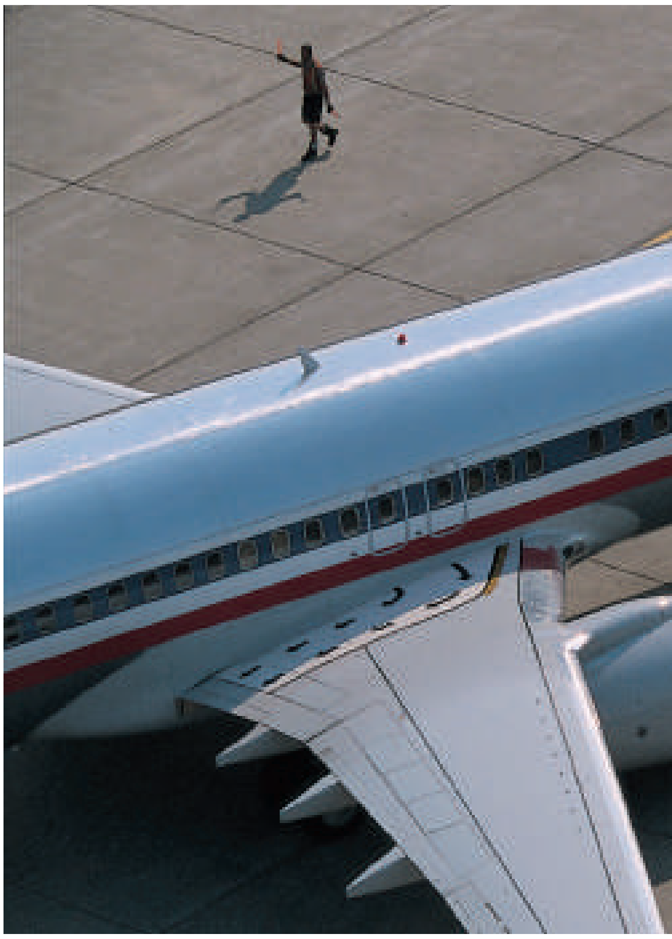
Traffic recovery in the US has been slower than expected. Although majors are having to take drastic measures, growth should resume in 2003. This should trigger further orders after outstanding deliveries replace ageing jets.

US fleets in flux, but orders should follow growth



One year after September 11th, US carriers have weathered the industry downturn with various degrees of success. Some carriers have experienced traffic growth. Jet Blue and Alaskan are two examples. Other have struggled to regain previous traffic levels, with US Airways, Midway, and United applying for federal loan options.

With the initial uncertainty passed, US carriers are beginning to review their options and possible fleet strategies. Forecasts predict US domestic traffic will return to pre-September 11th levels in late 2002 or early 2003. Steady traffic growth will follow between 2003 and 2006. This raises the issue of how US airlines will develop their route networks and fleets over the next five years.

Many US carriers reduced capacity and cancelled or deferred orders. This will be followed by a traffic recovery and then growth. How will US airlines provide enough capacity as passenger demand returns in the US? How will the major carriers compete with an increasing number of low-cost operators, especially on the lucrative east-coast, and what fleet plans do those carriers have?

Traffic growth

In the four years prior to 2001 (1997-2000), domestic US passenger numbers grew by an average rate of 3.3% per annum. Domestic passenger volumes fell by 6.8% in 2001 compared to 2000.

Capacity growth (measured as seats deployed) during 1997-2000 averaged 2.3% per annum, meaning overall load factor increased between 1997 and 2000. Capacity fell by 4.3% in 2001.

September 11th reduced the US domestic market, but the economic downturn was already having an effect, with some airlines struggling.

Post September 11th, and into 2002, carriers like Jet Blue and Southwest grew while others experienced a quick rebound of traffic. This included Alaska, America West, and, to a certain extent, Delta. It is hard to establish how much of the rebound is driven by price-cutting.

Other major carriers have lagged behind in traffic growth, with US Airways, United, and American all recovering sluggishly.

US carriers have been offering deep discounts to attract the US public back to air travel. The added effects of a slow US economy has made the American consumer more cost-sensitive. This has assisted low-cost operators like Southwest, AirTran, and Jet Blue in eroding the marketshares of their major competitors.

September 11th, price competition, and the economic slowdown has had an effect on revenue. Domestic passenger revenue decreased by 7% from 2000 to 2001. While this is not as harmful to the smaller operators, which have lower unit costs, it is having an effect on major US operators. The current events at US Airways, American and United reflect this.

