

The Big Read **Boeing Co**

## How Boeing's troubles are upsetting the balance of power in aviation

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If the plane maker continues losing market share to Airbus, there could be consequences for supply chains and airline customers

By **Sylvia Pfeifer** and **Philip Georgiadis** in London and **Steff Chávez** in Chicago 19 HOURS AGO

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Building the world's biggest passenger jet, the Airbus A380, demanded a factory of equal stature. But the double-decker airliner was a commercial failure and the 50-hectare Jean-Luc Lagardère centre in the French city of Toulouse produced the last of the model in 2021.

Three years on, a facility with a central hangar that can shelter 500 tennis courts under a 46m-high ceiling has roared back to life with renewed purpose: helping the European plane maker fulfil a 7,197-strong backlog for its best-selling A320 series of smaller, single-aisle jets. By 2026, Lagardère will be one of 10 final assembly lines working at a pace of about 75 planes a month.

While Airbus's production lines are humming, its arch-rival Boeing is engulfed in crisis. The dramatic mid-air blowout of a door plug on the fuselage, the plane's main body, during an Alaska Airlines flight on January 5 has cast a shadow over Boeing's 737 Max series — a direct competitor to Airbus's A320 and the American company's biggest source of revenue in its commercial aircraft business.

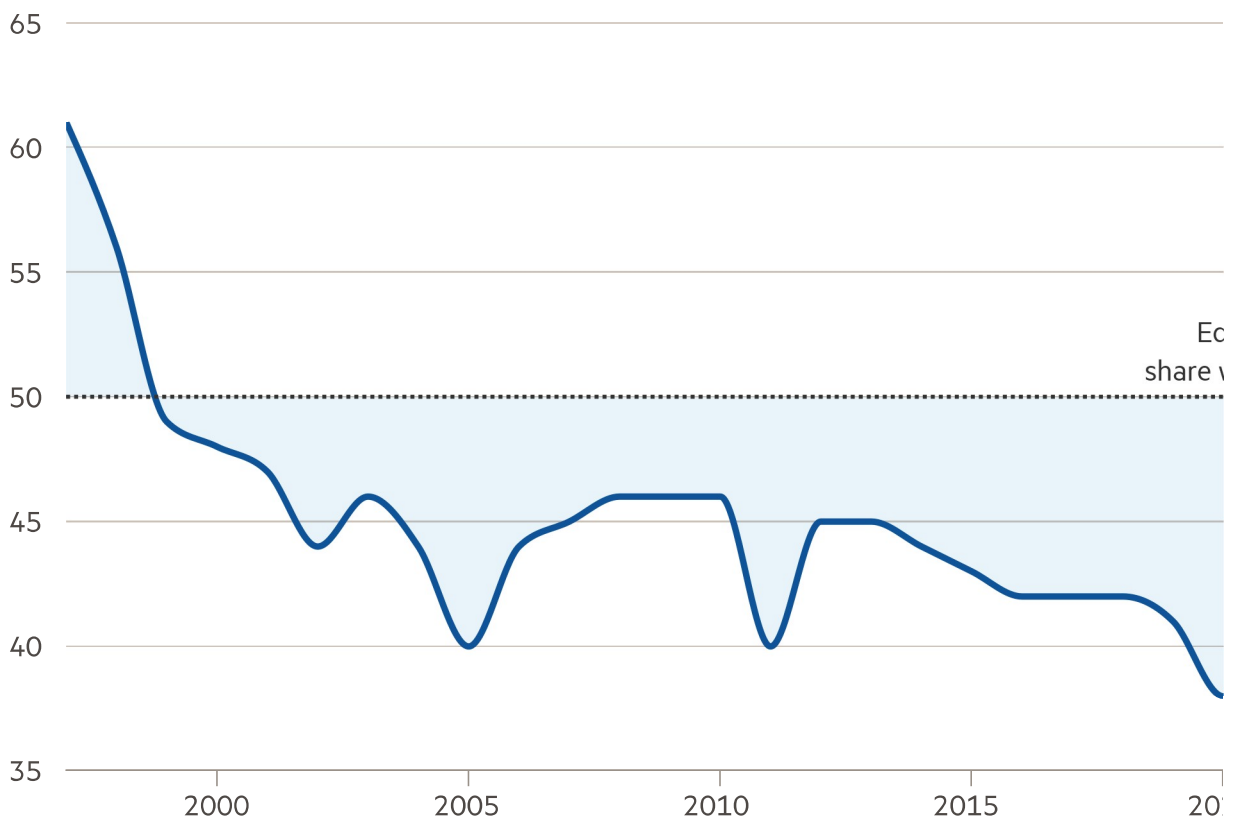
It was the latest incident in a series of setbacks for the US group. In 2018 and 2019, the 737 Max 8 was involved in two crashes that collectively killed 346 people. This time it is the Max 9, a longer version of the plane, that is in focus. US regulators, which had grounded some of the Max 9s, last week cleared them to fly again. But investigations continue into the manufacturing processes at Boeing and its supplier Spirit AeroSystems, which builds the Max fuselages.

