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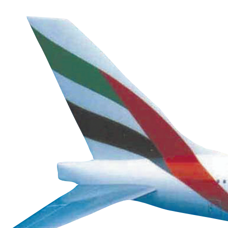

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Eastern dawn lightens the gloom

Emerging markets are the best hope for makers of civil and military aircraft, report **Andrew Parker** and **John O'Doherty**

Holding pattern: the airlines, and therefore the aircraft makers, are waiting to see the full effect of economic slowdown Reuters

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On FT.com Our reporting team at the Dubai show will add to this report with video interviews and further exclusive content
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The aviation industry's recovery in 2010 after two years of recession-induced losses looks as if it will be short-lived. Many airlines are braced for reduced full-year profits or losses again in 2011 and 2012 because of slowing economic growth or stagnation in western countries.

This may have negative repercussions for the commercial aircraft makers, led by Boeing and Airbus. Their healthy order books could be damaged if airlines respond to the deteriorating economic environment by cancelling aircraft or pushing back their delivery dates.

The manufacturers are part of larger groups that are already adjusting to reduced defence spending by western governments focusing on repairing budget deficits. Both the commercial and the defence sides of these groups are likely to find some of their best business in emerging markets in the coming years.

At the Dubai air show, which runs from November 13 to 17, one of the big talking points will therefore be the prospects for the airlines and aircraft makers amid a combination of weak economic growth and high fuel prices.

Investors were alarmed by the September 20 profit warning from Lufthansa, Europe's largest airline by revenue. That was blamed on disappointing passenger bookings. One week later Cathay Pacific, the world's third largest air cargo carrier, said freight volumes may fall by more than 10 per cent in the fourth quarter compared with the same period last year.

Then, on October 3, shares in AMR, parent of American Airlines, plunged 33 per cent on fears the airline may file for bankruptcy because of operating costs higher than at rivals. So far this year, the Datastream index of global airlines is down 27 per cent.

"The industry is brittle," says Tony Tyler, director-general of the International Air Transport Association, the main representative body for the airlines. "Any shock has the potential to put us in the red."

The airline industry made a combined net profit of $16bn in 2010, according to Iata, but the airline body expects this figure to fall to $6.9bn in 2011 and $4.9bn in 2012.

While air travel continues to rise on a long-term basis – there were 2.7bn passengers last year – it is closely correlated to gross domestic product. In September the International Monetary Fund cut its global growth forecasts for this year and next, citing the EU sovereign debt crisis and the weak US economy.

Andrew Lobbenberg, analyst at Royal Bank of Scotland, predicts that European flag-carrier airlines will in the coming months see a fall in demand for business – so-called premium – travel, particularly on long-haul routes over the north Atlantic. This would particularly hit the flag carriers' profitability because, unlike low-cost airlines, they generate about 50 per cent of their revenue from business passengers.

"Our caution towards flag carriers is based on a view that premium traffic is going to tumble," says Mr Lobbenberg. He adds that the weak economic environment will act as a spur to further consolidation between airlines. "As economic conditions deteriorate, we expect consolidation to rise up the agenda," he says.

Tie-ups between US carriers over the past three years have meant that they are responding to high fuel costs this year by cutting seating capacity, in a move that has given them the opportunity to raise fares.

In Europe, by contrast, where there are still too many airlines, flag carriers are still planning to increase seating capacity.

Geoff van Klaveren, analyst at Deutsche Bank, says: "The European carriers still focus too much on empire-building rather than shareholder value, and should be more conservative with capacity – especially with low economic growth and high oil prices. Perhaps one of the reasons why European airlines have continued to add capacity is that they don't want to lose market share to Gulf rivals."

These Middle East companies – Emirates of Dubai, Etihad of Abu Dhabi and Qatar Airways – are threatening to inflict as much pain on European flag carriers on long-haul routes to Asia as low-cost airlines have inside the EU.

But for the aircraft makers, the Middle East airlines are extremely important customers. Emirates, for example, is the biggest operator of the Airbus A380 superjumbo, with 17 already in its fleet and a further 73 on order.

Such deals are a sign of how Boeing of the US and Airbus, owned by EADS, the European aerospace company, hope to be insulated from another aviation downturn by their large order books.

Much of the backlog consists of orders from airlines in emerging markets, which have better growth prospects than western countries. Furthermore, many of the orders from airlines in developed markets are for more fuel-efficient narrow-body aircraft that will replace ageing gas guzzlers.

> 'I think it's likely the Pentagon will cut the number of F-35s. My feeling is that one version will get the chop'

Nick Cunningham, an analyst at Agency Partners, the equity research company, says: "[Boeing and Airbus] are likely to see an increasing number of aircraft delivery deferrals, but their long backlogs and the ramp-up of delayed programmes means that adverse impacts on revenues are likely to be very limited, unless the economic downturn deepens and goes on for several years."

Defence manufacturers, meanwhile, are adjusting to the prospect of reduced orders for combat aircraft from their traditional customers in western countries.

Development of the F-35 joint strike fighter – by Lockheed Martin of the US – has been hit by delays, leading to predictions that the Pentagon will cut the planned US order of 2,443 aircraft. One option would be to axe the jump-jet version of the F-35.

"I think it's likely the Pentagon will cut the number of F-35s," says John Louth, an analyst at the Royal United Services Institute. "My feeling is that one version will get the chop."

Europe is also wrestling with political and budgetary challenges of its own.

The Eurofighter Typhoon – built by a European consortium involving EADS, Finmeccanica of Italy and UK-based BAE Systems – has already been delivered to its four launch customers in Germany, Italy, Spain and the UK. So far, 285 jets have been delivered to those countries, with a further 187 to come.

But as European governments grapple with large budget deficits, they are cutting back defence spending. It now looks all but certain that no new orders will come for the Typhoon from its four launch partner countries, leaving the fighter dependent on winning export customers.

