on domestic and international routes, and to provide new capacity - originally China Eastern was going to order 10 aircraft, but doubled its order at the last moment.

On cargo, the last of China Eastern's MD-11s were converted into freighters earlier in 2004 and passed on to subsidiary China Cargo Airlines. China Eastern owns 70% of China Cargo (with China Ocean Shipping owning the other 30%) but it has been planning to sell 10% of its stake to Taiwan's China Airlines ever since 2001. Not surprisingly, this has been delayed as it is a politically sensitive deal, though China Eastern is still pushing hard for completion as it plans to use the proceeds to pay down some of its debt. China Eastern also launched an FFP tie-up with China Airlines, the Taiwanese flag carrier on October 1st, and this could lead to codesharing in the future.

China Eastern's aggressive fleet expansion will underpin a large increase in both its domestic and international network in the next couple of years. In April China Eastern started services from Shanghai to London Heathrow, becoming the second Chinese airline to serve the UK (after Air China). The route was to have been started a year previously, but was delayed because of SARS. China Eastern is also planning major expansion on routes to Japan. A Beijing-Yantai-Osaka route was launched in November 2003, followed by a Kunming-Osaka service the following month. Further routes to Osaka and Tokyo are under consideration. A Shanghai-Kuala Lumpur service started in January 2004. China Eastern also started a service between Shanghai and Melbourne in December 2003, the last of the Big Three to serve the destination.

China Eastern is likely to join oneworld sooner rather than later. It already has close ties with oneworld's Cathay: they became FFP partners in 2001 and under a joint training deal 40 China Eastern flight attendants are carrying out 18-month secondments at Cathay in order to improve their service skills. Cathay restarted flights to China at the end of 2003 after being granted an operating licence by CAAC. However, despite a revised bilateral between Hong Kong and mainland China in September 2004 that allows a 30% increase in flights between the regions, Cathay is blocked from operating on the lucrative route to Shanghai until October 2006, which is likely to lead to a codeshare deal between Cathay and China Eastern.

The independents

The implicit pressure from the Chinese government on the independents to "align" themselves with one of the Big Three remains, with only large surviving independents being Shanghai Airlines and Hainan Airlines.

Shanghai Airlines has a 35-strong, all but four of which are Boeing aircraft. After net profits fell 35% in 2003 to \$11.1m, it reported a half-year 2004 net profit of \$17.5m (compared with a \$24m net loss in 1H 2003). In September 2004 the carrier announced it was

acquiring Beijing-based China United Airlines for \$8.5m. China United is run by the Chinese air force and operates domestic and international routes with a fleet of 15 737s and Russian aircraft. The acquisition implies Shanghai has realised that it needs to copy the acquisitive strategy of the other remaining large independent, Hainan Airlines, if it wants to avoid being swallowed up by the Big Three and survive the challenge of the opening up of Shanghai's two airports to domestic competitors.

Hainan Airlines operates 65 aircraft, the majority of which are again Boeing models. However, it has 31 aircraft on order as it expands its way to survival against the Big Three. In 2003 it racked up a massive net loss, of \$153m, though in 1H 2004 net profit of \$10.4m was recorded, compared with a net loss of \$118m in January-June 2003.

Hainan's latest move is the planned launch of Shilin Airlines in Yunnan, in the southwest of China, with a fleet of at least five regional aircraft. Hainan launched a route to Osaka in September and has also applied for permission to launch a service to New York.

Yet despite the consolidation of the last few years, there are tentative signs that Chinese government may be prepared to

allow new private airlines to emerge. In May, a licence was awarded to Yinglian Eagle United Airlines, which is owned by a Guangdong telecoms company and which plans to start regional routes from Chengdu sometime in 2005. Additionally, in June preliminary CAAC licences were given to two further start-ups - Shanghai-based Spring Autumn Airlines and Tianjin-based Aokai (now renamed Okay Airways).

Yinglian claims it will be a LCC, as does Okay, but whether the Chinese government will allow budget carriers to emerge and compete against the domestic networks of the Big Three will be the true test of liberalisation. Malaysian LCC AirAsia is planning to launch a route between Bangkok and Kunming (in the south west of China) in December 2004, and the CAAC will be keeping a close watch on how successful the LCC is. There are certainly enough secondary airports around to make LCC routes viable in theory, but after consolidating a mess of Chinese airlines into three large groups, there may be reluctance by some in the government to let entrepreneurial airlines attack the Big Three - particularly before Air China has completed what may be a tricky IPO.