The reduction in fares has had the effect of stimulating traffic to come back to pre-September 11th volumes for some airlines, with growth of RPMs in the US domestic market of 11% between January and June 2002.

Seat capacity has been increased by 6% over the same period. While traffic has returned to the market, capacity, measured as available seat-miles (ASMs), has remained low. ASMs are forecast to return to pre-September 11th levels within two years.

Traffic forecast

The International Air Transport Association's (IATA's) revised passenger traffic forecast predicts passenger traffic to grow by an average of 1.59% annually in the US domestic market during 2001 to 2006. This takes into account the negative 5% growth of 2001.

From 2002 to 2006, IATA forecasts the market will grow by about 3.6% per year, which is consistent with Boeing's market outlook of 3.5% compound annual growth.

The US domestic market should require 810 billion available seat-miles (ASMs) by 2006; about 15% more than the 2002 level of 702 billion and 10.5% above its previous peak in 2000 of about 770 billion ASMs. The large fall in traffic

American's traffic recovery has been slow compared to most carriers. The airline has announced it will retire its 74 Fokker 100s, and will only partially replace lost capacity by increasing seat numbers and utilisation of its remaining aircraft.

will probably be followed by a traffic recovery and then growth. This will require additional ASMs and aircraft.

Current fleets

Current airline fleets, used primarily on domestic routes and including parked aircraft, are summarised *(see first table, page 14)*. Some of the older types such as the 727, Fokker 100, DC-9, DC-10 and MD-80s will be replaced. The most likely replacements are the 737 and A320, since they account for the most numerous firm orders and options. Delta is replacing 727s with 737s on a one-for-one scheme, with other carriers expected to adopt similar retirement or replacement strategies.

US airlines have 2,803 narrowbodies, 882 757s/767s/A300-600s and 44 DC-10s in operation, totalling 3,729 aircraft *(see first table, page 14)*. With the expected increase in ASMs, and a small increase in load factor, the fleet will have to be about 4,200 aircraft by 2006; a net increase of 500.

There are another 337 narrowbodies plus nine 767s on order from Boeing and a further 205 A320 family orders outstanding for US domestic carriers *(see second table, page 14)*. These numbers leap to 885 and 408 when options are included, totalling 1,293 oustanding narrowbody orders.

While this is a large number of aircraft, it should be compared against the 1,080 of ageing 727s, MD-80s, Fokker 100s, DC-9s and 737-200s. It is unlikely that all 1,045 727s, MD-80s/-90s and DC-9s will be retired by 2006. A more probable portion is half to two-thirds; 550-700.

There will be at least 335 aircraft retired from these fleets by 2006. These include the 175 727s, 74 Fokker 100s from American, about 10 DC-10s, 27 DC-9s from AirTran and 35 737s from Frontier and America West.

In addition it is likely there will also be some MD-80s and other Fokker 100s retired. Retirements by 2006 could total 500 or more aircraft. Not all retirements will need to be replaced. Most carriers will be able to increase aircraft utilisation and seat numbers if necessary, as is the case with American's plans. American's retirement of 74 Fokker 100s will partially be replaced by increased aircraft utilisation and additional seats in its remaining fleet.

On a macro level, the 540 narrowbodies on firm could satisfy the approximate net fleet increase to about 4,200 aircraft by 2006. There are sufficient options held to replace the retirements during this period.

Firm orders will, however, replace retired aircraft, and options converted to provide capacity for growth.

This indicates at least 300 options will have to be converted to replace the 727s, Fokker 100s, DC-9s, DC-10s and 737-200s retired during this period. Continental will also retire 11 MD-80s and US Airways will probably reduce its fleet by 40 aircraft. There is also the possibility of further MD-80 retirements by Alaska, American, Continental and Delta over the next four years. Option conversions could therefore approach 500.

Although some of the major carriers, in particular US Airways, are retiring aircraft to reduce capacity, traffic gains have been made by low-cost airlines and they will convert options to accommodate this.

Drew Magill, Boeing's director of marketing for the Americas believes "demand will continue, with network carriers like American and Continental driving toward fewer fleet types. Due to their current finances they are less likely to order aircraft at present. However, the economics of re-fleeting combined with the attraction of reducing their fleet types means they may resume orders shortly. In a typical downturn low-fare carriers grow more than the network carriers. Fleet numbers will grow in the US, and new orders will be placed, but it is too early into the cycle to predict when this will occur."