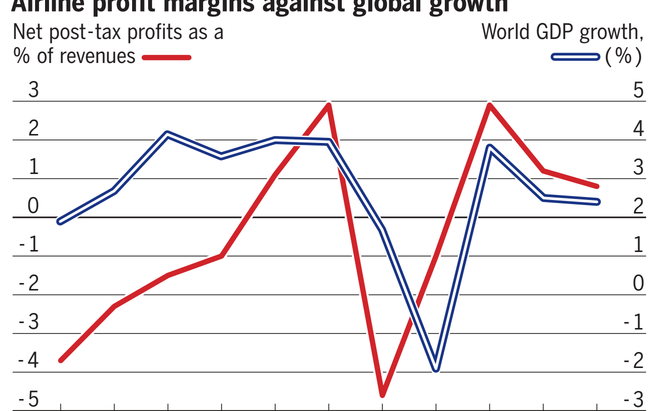
This explains why aerospace companies are intensifying their search for deals in emerging markets, where some countries have military ambitions to match their fast-growing economic clout. The Eurofighter consortium is on a shortlist of two suppliers of 126 combat aircraft to India, which could be worth $20bn, while Boeing is hoping to secure orders for its F-18 Super Hornet fighter jet in Brazil, in a deal that could be worth $5bn.

If Boeing and EADS can keep a tight rein on the cost of their development programmes – which both companies do not have a distinguished history of doing – they can look forward to a period of rising earnings.

This underlines how the aircraft makers have much greater control over their prospects – in stark contrast to the airlines.

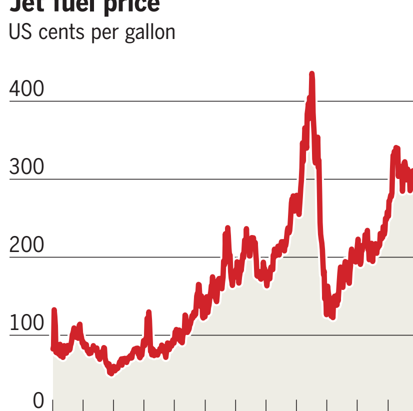
With few signs of relief in western economies, many airlines are braced for a hard rather than a soft landing over the coming year.

Airline profit margins against global growth

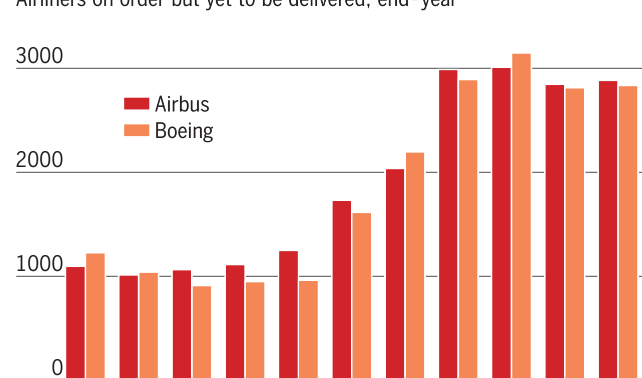


Sources: IATA; Thomson Reuters Datastream; Ascend

Jet fuel price



Aircraft backlog



Dreamliner ushers in fresh rivalry

Manufacturers

Boeing and Airbus are aiming high, writes **Kevin Done**

It has been a long time coming, but the recent delivery by Boeing of its first 787 Dreamliner has finally ushered in a new era in commercial aviation – Airbus, the US group's European competitor, is in hot pursuit with its delayed A350.

The much-heralded step change in long-haul jets promises much improved fuel consumption, reduced emissions and lower operating costs for airlines.

It also offers passengers a better experience, with features such as cleaner cabin air, higher humidity and bigger windows.

But development of the 787, billed as the first plastic airliner, has not been easy for Boeing. Carbon fibre composites have been employed for the first time in an airliner for the majority of the primary structure, the fuselage and wings.

The aircraft's entry into commercial service with Japan's All Nippon Airways last month was more than three years late. Boeing still holds more than 800 orders for the 787, but it has also lost customers frustrated by the long wait.

The embarrassing series of delays has removed much of the competitive edge that the US aircraft maker had hoped to gain over Airbus when the 787 programme was officially launched in early 2004.

The first 787 delivery took place in the second half of 2011 rather than in the first half of 2008, as initially promised.

This allowed Airbus to close some of the gap with its A350, which is now due to enter service in the first half of 2014. With the extra delay of up to six months announced on November 10, this could represent a slippage of a year from the previous timetable.

Boeing started the latest product development battle with a greatly increased use of composites in the 787.

Composites account for 50 per cent by weight of the 787, and aluminium has shrunk to only 20 per cent – compared with 12 per cent composites and 50 per cent aluminium in the Boeing 777, the US group's last new aircraft before the 787.

Composite materials – the A350 will have a similar share to the 787 – allow lighter, simpler fuselage and wing structures, reducing weight and fuel consumption.

The promise is also that the materials will not fatigue or corrode, reducing scheduled maintenance and increasing aircraft productivity.

Boeing says the 787, helped by new engines from Rolls-Royce and General Electric, burns 20 per cent less fuel than other similar sized aircraft.

However, both Airbus and Boeing say that while the new materials technology works for long-haul aircraft, it is not yet ready for use in their smaller short-haul jets.

They have faced an acute dilemma over the timing of the replacement of their B737 and A320 families of single-aisle, short-haul jets, the workhorses of the global airliner fleet. Both have been very successful and still have enormous order backlogs.

However, faced by surging fuel bills and rising environmental pressures, airlines have been urging the aircraft makers to modernise the jets.

The multibillion-dollar gamble facing both Airbus and Boeing was whether to press ahead and develop all-new products or to re-engine the existing aircraft to take advantage of developments in engines.

A wrong move could have left either player at a severe competitive disadvantage for more than a decade.

Airbus moved first late last year by announcing the launch of the A320neo (standing for new engine option). It is offering a package of improvements to its existing A319, A320 and A321 family of single-aisle aircraft, including much more efficient engines – Pratt & Whitney's PW1100G geared turbofan or the Leap-X offered by CFM International, the GE/Safran joint venture.

More comfort: Boeing 787

Entry into service is due in October 2015 and Airbus is promising a 15 per cent reduction in fuel burn, up to 500 nautical miles of extra range and 8 per cent lower operating costs.

The Airbus launch in December caught Boeing on the hop, with the A320neo winning more than 1,000 orders and commitments.