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Databases

		Group revenue US\$m	Group costs US\$m	Group op. profit US\$m	Group net profit US\$m	Operating margin	Net margin	Total ASK m	Total RPK m	Load factor	Total pax. 000s	Group employees
ANA												
YE 31/03	Year 2001/02	9,714	9,529	185	-76	1.9%	-0.8%	87,908	57,904	64.7%	49,306	
	Apr-Sep 02	5,322	5,194	127	-69	2.4%	-1.3%	44,429	29,627	66.7%	25,341	
	Year 2002/03	10,116	10,137	-22	-235	-0.2%	-2.3%	88,539	59,107	66.7%	50,916	14,506
	Apr-Sep 03	5,493	5,362	131	186	2.4%	3.4%	32,494	19,838	61.1%	22,866	
Cathay Pacific												
YE 31/12	Year 2002	4,243	3,634	609	513	14.4%	12.1%	63,050		77.8%		14,600
	Jan-Jun 03	1,575	1,672	-97	-159	-6.2%	-10.1%	26,831		64.4%	4,019	14,800
	Year 2003	3,810	3,523	287	168	7.5%	4.4%	59,280	42,774	72.2%	12,322	14,673
	Jan-Jun 04	2,331	2,046	285	233	12.2%	10.0%	35,250		76.1%	6,404	
JAL												
YE 31/03	Year 2000/01	13,740	13,106	634	331	4.6%	2.4%	129,435	95,264	73.6%	38,700	17,514
	Year 2001/02	9,607	9,741	-135	-286	-1.4%	-3.0%				37,183	
	Year 2002/03	17,387	17,298	88	97	0.5%	0.6%	145,944	99,190	68.0%	56,022	
Korean Air												
YE 31/12	Year 2001	4,309	4,468	-159	-448	-3.7%	-10.4%	55,802	38,452		21,638	
	Year 2002	5,206	4,960	246	93	4.7%	1.8%	58,310	41,818	71.7%		
	Year 2003	5,172	4,911	261	-202	5.0%	-3.9%	59,074	40,507	68.6%	21,811	
Malaysian												
YE 31/03	Year 2000/01	2,357	2,178	179	-351	7.6%	-14.9%	52,329	39,142	74.8%	16,590	21,518
	Year 2001/02	2,228	2,518	-204	-220	-9.2%	-9.9%	52,595	34,709	66.0%	15,734	21,438
	Year 2002/03	2,350	2,343	7	89	0.3%	3.8%	54,266	37,653	69.4%		21,916
Qantas												
YE 30/06	Year 2001/02	6,133	5,785	348	232	5.7%	3.8%	95,944	75,134	78.3%	27,128	33,044
	Jul-Dec 02	3,429	3,126	303	200	8.8%	5.8%	50,948	40,743	80.0%	15,161	34,770
	Year 2002/03	7,588	7,217	335	231	4.4%	3.0%	99,509	77,225	77.6%	28,884	34,872
	Jul-Dec 03	4,348	3,898	450	269	10.3%	6.2%	50,685	40,419	79.7%	15,107	33,552
Singapore												
YE 31/03	Year 2001/02	5,399	4,837	562	395	10.4%	7.3%	94,559	69,995	74.0%	14,765	29,422
	Year 2002/03	5,936	5,531	405	601	6.8%	10.1%	99,566	74,183	74.5%	15,326	30,243
	Year 2003/04	5,732	5,332	400	525	7.0%	9.2%	88,253	64,685	73.3%	13,278	29,734
	Apr-Jun 04	1,588	1,409	179	159	11.3%	10.0%	25,249	18,167	71.9%	3,800	

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

AIRCRAFT AVAILABLE FOR SALE OR LEASE

	Old narrowbodies	Old widebodies	Total old	New narrowbodies	New widebodies	Total new	Total
1999	243	134	377	101	53	154	531
2000	302	172	474	160	42	202	676
2001	368	188	556	291	101	392	948
2002	366	144	510	273	102	375	885
2003	275	117	392	274	131	405	797
2004-March	227	94	321	249	110	359	680

AIRCRAFT SOLD OR LEASED

	Old narrowbodies	Old widebodies	Total old	New narrowbodies	New widebodies	Total new	Total
1999	582	230	812	989	170	1,159	1,971
2000	475	205	680	895	223	1,118	1,798
2001	286	142	428	1,055	198	1,253	1,681
2002	439	213	652	1,205	246	1,451	2,103
2003	408	94	502	1,119	212	1,331	1,833
2004-March	32	13	45	215	32	247	292