Boeing's delivery forecasts indicate deliveries for US operators will recover within the next two to four years, with the delivery cycle being over the next three to five years. It sees 2002 as a period of consolidation and settlement, while traffic will return in 2003 and

SUMMARY OF US AIRLINE AIRCRAFT USED IN DOMESTIC OPERATIONS

Airline	717	727	737	757	767	A300-600	A319	A320	A321	DC-10	DC-9	F.100	MD80/90	TOTAL
AirTran	38		1								27			66
Alaska Airlines			69										32	101
America West			51	13			31	49						144
American Airlines		29	77	151	89	34				2		74	362	818
Continental Airlines		1	252	45	26					5			45	374
Delta Airlines		65	78	121	123								136	523
Frontier Airlines			24				9							33
JetBlue Airways								27						27
Northwest Airlines		29		55			44	75		36	170			409
Southwest Airlines			369											369
United Airlines		51	182	97	55		55	92		1				533
USAirways			146	34	11		57	16	28			40		332
Total	38	175	1,249	516	304	34	196	259	28	44	197	114	575	3,729

Source: AvSoft Ltd

SUMMARY OF US AIRLINE FIRM AIRCRAFT ORDER BACKLOG

Airline	717	737	757	767	A319	A320	A321	TOTAL
AirTran	25							25
Alaska Airlines		10						10
America West					2	6		8
American Airlines		41	3	9				53
Continental Airlines		56	11					67
Delta Airlines		61						61
Frontier Airlines					11			11
JetBlue Airways						58		58
Northwest Airlines			17		34	9		60
Southwest Airlines		113						113
United Airlines					23	25		48
USAirways					3	21	13	37
Total	25	281	31	9	73	119	13	551

Source: AvSoft Ltd

airlines' operating economics will improve.

Market development

So how will the market develop over the next five years, and what are the major factors that will influence it? "The market will be driven by frequency. Ticket cost will be an important issue, and it is a challenge to the major carriers to reduce their prices to our level," says Gareth Edmondson-Jones, spokesman for JetBlue. "The market will gravitate toward higher frequency before larger aircraft. While there will be a market for a 767 type aircraft, the majority of domestic work will be performed by 737/A320-size aircraft."

Major carriers only operate midbody (757/767) and widebody aircraft on densely travelled routes. Northwest operates DC-10s from Minneapolis to Honolulu and to Los Angeles. It also operates the DC-10 to Seattle, Anchorage, and Memphis. United and American operate 767s/A300s on Transcontinental routes, and high-density routes from New York and Boston to Florida. Continental operates 767s on similar routes.

Passenger volume has a bearing on fleet plans, since carriers do not want to operate high capacity aircraft against high competition. The US majors would not want to use a 190-seat, 757 type aircraft to compete against a 140-seat 737.

The intentions of US carriers are to create high frequency services and keep aircraft size within the 130-160 seat bandwidth. Most carriers will offer additional frequency on primary routes, and seek to reduce frequency on secondary routes, or move them to a regional affiliate. The use of regional affiliates will be enhanced, as their lower costs allow them to operate on marginal routes, while also providing feed to the network carriers.

Continental Airlines

Continental Airlines has 298 narrowbody jets, with an order backlog of 56 737s and 11 757s *(see tables, this page)*.

Continental has plans to remove 11 MD-80s by the end of 2003, bringing to 60 the number of aircraft it has retired since September 11th. It will still have 34 MD-80s after the retirement of 11. Domestic capacity in 2003 will be reduced by 3-4% compared to 2002, which already has been reduced by 6.5% compared to 2001.

Continental's aims are to reduce its exposure on major routes where business traffic has not returned. The retirement of some MD-80s goes some way to reducing the sub-fleets it has. With the continued absence of higher-yield business travel, carriers are scrutinizing their unit costs to generate better efficiencies and regain a degree of profitability. Continental has sought to reduce its cost exposure.

Continental has already retired its 727s and most DC-10s, and leaning to a simplified fleet, consisting of mainly 737s.

American Airlines

American has recently announced some major changes to its fleet and operations. It will retire 74 Fokker 100s by the third quarter of 2005, cutting its aircraft types to seven. American intends to rationalise its fleet types to six. American has also deferred 35 aircraft deliveries in 2002, and hopes to defer many of the 67 737s, 767s and 777s it has on firm order scheduled for delivery between 2003 and 2006.