Boeing was initially seduced by the prospect of trumping Airbus with an all-new aircraft. But by the summer, faced with the potential desertion of key customers including American Airlines which was close to ordering hundreds of new aircraft, it matched Airbus and announced a revamp of its 737.

This month, Boeing said that it had already received more than 600 order commitments from eight airlines for the 737 Max, which it promises will have a 10-12 per cent lower fuel burn than current 737s.

It will use the CFM International Leap-1B power unit, which Boeing says will offer a 4 per cent lower fuel burn than the A320neo. Deliveries are not scheduled until 2017.

As orders for newer, fuel-efficient jets rack up, Airbus and Boeing again appear well-protected by their big order books from further weakness in the world economy.

The last recession took a heavy toll of the airlines, but Airbus in particular has weathered the storms successfully and by carefully juggling the order book has managed to raise output to record levels in each of the past three years.

However, the other threat is from outside the duopoly. By the end of the decade, the two will face new rivals from China and Russia.

Gulf states start to call the shots on fighter jets

Middle East

Manufacturers in the west are having to rethink their strategy, explains **James Blitz**

The Middle East has long been a prized region for aerospace manufacturers wanting to sell combat jets and trainers.

But the competition to sell to the leading potential buyers in the region – most notably Saudi Arabia, Oman and the United Arab Emirates – is set to become increasingly fraught in the next few years.

Western defence companies have had a great deal of success selling to these states. The consortium that produces the Eurofighter Typhoon fighter – the pan-European EADS, UK-based BAE Systems and Finmeccanica of Italy – has sold a significant first tranche of jets to Saudi Arabia. Among US manufacturers, Boeing has sold its F-18 combat jet in the region, while Lockheed Martin has notched up sales of its F-16.

However, after a long period of sales achievements, some leading figures in the defence industry believe the going will grow much tougher.

"There is certainly an interesting sustainability issue for the UK," says Sir Brian Burridge, vice-president for strategic marketing at Finmeccanica.

"Saudi Arabia has bought two products – Typhoon and Tornado [built by the UK-German-Italian Panavia Aircraft consortium] – in numbers. But if we leap forward nine years, that part of the export market will have changed."

> **'There is a sustainability issue for the UK'**
> **– Sir Brian Burridge**

Another leading figure in the European defence industry agrees. "There is certainly a lot of modernisation of air forces taking place in the Gulf states and that will continue," he says.

"But it will be at the pace that purchasing countries want to run at, not one that can really be dictated by the defence companies."

In all of these sales, leading defence figures say that several factors are crucial to success. First and foremost is how technologically advanced the aircraft are. The British certainly believe, for instance, that the Typhoon – which has recently performed well in UK operations in Libya – has a competitive edge.

"Thanks to Libya, we know that Typhoon is the best fourth-generation, medium-range combat aircraft on the market," says a senior UK ministry of defence official.

"If you are serious about capability, you have to buy Typhoon. France and the US will compete strongly, but if you buy the [Dassault] Rafale or the F-18 you want to be certain you will not ever be in combat against a country deploying Typhoon."

A second factor influencing sales is the broader industrial benefit that can be given to the country buying the aircraft.

All purchasers are looking to reach offset agreements that secure additional benefits beyond the provision of the fighter. Such terms could include the buying country striking a deal to maintain or make part of the aircraft, or even securing

Continued on Page 4

Aerospace

An American in Europe: the Emissions Trading Scheme could cost US airlines more than $3bn by 2020, it is estimated Getty

Rivals dig in over EU carbon trading scheme

Emissions

Pilita Clark finds the row over an environmental move heating up

The history of aviation is littered with rows between the US and Europe, long the world's two most important airline markets.

But the latest one has the added excitement of threatening to turn into one of the first big carbon trade wars.

The dispute arose because the European Union has decided that from January 1 2012, any airline flying into or out of the EU will be charged for its carbon pollution.

That is due to aviation being brought into the EU's six-year-old emissions trading scheme (ETS), a system that obliges companies to pay for permits (or allowances), each equal to one tonne of carbon dioxide, to cover their annual emissions.

A company with emissions below a certain level can sell its excess permits to others with high emission levels.

Thousands of European companies have been covered by the scheme since it started, from power stations to oil refineries; steel works to cement factories.

But the decision to extend it to companies outside the bloc – foreign airlines – is the EU's most ambitious move yet to force the rest of the world to comply with its environmental rules.

The first shot came from the Air Transport Association, the US industry body, and two airline groups – United and American Airlines. They launched a legal challenge, now before the EU's highest court, to what they said was an "astonishing" step that breached international law and would cause legal "chaos".

The ATA estimates the scheme would cost US airlines more than $3.1bn between 2012 and 2020, though some analysts say the costs will be lower.

At today's relatively low carbon prices, the cost of the scheme should be small compared with other industry charges, the Bloomberg New Energy Finance service has calculated.

It says out-of-pocket costs will be less than a quarter of a per cent of revenue from the routes covered by the ETS in 2012, and about half a per cent in 2020.

The airlines' legal challenge, still awaiting a final ruling from the European Court of Justice, is not looking promising. Last month, an adviser to the court cast aside most of the US airlines' arguments, saying the EU legislation did not infringe the sovereignty of other states and was compatible with relevant international agreements.

> A US airline might be unable to fly to Europe without breaking either a US or an EU law

Undeterred, both Republicans and Democrats in the US House of Representatives a few weeks later approved a measure that would make it illegal for US airlines to comply with the EU scheme.

"This scheme is an arbitrary and unjust violation of international law that disadvantages US air carriers, threatens US aviation jobs, and could close down direct travel from many central and western US airports to Europe," said John Mica, a Republican congressman and chairman of the transportation and infrastructure committee.

Chip Cravaack, his party colleague, was even blunter: "The ETS scheme is equivalent to the paying of ransom to the Barbary pirates for safe passage."

This effort does raise the intriguing prospect of a US airline being unable to fly to Europe without breaking either a US or an EU law.

This month the US joined forces with more than two dozen other countries, including China, India, Russia and Japan, to take the fight to the International Civil Aviation Organisation (ICAO), the UN agency that sets airline standards.