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

Aviation Strategy

Databases

EUROPEAN SCHEDULED TRAFFIC

	Intra-Europe			North Atlantic			Europe-Far East			Total long-haul			Total Int'l		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
1996	165.1	100.8	61.1	163.9	126.4	77.1	121.1	88.8	73.3	391.9	292.8	74.7	583.5	410.9	70.4
1997	174.8	110.9	63.4	176.5	138.2	78.3	130.4	96.9	74.3	419.0	320.5	76.5	621.9	450.2	72.4
1998	188.3	120.3	63.9	194.2	149.7	77.1	135.4	100.6	74.3	453.6	344.2	75.9	673.2	484.8	72
1999	200.0	124.9	62.5	218.9	166.5	76.1	134.5	103.1	76.7	492.3	371.0	75.4	727.2	519.5	71.4
2000	208.2	132.8	63.8	229.9	179.4	78.1	137.8	108.0	78.3	508.9	396.5	77.9	755.0	555.2	73.5
2001	212.9	133.4	62.7	217.6	161.3	74.1	131.7	100.9	76.6	492.2	372.6	75.7	743.3	530.5	71.4
2002	197.2	129.3	65.6	181.0	144.4	79.8	129.1	104.4	80.9	447.8	355.1	79.3	679.2	507.7	74.7
2003	210.7	136.7	64.9	215.0	171.3	79.7	131.7	101.2	76.8	497.2	390.8	78.6	742.6	551.3	74.2
Aug 04	20.3	14.5	71.6	21.3	18.1	85.3	13.6	10.8	79.8	48.2	40.3	83.5	72.1	57.6	79.9
Ann. chng	7.3%	5.1%	-1.5	3.6%	4.6%	0.8	20.8%	16.8%	-2.7	7.5%	7.4%	0.0	7.6%	6.8%	-0.5
Jan-Aug 04	146.9	96.7	65.9	151.2	124.5	82.3	101.0	78.3	77.6	356.5	286.0	80.2	529.9	401.3	75.7
Ann. chng	6.1%	8.2%	1.2	6.0%	9.7%	2.8	18.5%	23.7%	3.3	8.8%	12.1%	2.4	8.5%	11.6%	2.1

Source: AEA

US MAJORS' SCHEDULED TRAFFIC

	Domestic			North Atlantic			Pacific			Latin America			Total Int'l		
	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %	ASK bn	RPK bn	LF %
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
2000	1,033.5	740.1	71.6	178.9	141.4	79.0	127.7	97.7	76.5	83.0	57.6	69.4	380.9	289.9	76.1
2001	1,025.4	712.2	69.5	173.7	128.8	74.2	120.1	88.0	73.3	83.4	56.9	68.2	377.2	273.7	72.6
2002	990.0	701.6	70.9	159.0	125.7	67.2	103.0	83.0	80.5	84.1	56.8	67.5	346.1	265.5	76.7
2003	963.1	706.6	73.4	148.3	117.6	79.3	94.8	74.0	80.5	84.2	59.3	70.5	327.2	251.0	76.7
Aug - 04	90.0	72.0	80.0	15.5	13.2	85.1	9.3	7.9	85.1	8.6	6.5	76.2	33.3	27.6	82.8
Ann. chng	6.0%	6.3%	0.2	9.5%	9.6%	0.1	12.1%	10.7%	-1.1	16.3%	12.2%	-2.8	11.9%	10.5%	-1.0
Jan-Aug 04	682.1	519.5	76.2	108.8	89.2	82	68.6	58.3	85	65.3	46.9	71.8	242.7	194.4	76.1
Ann. chng	6.1%	8.2%	1.5	11.5%	16.1%	3.2	10.3%	24.0%	9.4	15.6%	15.0%	-0.4	12.2%	18.1%	4

Note: US Majors = Aloha, Alaska, American, Am. West, American Transair, Continental, Cont. Micronesia, Delta, Hawaiian JetBlue, MidWest Express, Northwest, Southwest, United and US Airways Source: ATA

JET ORDERS

	Date	Buyer	Order	Delivery	Other information/engines
Boeing	10 Sept	Ethiad	5 x 777-300ER	4Q 2005	
	1 Oct	WestJet Airlines	1 x 737-600	1Q 2006	converted option
	6 Oct	JAL	3 x 747-400SF		plus 4 options
	10 Oct	Turkmenistan A/L	2 x 717-200	3Q 2005	
Airbus	11 Oct	China Eastern	20 x A330-300		
	9 Oct	Air China	6 x A319	2005	CFM 56-5
Embraer	29 Sept	Air Canada	45 x ERJ190	1Q 2005	plus 45 options
Bombardier	27 Sept	Air Canada	15 x CRJ200, 15 x CRJ700		plus 60 options

Note: Prices in US\$. Only firm orders from identifiable airlines/lessors are included.

Source: Manufacturers

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