Part of the changes to American include alterations to its Dallas-Fort Worth (DFW) hub, where the bank structure will be reduced. The changes, similar to those already made at Chicago, will increase aircraft utilisation and this is estimated to create the capacity equivalent to 17 aircraft.

American's changes have arguably been the most far-reaching of any airline, since it is seeking to overhaul its hub-and-spoke business model. American intends to reduce the concentration of frequencies that occur during each of eight daily hub banks at DFW. The banks will be more evenly spread out during the day, reducing the peak-hour congestions that typify a hub airport. This restructuring will spread the use of its aircraft and handling over a longer period, and increase their utilisation rates. American will also replace some first class seats with economy seats in its fleet, increasing total seat capacity.

United Airlines

United Airlines has 380 narrowbodies and 152 midbodies. It has 48 A320s on order *(see tables, page 14)*. The current uncertainty about United's ability to withstand the market conditions, and avoid Chapter 11 Bankruptcy, has had an effect on its fleet plans. Its 727s are being retired, an easy decision since most are already parked.

United has already deferred orders, and will probably defer or cancel more. The code-sharing deal with US Airways is possibly a step towards greater integration between the two, an issue that has been approached several times before. United is exposed on two fronts: high labour costs, and low passenger revenues, especially on domestic sectors where business travel has significantly reduced. United has tried to get labour concessions to reduce its cost structure, but has made no significant progress to date.

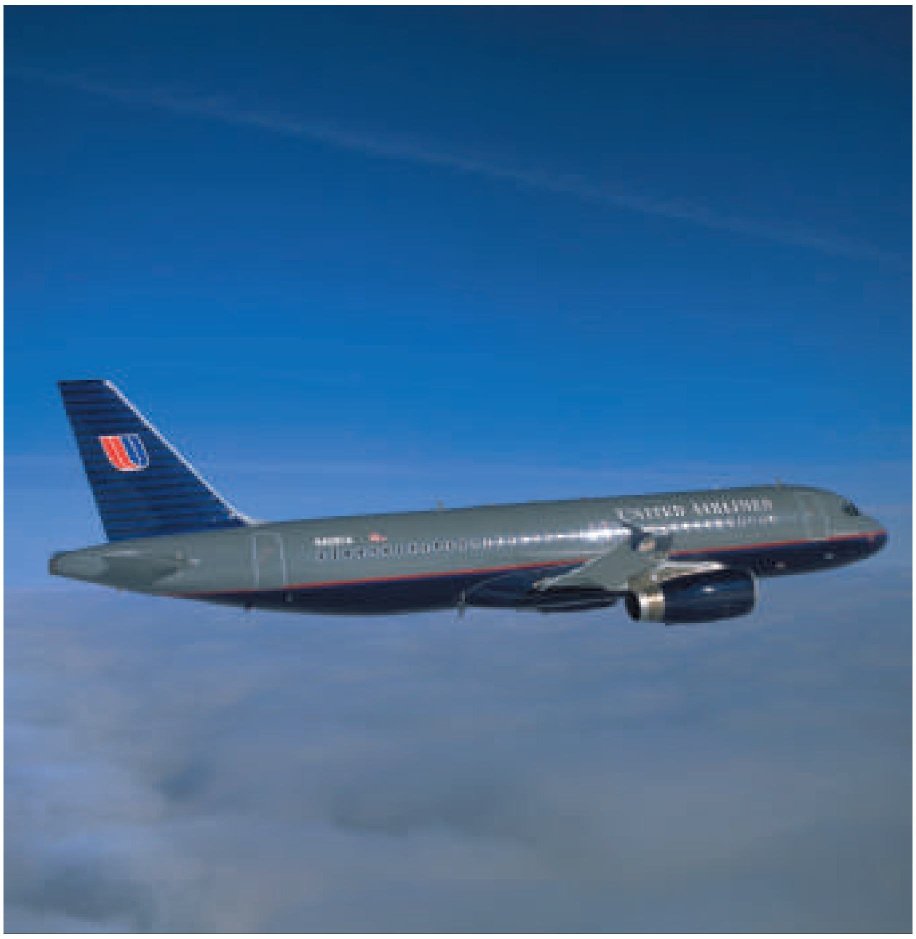
Whether the airline files for Chapter 11 protection, or manages to gain employee concessions to qualify for federal loan guarantees, its operations for the next two to three years will be affected. United will be waiting for traffic and revenue to make a recovery before embarking on any growth phase.