In total, 26 countries told the 36-member governing council of the ICAO that the EU measure "violates the cardinal principle of state sovereignty" and will "curb the sustainable growth of international aviation".

The council voted to adopt a declaration opposing the EU's inclusion of foreign airline flights in its carbon scheme.

But environmental campaigners dismissed the move, claiming it amounted to little more than political posturing.

"The airlines may try to claim this is a council 'ruling'," said Pamela Campos, a lawyer for the Environmental Defense Fund, a non-profit organisation, who attended the ICAO meeting. "But the ICAO president made very clear this morning that the 'declaration' is simply that – a political expression of a group of countries that their airlines aren't happy about having to comply with pollution controls."

So far, despite the political pressure, Brussels is standing firm.

As the ICAO meeting ended, Connie Hedegaard, the EU climate commissioner, said: "This decision will affect neither the EU's commitment to working within ICAO to agree on a global solution, nor our adopted legislation to include aviation in the EU ETS. If the other countries want to reduce aviation emissions differently, that is fine. Our legislation clearly says that if a country outside the EU takes 'equivalent measures' to reduce aviation emissions, all incoming flights from that country can be exempted from the EU system."

Ms Hedegaard may be waiting some time.

UAE carrier works hard to soar

Etihad Airways

A crowded market makes it difficult to stand out, says **Camilla Hall**

For Etihad Airways, the national carrier of the United Arab Emirates, the hardest job is to establish that fact.

At just eight years old, Abu Dhabi's Etihad remains in the shadow of Emirates, the highly successful government-owned airline of neighbouring Dubai.

To create its own space in the market, Etihad has had to spend billions of dollars to get noticed.

It came to the fore in 2008, when it placed one of the largest orders in the history of commercial aviation. The order, worth about $20bn, sent a signal that the airline was serious about becoming a global force, and made not just its Gulf rivals, but also its western competitors, take note.

This year, the Abu Dhabi government-owned company caught the attention of its rivals again, after reports linked it to big investments in European airlines such as Aer Lingus, the Irish carrier, and BMI, the lossmaking subsidiary that Lufthansa has since decided to sell to IAG, the owner of British Airways.

"They are trying to catch up," says Mohammed Ali Yasin, chief investment officer at CAPM Investment in Abu Dhabi. It is a congested area, but to have a commercial hub it must have its own airline, he says. "It's really more than just an airline; it's more of a service industry that helps brand Abu Dhabi."

And it is not just through purchases that Etihad has drawn attention. The company has also become a big international sports sponsor, signing up Manchester City, the English football club, in a somewhat controversial deal this year, as well Harlequins, the London rugby union team. It is also a supporter of the Formula 1 Grand Prix hosted by the emirate.

Etihad, does not see it as a case of catching up. In its view, it is already surpassing its Gulf rivals.

"Where it took Emirates 18 years to carry 7m passengers a year, and Qatar Airways 13, it took Etihad Airways seven years," says James Hogan, the chief executive.

This year the airline added destinations including Shanghai and Bangalore, and increased capacity on several European routes.

Whether through acquisition or organic growth, Etihad's global reach is central to the emirate's long-term plan to attract tourists, boost commerce and diversify the state finances away from oil.

Dubai, without the luxury of Abu Dhabi's oil reserves, was forced to do this years ago; its airline was founded two decades earlier.

"You've got to see the whole thing as a set," says Michael Tomalin, chief executive of National Bank of Abu Dhabi. Etihad is part of a group of industries that are helping put Abu Dhabi on the map.

Like Dubai, Abu Dhabi is expanding its airports with multibillion dollar plans for a midfield terminal that has excited contractors as other projects flag.

The emirate is also increasing the number of hotels and is building museums, including a venture with the Louvre, as part of its plans to attract visitors.

That plan is bearing fruit, with passenger numbers up 15 per cent in the third quarter compared with last year. However, Abu Dhabi is yet to offer the same visiting or stay-over experience as its neighbour.

It's more of a service industry than an airline – Mohammed Ali Yasin

Mandagolathur Raghu, head of research at Markaz, a Kuwait-based investment bank, says: "While it is true that Etihad and Emirates, both being UAE-based, will have to fight it out to obtain traffic rights in unserved markets, there is still enough space for them to operate profitably."

And they have been prepared to fight.

As the airline has grown, so has its relevance to the international industry. With that has come criticism.

Mr Hogan has hit back in a feud over export financing, as western airlines accused export credit agencies of unfairly subsidising the growth of airlines such as Etihad.

Mr Hogan, previously with Bahrain's Gulf Air, has argued that western airlines are falling behind, because they are not so well placed to serve a booming Asia, and have the burden of ageing fleets, not because of preferential financing of the Gulf carriers.

Etihad has a less diversified funding base than Emirates and relies largely on export credit agencies to fund its fleet, bankers say.

Unlike Emirates, it has not chosen to tap the bond markets as a means of raising funds, which can prove more expensive and demands more transparency from the company.

Despite the global economic downturn, Etihad reported a 39 per cent increase in its third-quarter revenue, as it expanded routes and boosted passenger numbers. The company expects to break even for the first time this year, Mr Hogan says.

Over the next 10 years, Etihad, which in March had a fleet of 57 passenger and cargo aircraft, plans to take delivery of nearly 100 aircraft, including 10 Airbus A380s, the company says.

The airline continues to target the luxury market and launched flights to the Seychelles this month.

Though the management team is largely expatriate, Sheikh Hamed bin Zayed Al Nahyan, a senior royal, is the airline's chairman.

"Having the Abu Dhabi government behind your name, you're going to have market share," says Mr Yasin of CAPM Investment.

Fractional NetJets pull-out dissolves a quiet relationship

Rohit Jaggi
FLIGHT LINES

The decision by NetJets Europe, the fractional operator, to call an early halt to its affiliation with National Air Services (NAS) of Saudi Arabia ends an 11-year experiment with taking the world's leading fractional jet ownership brand into the Middle East.

It is one that has failed, in large part, to take off.

NAS, known while the agreement with NetJets Europe was in place as NetJets Middle East, is the largest private jet operator in the region, with 70 aircraft.