Northwest

Northwest's fleet issues are well documented. It has a large fleet of ageing DC-9s *(see first table, page 14)*, which it is in no hurry to announce retirement plans for. Northwest operates 318 narrowbodies, with a further 55 757s and 36 DC-10s *(see first table, page 14)*.

Northwest's domestic ASMs have shrunk by 3.3% in 2002 versus 2001. Northwest has reduced the number of DC-10s used on its domestic network, and now account for 6.5% of ASMs. This compares to 11.6% in 2001. Year-over-year data for August 2002 and 2001 shows ASMs generated by Northwest's A320s have risen by 2.8%. The other aircraft with increased utilisation was the 757 (up 1.2%), and the CRJ (up 1%).

Northwest has always been a strong user of single-aisle, lower capacity aircraft. It has 34 A319s and nine A320s on order. Northwest has an option for 176 A319s, an obvious replacement for the DC-9. Northwest has made a stronger recovery in its US domestic traffic than other majors.



United has had the second worse traffic recovery of any US airline since September 11th. It has deferred A320 orders, but may still have to file for Chapter 11 bankruptcy protection.

Southwest

Southwest has the largest 737 fleet, at 369 aircraft *(see first table, page 14)*. With a further 113 orders, and an additional 79 options, it is well positioned to meet the future growth.

Laura Wright, Southwest's vice president of finance explains. "We did not ground or reduce our fleet after September11th, but made the decision to reduce fleet growth. We have reduced our fleet growth plans to 4% for the next two years, from the previous levels of 8-10% per annum. The passenger market is currently weak, with a lot of overcapacity."

Southwest's growth over the next few years would require it to take its current orders, which are scheduled through to 2008. "We have a need for those aircraft, and will not defer deliveries. We do have the option of converting them to other variants," says Wright.

The 737 certainly fits Southwest's needs, and suits its network. "We basically have a short stage length, which suits the 737. We also use it to fly trans-continental, so it does not restrict our operations at all," adds Wright.

Southwest's order volume puts it at the forefront of the medium-capacity direction the market is generally heading. "We believe the 737 can provide the seat capacities we need without exposing ourselves to excessive capacity," says Wright.

JetBlue

Jet Blue has 27 A320s, with a further 58 firm orders *(see tables, page 14)* and 17 options. JetBlue's Edmondson-Jones believes its current growth is sustainable. "We are adding one aircraft every three weeks on average. In December 2001 we had 21 and will have 36 by this December. This will grow to 50 by the end of 2003. Beyond that, our options are fluid, but we have plans to add 12 and 13 aircraft in 2004 and 2005. While we are adding additional aircraft, we will only launch one or two new cities to our network. The majority of our effort will go into adding frequency on existing routes, and launching routes to link cities that we currently fly to, a process of connecting the dots."

While JetBlue has a high load factor, there are no immediate intentions to increase aircraft size. "We are happy with the A320, since it suits our needs. The A321 is a bit too large for us," says Edmonson-Jones. "We are in a frequency game at the moment, where the carrier with the greater frequency captures the market. We will increase aircraft size later."