"The fractional model wasn't working in the Middle East," says one industry observer.

"There were a number of reasons, including the lack of tax benefits and a culture that favours outright purchase of an aircraft rather than shares."

NasJet, as the NAS operation will now be known, will be freed by the ending of the agreement to concentrate on aircraft management and charter – more fertile markets in the region than fractional ownership – as well as serving its existing owners of aircraft shares.

NetJets Europe, an arm of Ohio-based NetJets Inc, a company owned by billionaire investor Warren Buffett's Berkshire Hathaway, will continue to fly into the Middle East.

NetJets Europe says: "The 11-year-long franchise agreement with NAS in Saudi Arabia has been a great way for NetJets to understand and venture into the Middle East market. NetJets has decided to end its franchise agreement with NAS. In the meantime, NetJets will provide alternative solutions to our owners who need to fly into the region."

For NetJets, the decision allows it to concentrate on setting up and expanding its operations in emerging regions such as China and India.

NAS has found the fractional model – in which owners buy shares in a jet giving them the right to fly a certain number of hours a year, plus monthly fees and fees for flights – a difficult sell in the Middle East.

Elsewhere in the world, the global financial crisis has also taken a toll. NetJets was hit by shareholders flying fewer hours or leaving, and was forced to lay off staff, park aircraft and cancel orders for new jets. The US group suffered a $711m loss in 2009. However, Mr Buffett told Berkshire Hathaway shareholders this year that NetJets had $207m pre-tax earnings in 2010.

NetJets Europe, meanwhile, which saw flight hours fall by a fifth in 2009, has seen activity rise since then. And in the past 13 months NetJets as a whole has placed two big orders for up to 250 aircraft, worth as much as $7.7bn, to refresh its fleet.

Dubai airline's bid to be biggest takes off

Emirates

Simeon Kerr reports that the Gulf carrier continues to grow rapidly

Far from a straightforward task: Emirates faces increased competition from local carriers as well as pressure on margins AFP/Getty

It started out with a stipend of $10m from Dubai's ruler in 1985. Now, Emirates, one of the fastest-growing airlines in the world, is knocking on the door of global domination.

Other airlines fret about projections that Emirates is on track to become the largest long-haul carrier by 2015, as its relentless growth in passenger numbers continues to underpin Dubai's recovery after its damaging property crash in 2008.

Over the past five years, the airline has tripled capacity and revenues, and is set for a 9 per cent increase in capacity through 2015, says a recent report by Boston Consulting Group.

During that time, cash margins have declined from 28 per cent to 23 per cent, but they still compare favourably with competitors at a time when the global industry has come under intense pressure.

Emirates' fleet of 159 aircraft is set to be enlarged by an order book of almost 200. The city-pairing strategy – linking the Middle East with Asia, Africa, Europe and the Americas – continues to define the airline's strategy. Its large Chinese and African networks are expanding to include a thrust into the Americas.

Throughout the emirate's 2009 recession, Dubai airport remained busy. It is now lifting the broader economy as tourism recovers.

The airport is forecast to become the world's second busiest this month, leapfrogging Paris, Hong Kong and Frankfurt, according to a report by the Centre for Asia Pacific Aviation.

The new Dubai World Central-Al Maktoum airport, located in the desert near the border with Abu Dhabi, has already opened to cargo and could start to receive passenger flights next year.

Sheikh Ahmed bin Saeed Al Maktoum, who has guided the airline since its formation, also runs the civil aviation authority, nurturing the symbiotic relationship between the two entities, as the airport tries to overtake London's Heathrow as the world's busiest by 2015.

An uncle and close aid to the ruler, Sheikh Ahmed's political star has risen as fast as the airline has grown. He is increasingly involved in the day-to-day business of digging Dubai out of its $110bn debt hole.

The airline's aggressive sports marketing drives – from sponsorship of the stadium of Arsenal, a UK football club, to Real Madrid's shirts – has combined with a reputation for service and onboard entertainment to raise the carrier's profile globally.

Emirates' rapid growth has benefited from Dubai's low-cost environment: it is free of corporation tax, and offers cheap labour. This extends to airport fees at its Dubai airport hub – the envy of many other international airlines that have to pay much more for access to airport infrastructure at their home bases, according to BCG.

Though Emirates says it receives no subsidies from the government, bankers say that tacit sovereign backing ensures low borrowing costs.

However, the airline remains vulnerable to the vagaries of the oil market, despite having delivered profits for its shareholder, the Dubai government, over the past 23 years.

Its interim results for the six months to September 30 saw profits tumble 76 per cent to some $225m, hit by high oil prices and foreign-exchange volatility.

Sheikh Ahmed reported: "Emirates remained focused on its long-term strategy despite global instability, ever-climbing fuel prices (which resulted in Emirates paying $1bn more in fuel costs over the same period last year), and fluctuating exchange rates."

Revenues rose 15 per cent; passenger load factor remained high at 79 per cent, close to last year's first-half record-breaking 81 per cent; and revenue per passenger kilometre also rose 5.7 per cent.

Analysts wonder whether Emirates can keep its long-haul strategy on track in the coming years, as it faces increasing regional competition from Qatar Airways and Abu Dhabi's Etihad, as well as the established carriers from Asia and Europe.

Stephen Furlong, equity analyst at the research division of Davy, the Irish stockbroker, says "The greatest challenge is, I believe, persuading time-sensitive business passengers from areas such as China and north Asia – that are not as time-efficient as Australia and southeast Asia – to travel via Dubai."

A conundrum for the airline, says BCG, is that its margins weaken as it comes into more direct contact with global competitors in the areas that are driving traffic the fastest: Europe, Asia and Africa.

BCG has calculated that the most profitable passengers are those whose journeys originate in the Middle East and travel via Dubai. International passengers transiting through the region's hubs are less profitable. The airlines' global expansion is thus partly subsidised by regional passengers.

Further expansion will therefore suggest a "significant allocation of capacity to unprofitable passenger segments", BCG argues.

But as Sheikh Ahmed says, Emirates remains focused on its long-term strategy. Many have bet against it before; fewer would do so now.

Doha's flag carrier plans big expansion

Qatar Airways

It hopes to benefit as the region emerges as a hub, says **Simeon Kerr**

Qatar Airways is growing fast, seeking to boost its fleet almost 20 per cent to 120 by 2013. Yet it is based a mere 240 miles from Dubai airport, another fast-expanding hub.

The parallels between Qatar Airways and Dubai's Emirates just will not go away.

Qatar Airways, which started operations in 1994, is 50 per cent owned by the emirate's government, with the other half owned by members of the ruling family.

The national carrier of the tiny peninsula, which, thanks to its oil and gas, is one of the world's richest countries on a per-capita basis, wins many awards for quality and service.

Like Emirates, the airline – based in Doha, Qatar's capital – is also launching an extensive network across Asia, Africa, Europe and the Americas, in an attempt to take on the legacy carriers, as a corner of the Gulf – spanning Doha, Dubai and Abu Dhabi – seeks to emerge as a global aviation hub.

Whether the region can accommodate so many "megacarriers" is open to debate, but Qatar is on the march globally.

Its sovereign wealth funds have grown to an estimated $80bn-plus in assets, via a collection of corporate stakes across the world, along with a diversified funds portfolio that aims to underwrite the comfort of future generations.

Qatar's wealth and boldness, meanwhile, allows the small state to punch above its weight on the world stage, as it mediates in regional disputes and projects soft power via the state-funded Al Jazeera television network.

Qatar Airways can serve as an adjunct to this maverick foreign policy while also pursuing a commercial long-haul strategy that could receive a boost in the run-up to the Gulf state's hosting of the football World Cup in 2022.

Doha, one of the biggest backers of the rebels who ousted the late Libyan leader, Colonel Muammer Gaddafi, is now set to play a central role in state formation and rebuilding of the north African state's economy.

Little surprise, then, that Qatar Airways is this month set to operate the first regular scheduled international flight into Benghazi, the rebels' base.

The main thrust of the airline's expansion, however, is the short-term growth of its long-haul business to 120 destinations with a fleet of 120 aircraft, with even more on order.

Stephen Furlong, equity analyst at the research division of Davy, the Irish stockbroker, says: "I would say, given the level of growth and aircraft required, the superconnectors are looking at all avenues of passenger flow to fulfil this."

"Qatar Airways seems more ready to look at acquisitive, as well as organic growth."

This year, the airline took a 35 per cent stake in Cargolux, the Luxembourg-based carrier. This move bolstered its small freighter fleet.

Rumours have also surfaced of a bid for a minority stake in Spanair, the troubled Barcelona-based carrier with a network within Spain, across Europe and into west Africa.

Africa, a fast-growing travel segment for many airlines, is also on the horizon for Qatar Airways.

The airline continues to add a new destination on average once a month, the latest being Benghazi and Entebbe, Uganda, making Africa the location for 16 of the airline's 100 destinations.

Akbar Al Baker, chief executive since 1997, recently said the airline would continue to open up destinations in the under-served continent.

The next big challenge for the carrier comes with the opening of Doha's new international airport, located near the existing facility in the capital.

Already subject to several delays and an estimated expanding budget of up to $15bn, it is now scheduled to open early next year, the company says.

Qatar Airways will continue to open up destinations in under-served Africa

Akbar Al Baker, Chief executive

The airport, built by Bechtel, the US construction group, will underpin Qatar Airways' expansion plans. It will be able to handle three times as many passengers as present airport.

Like Emirates in Dubai, where first-half profits tumbled this year, Qatar Airways is facing headwinds in the global economy.

The airline's much anticipated initial public offering this year, with a planned listing in Qatar and possibly London, was pulled this autumn because of adverse market conditions.

However, tapping international capital is not necessarily a priority for Qatar Airways, given the wealth of its parent.

Qatar's domestic investment drive – from industry to arts, sports to banking – is enough to keep the carrier busy for decades to come.

However, as with Emirates, its international ambitions will keep global airlines looking over their shoulders.

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Aerospace

Gulf starts to call the shots

Continued from Page 1

investment by the vendor in other industries.

There is a third factor, however, which plays to US strengths and which could prove decisive.

The Gulf states will always view any purchase as an opportunity to underpin the broader security relationships they have with western governments, especially the US. Saudi Arabia looks to the US to be a key ally in the event of any conflict with Iran. This is particularly significant given Iran's possible ambition to develop a nuclear weapon.

"The US guarantee of security is a significantly strong card," says a leading defence contractor. "It is not implausible that President Obama would phone King Abdullah of Saudi Arabia to press home his points on any arms sale. In other markets that doesn't apply. But here, that can have resonance."

> 'Each procurement justifies itself in its own right. But it always takes place in a wider diplomatic context'

Graham Chisnall of ADS Group, a defence industry trade body, agrees. "Clearly all big defence purchases are diplomatic gestures and mostly government-to-government arrangements.

"Each procurement justifies itself in its own right. But it always takes place in a wider diplomatic context and that can be important."

In the years to come, aerospace manufacturers may well be looking to other states for sales. India has opened the final sealed bids in its fighter jet tender, the biggest in the world this year.

Japan is undertaking a tender exercise for the replacement of its Phantom jets, while South Korea is also looking to revamp its fast-jet fleet.

Meanwhile, defence companies may have to think harder about what kinds of equipment to sell to the Gulf states.

"The Gulf will always be a market for defence aerospace," says Sir Brian at Finmeccanica. "But in the years ahead, sales of combat ships may be the kind of area that compensates for declining jet sales."

Sellers of fast jets target ageing aircraft fleets

Procurement

Defence companies may have found a sweet spot, says **John O'Doherty**

It is a curious time for the makers of fighter jets. Their traditional markets in the developed world are hit by delays and cash-strapped customers, yet a boom in demand for defence equipment from emerging markets is throwing up a host of opportunities.

Such opportunities are being chased the more eagerly by defence groups, because many countries, including Brazil, India and Japan, are still open to competition, whereas most of the developed countries that are in the market for aircraft have already decided what they will buy.