Alaska Airlines

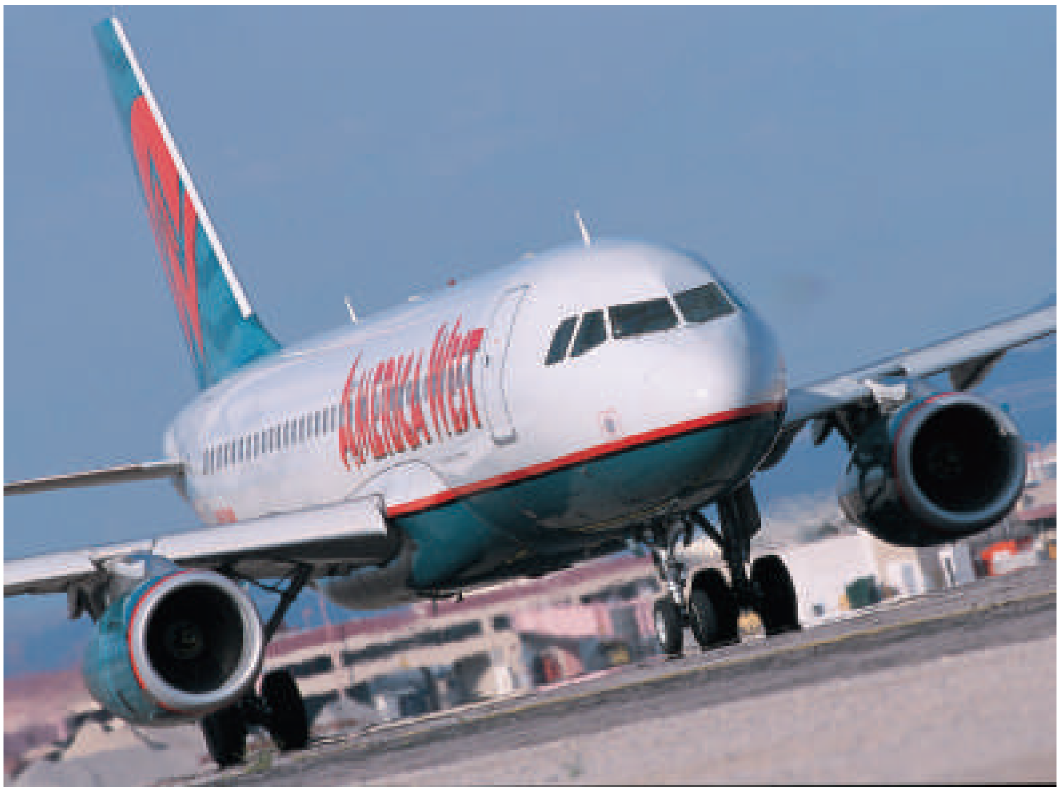
Alaska has 101 aircraft, comprising 69 737s and 32 MD-80s *(see first table, page 14)*. It has 10 737s on order, with a further 20 options. Alaska has the benefit of owning Horizon air, a low-cost regional airline. This allows Alaska to compete in both segments of the market, low-cost and full-service, while experiencing cost efficiencies across the whole group.

Alaska operates on the west coast, and has high-density routes from Seattle to Anchorage and Portland, with few competitors. America West, Frontier, and United share routes on their networks. Alaska has recorded a 4% growth in ASMs over the past year, which returns it to within 1% of its previous ASM peak in 2000. Alaska rebounded quickly after September 11th. RPM growth became positive again in January 2002. Alaska has significant growth potential, and may be one of the first carriers to place additional aircraft orders.

Delta Airlines

Delta, which placed a large aircraft order with Boeing in 1997, believes it has the order volume and flexibility to suit any market conditions, as John Burtz, Delta's general manager of aircraft acquisitions and sales explains. "We do not need to order additional aircraft at this stage. Our contract with Boeing is flexible."

With 61 firm orders for 737s, and a further 60 options, will this be a problem for Delta when the remaining 62 727s are retired? "Not really. The optimal size can vary, but from our standpoint the 130-



America West had a flagging recovery until it implemented a fare structure to boost passenger numbers. The airline will retire its remaining 11 737-200s and has deferred A318 deliveries.

160 seat bandwidth is the optimal size for us. The 737 NG will complement our fleet," says Burtz. "We expect to be able to source sufficient lift when required over the next two or three years to meet market demands. All 727s will be removed from our fleet by October 2003, and we have the ability to replace them on a one for one basis with 737-800s. We have no plans to retire the MD-80; it is a workhorse for us."

Competitive developments have some influence on fleet issues, because carriers do not want to compete with a wrong fleet type. "Our fleet decisions are not influenced by competitors, because it is difficult to compare a full-service airline with a no-frills operator. Delta's aircraft choices reflect our needs. We would look to Delta Express and our RJs to spearhead our response to competition."

America West

Despite its current financial concerns requiring the application for federal loan guarantees, America West is well positioned to capitalise on the changes in the domestic sector. It unit costs are lower than its closest competitors (United and American), and has its main hubs at Phoenix and Las Vegas.

America West is able to operate competitively. It has 131 narrowbodies, including 737s, A319s and A320s, and an order backlog of 33 Airbuses and a further 24 options. America West also has 13 757s, which it deploys on high-density routes from Las Vegas to Phoenix, Los Angeles, Denver and Florida.

America West has deferred the majority of its orders, and not examined new orders or options. The approved restructuring plan means America West will face restricted options for up to seven years, if it follows its business plan.

Its fleet plan revolves around deferred orders, and using the CRJs of its affiliate airlines to provide flexibility and service in markets where the larger aircraft are not economic. A318 deliveries have been deferred until 2005. America West also intends to retire its remaining 11 737-200s. There will be an increased reliance on Mesa Air, which operates CRJs on routes where the A318 or 737 are uncompetitive.

US Airways

With the filing for Chapter 11 bankruptcy protection by US Airways, the airline's fleet plans are far from certain. Its recent RJ concessions will probably not be fully used in the near term, because the airline is expected to shrink while under bankruptcy protection.

It is difficult to see US Airways contributing to any growth in its mainline fleet numbers. It has signalled an intention to develop the RJ operation. Chief executive officer David Siegel stated that Pittsburgh International Airport would play a major role in the reshaped carrier as the headquarters for newly formed MidAtlantic Airways. Many of the regional jets that US Airways expects to acquire over the next two years will be part of MidAtlantic's fleet, and will fly the US Airways Express banner. Siegel recently stated "MidAtlantic is the cornerstone of the regional jet operations and represents the future growth of the airline."

Siegel's statement that US Airways will survive in a smaller form indicates the airline's intentions. It has already retired a lot of 737s, MD-80s, 727s and DC-9s. The airline has 321 narrowbody aircraft, with an order backlog of 24. It also has 11 767s.

US Airways wants to shrink its fleet to 245, and add up to 400 RJs to its current 70-strong fleet. Fokker 100s are the most likely to be retired. Executives believe the airline must employ RJs if they are to compete against Continental and Delta. The airline will reduce its network and operations at key hubs in the short-term.

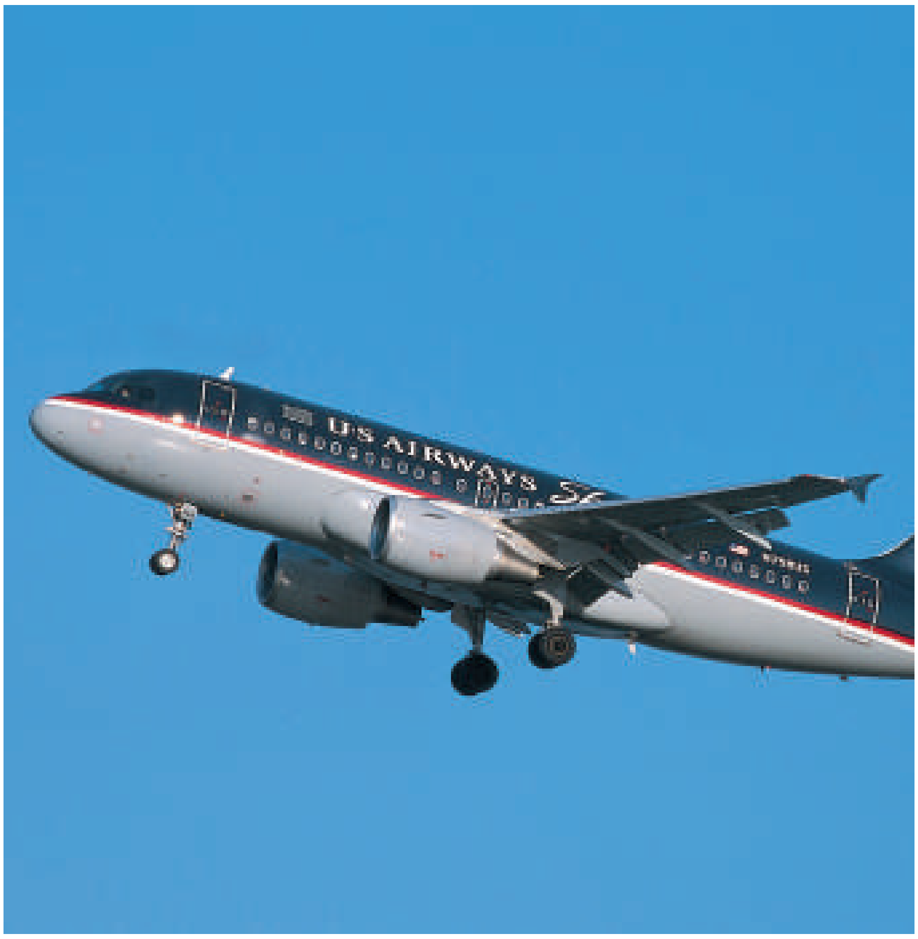
Frontier Airlines

Frontier airlines, based in Denver, operates 24 737s and nine A319s *(see first table, page 14)*.