The two largest programmes for fighter jets in the US and Europe are the F-35 Joint Strike Fighter built by Lockheed Martin, and the Eurofighter Typhoon, made by a consortium of UK-based BAE Systems, Finmeccanica of Italy and the pan-European aerospace group EADS.

The F-35 has been subject to several delays and cost overruns, while European governments have long been wrangling over the number of Typhoons they will buy.

Most observers expect that no new Typhoon contract will be signed by the four existing partner nations of Germany, Italy, Spain and the UK.

But perhaps the most important feature of these two programmes is that in spite of the delays and arguments, the final decision of who will buy which aircraft has largely been settled.

The US and the leading European powers have generally decided which aircraft will feature in their air forces in 15 years time.

But this picture of delays within a broader context of certainty over the type of aircraft being chosen contrasts with the rest of the world, where several countries plan to buy jets but have yet to decide which.

Analysts reckon these emerging markets represent a great opportunity because a fleet of existing fighter jets is coming up for replacement.

Craig Caffrey, an aerospace analyst at IHS Janes, says: "Several nations are flying [Lockheed Martin] F-16s and others are flying [Dassault] Mirages.

"As both of these aircraft approach the end of their lives, everyone is looking for a new jet at the same time."

The biggest prize for western jet makers at present is the Indian multi-role combat aircraft competition, which will see an $11bn order for 126 fighter jets to replace India's ageing Russian-built MiG-21s.

European industry is in the lead, after a decision in April by the Indian government to select the Typhoon and the Rafale, made by France's Dassault, for further evaluation before reaching a final decision possibly late this year.

A decision on fighters will be pushed back to 2012 – Dilma Rousseff

The selection of two European options came as a blow to the US, as both Boeing and Lockheed Martin had competed in earlier stages of the competition with the F-18 and an updated version of the F-16, respectively.

However, the US may have been hobbled by not offering its more advanced aircraft, whose technology is closely guarded.

Given that India is already collaborating on an advanced aircraft with Russia, and US-India relations have improved in recent years, some analysts say the decision to select only European aircraft was an attempt to maintain a strategic balance.

Brazil is also in the cross-hairs of the jet-makers.

Its air force is now tendering for 36 fighter jets as part of a deal worth about $5bn, but that could grow ultimately to 100 fighters.

The country currently operates a mixture of US-made Northrop Grumman F-5s, Dassault Mirages and A1s made by the Italian-Brazilian joint venture AMX. Boeing is offering the F-18 Super Hornet, while Dassault is offering the Rafale. Saab of Sweden's is offering the Gripen, which is seen as a lower-performance but lower-cost option.

The assiduous courting of Brazil by Nicolas Sarkozy, the French president, very nearly meant that the contract was a done deal for the Rafale, which has yet to secure an export customer.

But Dassault's hopes were dashed when the newly elected successor of Luiz Inácio Lula da Silva, Dilma Rousseff, stated that any decision would be pushed back until 2012.

The subsequent appointment of a new defence minister in August this year – whose predecessor had been defence minister in both the Lula and Rousseff administrations – is now seen as a further reducing the chances for Dassault.

Japan is another market that is also looking attractive for defence groups.

Long the preserve of US manufacturers, the country has said it is open to buying Typhoons. Tokyo wants about 42 fighters, with a decision due to made by December.

But regardless of which jets are bought by Japan, Brazil and India, the ultimate significance of the purchases may lie less in which defence group wins the contract, and more in the shift in the overall market for jets to the south and east.

"Western requirements seem to be shrinking at the same time as those in emerging markets are growing," says Mr Caffrey at IHS Janes.

"The growth within the fighter market is almost completely coming from outside Europe and North America."

US prepares to lose its lead on the heavy lifters

Military transport

The Airbus A400M is just the first of many, reports **John O'Doherty**

Relatively unglamorous they may be, but military transport aircraft are vital workhorses for modern armies.

Now the world of these delivery trucks of the sky is set for a shake-up, as the production of long-dominant aircraft winds down and new competitors come to market.

One of the transporters facing an uncertain fate is the Boeing C-17, the workhorse of the US Air Force – which has more than 160 of the aircraft.

Australia, Canada and the UK also operate C-17s – it is used by the Royal Air Force for the "air bridge" between the UK and Afghanistan, transporting troops, armoured vehicles and medical evacuees.

But orders for the big jet are winding down, and in January Boeing cut the number of people working on the C17 production line by 1,100 people.

The company says it has enough orders to keep the line going until 2014, but most analysts say that, even with some orders from India, production is likely to come to an end by about 2016. The parsimony of belt-tightening governments is unlikely to be able to prolong the production run much further.

"The C-17 is the platform of choice, but governments just don't have the money at the moment to buy any more," says Elizabeth Quintana, senior research fellow in air power at the Royal United Services Institute, the UK think-tank.

She adds: "So, by 2020 there will be a gap in airlift capability, certainly in the UK if not across Europe. Everybody knows that they don't have enough, and the operations in Libya have highlighted this."

The production run of Lockheed Martin's C-5 Galaxy has already ended, so when production of the C-17 stops, the largest western transporter will be the newly launched A400M from Airbus, the subsidiary of the pan-European EADS.

The A400M was plagued by political wrangling and technical problems in its development phase, but the aircraft is completing testing and France will take delivery of the first batch in 2013.

While the A400M should benefit from the phasing out of the C-17, it will not be able to replace the older aircraft completely. The A400M, which has turboprop engines, can land on unprepared airstrips. But it cannot carry as much as the C-17.

This gap could be a boon for transporters made by other countries. These include Russia's IL-476, and possibly Ukraine's An-70, which is under development by Antonov.

The part of the industry that caters to smaller payload requirements is also facing in a shake-up.

Here again, the dominant incumbent is American – the Lockheed Martin C-130J, the latest version of the long-lived C-130 Hercules, which is smaller than the A400M.

The C-130J is not facing any imminent end to production, but analysts reckon that could come in 2020.

Even before that, though, the C-130J is facing competition from Embraer, the Brazilian aerospace group. It is developing the KC-390, which is similar in size to the C-130J.

"The KC-390 has already begun to affect the C-130's traditional market space," explains Craig Caffrey, an aerospace analyst at IHS Jane's.

"Argentina, Chile, Colombia, the Czech Republic, and Portugal have all stated an intent to join the Brazilian programme to, in most cases, replace ageing C-130 fleets.

"If Embraer can keep the unit cost low, then it should be a genuine contender for many countries that require a 20-tonne-payload transport aircraft.

"It will be extremely difficult for any new US transport aircraft to obtain the kind of market dominance the C-130 has enjoyed for the past 50 years."

Even as the A400M and KC-390 move to occupy a larger share of airlift fleets, other countries are also building up capacity in transport aircraft.

> 'If Embraer can keep the unit cost low then it should be a genuine rival'

Kawasaki is working on the C-2 for the country's air self-defence forces. However, it is unlikely to have anything but a small impact on the global market for military aircraft, as the country's pacifist constitution prohibits exports of almost all types of defence equipment.

However, a transport aircraft with greater export potential may in due course come from China.

While the number of suppliers of military transporters looks set to grow in the next 20 years, one type of technology looks likely to remain on the sidelines: the airship.

The merits of a military airship have long been of potential interest to defence planners – designs have been put forward that can theoretically carry more than 10 times the 77-tonne payload of a C-17. But in conflict zones, a slow and unmanoeuvrable airship would be extremely vulnerable to attack.

However, says Joel Hayward, dean of the UK's Royal Air Force College: "In terms of moving stuff and people over long distances in a safe, benign environment [the airship] has tremendous potential," .

"But it sits in the realm of futurism. There's no credible development of any airship at the moment."

On the defensive: even the most extensive military counter-measures are unlikely to save the C-17

Stealth fighters India and Russia form groundbreaking partnership but US rival tries to muscle in

Fighter pilots who train alongside the their peers in the Indian Air Force (IAF) are left in little doubt of their tactical pedigree, **writes James Lamont**.

Indian pilots are among the best in the world, with lightning-sharp reactions and the deft hand-eye co-ordination essential to notch up "kills" in aerial exercises.

However, western counterparts say their instincts are still moulded by Soviet-style training manuals based on mass formations to dominate European airspace dating from the cold war, when the two were close, rather than the freer flight of smaller missions over the Himalayas.

The influence of Russia, which is still India's largest arms supplier, is unlikely to wane soon.

Forming the bedrock of India's air strike capabilities are Sukhoi-30MKI and MiG-21 fighter jets. And the country's military planners are now banking on an Indo-Russian stealth fighter joining their ranks within a decade to match the capabilities of China's J-20 fighter.

While two European rivals, the Eurofighter Typhoon and Dassault's Rafale, scrap over supplying fourth-generation combat aircraft to India in a contract that India says could be worth as much as $20bn, Moscow has already secured a partnership with India in military aviation lasting well into the future.

The prize of a visit by Dmitry Medvedev, Russia's president, to New Delhi last year was an agreement to develop jointly a fifth-generation stealth fighter, called by the Russians the T50 or Pak-FA – although India prefers to call it the FGFA, for fifth generation fighter aircraft. The two sides agreed to build up to 300 over 10 years in a deal estimated to be worth $35bn.

The T50, the equivalent of the US F-35, is expected to join the Russian air force in operational trials in five years, and India's four years later.

So far, prototypes of the T50 have completed 100 test flights. The aircraft has a range of 2,000km and a cruising speed of Mach 1.8. It will cost less than $100m – far cheaper than US rivals such as the F-22 Raptor and the F-35, according to its Russian makers Sukhoi and United Aircraft Corporation.

Indian participation puts Asia's third-largest economy at the forefront of military aircraft design and upholds a longstanding Russian promise to share the most advanced technology – something the US has not been ready to do.

Mikhail Pogosyan, president of UAC, says: "We are not simply offering our Indian colleagues the best prototypes of our aviation technology as a finished product, we are dedicated to sharing engineering resources in the development of the most modern aviation facilities with high potential for the global market.

"The joint programmes in the area of combat and transport aviation are a launching pad to develop civil aircraft."

Bangalore-based Hindustan Aeronautics Limited (HAL), which already assembles MiG, Sukhoi and BAE Systems Hawk jets, has sought at least a 25 per cent share in the production of a two-seat version of the aircraft. The fighter would also be equipped with BrahMos cruise missiles, which have been developed and tested jointly by the two countries. Ashok Nayak, a former chairman of HAL, describes the project as "more daunting" than any of the initiatives India's aeronautics industry has embarked on in the indigenous development of aircraft such as the Teja, Kiran or Marut.

High profile stealth aircraft: one of the names used by the Russians is Pak-FA – but India is likely to press for a different name Getty

At a stroke, the agreement has given India the kind of technological partnership – to match its space programme – it craves, and the promise of defence exports.

Potential customers for an Indo-Russian stealth fighter include Algeria, Brazil, Venezuela, Vietnam and Egypt. Indonesia and Iran are also possibilities.

But the US may still fight back on the current tender to supply fourth-generation fighters to India.

The Pentagon recently told the US Congress that it was prepared to provide information to India about the F-35 Lightning II, produced by Lockheed Martin and viewed as a heavy, cheaper version of the F-22.

European defence companies have expressed concern that the US authorities might try to short-circuit the bidding process with a new, more attractive offer outside the terms of the competition.

Ajay Shukla, the defence correspondent for India's Business Standard newspaper, has urged the Ministry of Defence in Delhi to abandon the purchase of "overpriced" fourth-generation fighters and immediately leap to the stealth capabilities offered by the F-35 in a single-vendor contract.

"Lockheed Martin has signalled in multiple ways it would supply the fighter at a fly-away cost of $65m per aircraft with deliveries beginning by 2015," he says.

But other Indian defence analysts say the process to choose the medium multi-role combat aircraft is too far advanced for a U-turn, and current needs are too pressing.

A sudden departure from the process would dent India's credibility, they say, at a time when the conduct of its bureaucracy is under greater scrutiny after a number of corruption scandals.

One defence expert says that the US offer of stealth technology puts the T50 partnership at risk.

The expert, who is close to the negotiations for fourth-generation fighters, asks: "What would India want with two stealth fighters?"

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