Frontier is in the process of upgrading its fleet to A319s, as Tracey Kelley, spokesperson for Frontier explains. "Our fleet has quite a mix of aircraft, both leased and owned. It is going to a one-type fleet and will provide us with some significant cost savings. Fleet commonality has a great benefit on any cost-structure, and we expect to gain significant benefit."

Frontier has 17 Airbuses on delivery backlog, and a further seven options. Additional orders are being evaluated, but no decision has been made. Frontier experienced a minimal impact from September 11th "After September 11th we cut capacity by 20%, but by early March 2002 it was back to pre-September 11th levels," says Kelly. "We have not seen the return of business travel

After filing for Chapter 11 bankruptcy protection, US Airways will downsize its main jetline fleet by up to 80 aircraft. This includes 40 Fokker 100s. The airline has renegotiated its scope clause to allow it to order up to 400 70-100 seat regional jets, which will be used to reshape its operation.



in the same volumes as before, however. We expect air travel to rebound, but do not expect business travel will return to the same level. This is mostly driven by the economy. Our fleet will all be Airbuses, so we get a great commonality saving there. While we are not currently reviewing our hub strategy, we may do that in the future," says Kelly.

Competitors

Another factor influencing fleet planning is competition, and what form it will take. Over the past decade, a sort of détente has developed, where each carrier leaves the other alone. The advantage and power of their respective hubs has helped protect the established carriers. This may soon cease with the development of low-cost operators.

The proliferation of low-cost operators sharing a major's hub airport has increased. Delta and USAirways face AirTran, Southwest and JetBlue, while American and United compete against Jet Blue and AirTran. Delta has recently appointed John Selvaggio to a newly created role to counter competitors, especially low-cost ones, suggesting that competitor action is a great concern.

Southwest and JetBlue benefit from low costs and can attract customers on price, and provide a 'cheap-and-cheerful' service. "We offer a high level of on-board comfort and service," says Edmonson-Jones. "This has helped us take marketshare, and is vital to our continued growth."

"Competition will become tougher as major carriers align their fares to our level, and the majors have a frequency advantage which is difficult for any carrier to overcome," says Kelly.

Summary

Industry consolidation and fleet reductions will create a surplus of aircraft in the short-term. Because most of the retired aircraft are ageing and due for replacement shortly, there will be a need for additional orders.

While deferrals and order cancellations will occur in the short term, the industry is expected to recover and then grow over the next five years. The majority of orders will be placed in the 130-160 seat bracket, with less orders going to the mid-sized jets, because they are seen as less flexible within the current market dynamics.

High capacity aircraft, the 757 and A321 or larger, have a limited role within the domestic US market. While there will still be a demand for large aircraft on dense routes, like Boston, New York, or Washington to Florida; they will largely be replaced by smaller capacity aircraft offering higher frequency. Most airlines are pursuing a medium capacity strategy, where aircraft flexibility is the prime consideration. The 737 and A320 suit that role, so the majority of new orders will be for that type.

Few orders are being currently considered, since the large orders placed in 1998 and after are still being delivered or deferred. Outstanding orders will keep pace with probable fleet retirements. Airlines with larger fleets of ageing aircraft are the most exposed, and these include United, Northwest, and American.

Low-fare competitors are more bullish about their options, and the large volume of orders from this area is indicative. These airlines expect to take increasingly larger chunks of marketshare, and will increasingly cause the established carriers problems.

Major carriers are already gearing up for tougher competition, with all of them reducing their cost base to better compete with the perceived new market demands; lower fares and less restrictions.

Over the next five years the market will need more capacity than the 540 firm orders scheduled for delivery to replace retired aircraft because of expected traffic growth from 2003 onwards.

Airlines may be reluctant to convert options, but the retirement of older aircraft and standardisation of fleets will contribute to lower unit costs.

Boeing expects to resume deliveries by 2004, but few airlines are placing orders. While the market will require more capacity in the future, nobody is yet brave enough to be the first to start a new wave of orders and option conversions. AC