Pledges by senior managers, including chief executive Dave Calhoun, to improve quality and engineering processes have fallen short. The decision by the Federal Aviation Administration to freeze the group's plans to increase production of its Max fleet will hit Boeing's financial targets.

Boeing, which reports fourth-quarter results on January 31, has turned to a retired Navy admiral to review its quality-management systems and is under pressure to offer investors some answers. Its customers are furious too: Alaska Airlines and United Airlines, the largest buyers of the Max 9, separately vented their anger last week, warning the plane maker that it urgently needed to solve its manufacturing problems.

## Boeing loses market share to its rival Airbus

Market share of large single-aisle aircraft (%), firm order backlog



FINANCIAL TIMES

Source: Cirium

Stan Deal, one of Boeing's most senior executives and chief executive of its commercial aeroplanes business, has apologised, conceding that: "We have let down our airline customers and are deeply sorry for the significant disruption to them, their employees and their passengers."

At stake is not just Boeing's standing as a leader in aviation. The company's mis-steps have prompted some industry experts to ask if there has been a decisive shift of power towards Airbus in the duopoly that governs aerospace.

Virtually every large passenger plane that is flown in the western world is built by Airbus or Boeing. Their five-decade transatlantic rivalry has been the bedrock of explosive growth in passenger numbers and led to innovations that have driven down the cost of flying and made mass market travel a reality.

The European group has held the crown as

## **It is absolutely critical that we have a strong Boeing and a strong Airbus and that the two of them at least compete with each other**

**Michael O'Leary, chief executive of Ryanair**

the world's largest plane maker by deliveries for the past five years and now holds a market share of 62 per cent in the lucrative narrow-body segment of the commercial market, according to aviation consultancy Cirium.

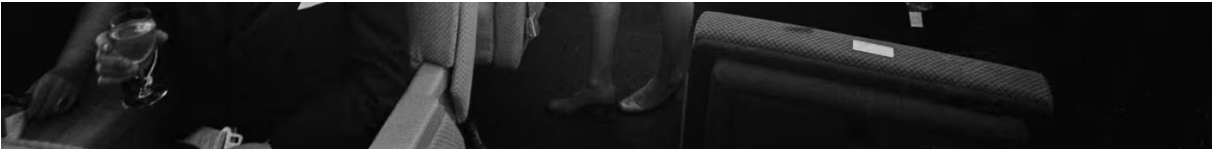
But industry executives say a strong Boeing is vital to the health of the sector. The two plane makers compete furiously for orders, with biennial air shows in Paris and Farnborough in the UK famous for announcements of big-money orders.

"It is absolutely critical that we have a strong Boeing and that we have a strong Airbus and that the two of them at least compete with each other, not just for orders, but also . . . in terms of technological developments," says Michael O'Leary, chief executive of Ryanair, one of Boeing's biggest customers.

That depends on Boeing turning things around. If it cannot, there would be consequences for the aerospace supply chain and for airline customers.

New entrants have tried to break into the industry but with mixed success. Comac, China's state-backed aerospace champion whose first single-aisle C919 commercial flight took to the skies last year, has begun to emerge as the first real threat in decades.





A Boeing 747 carries passengers between New York and London in 1970. The company's gamble on the aircraft has been credited with making air travel more affordable © Sidney Crawshaw & McDonald/Mirrorpix/Getty Images

“There has been a shift in power: Airbus is outselling Boeing two to one in the narrow-body market,” says Bank of America analyst Ron Epstein.

Boeing can still regain the lost ground but time is against it. “The aeroplane business is a very long-cycle business. Aeroplanes are in the market for 30 years,” he explains. “But the farther they get behind, the harder it is for them to catch up. That is the double-edged sword.”

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**Founded more than a century** ago in Seattle, Washington, Boeing is not only a company but a standard bearer for its home country: a pillar of the economy, both as a defence contractor — it builds [Air Force One](#), the US president's plane — as well as in civil aerospace.

Dennis Tajer, of the pilots' union for American Airlines, calls Boeing a “national symbol” that should be held to a high standard. “You don't think of an iconic company like Boeing, which really is sort of a flagship of our country, failing this consistently,” he says.

Boeing emerged as the dominant player in civil aerospace in the 1960s after a big field of rivals — many of which had prospered during the second world war — fell by the wayside or were taken over. In the same period, Britain's promising airliner industry made several strategic miscalculations, including pouring money alongside France into Concorde, a supersonic passenger plane that was never a sales success.

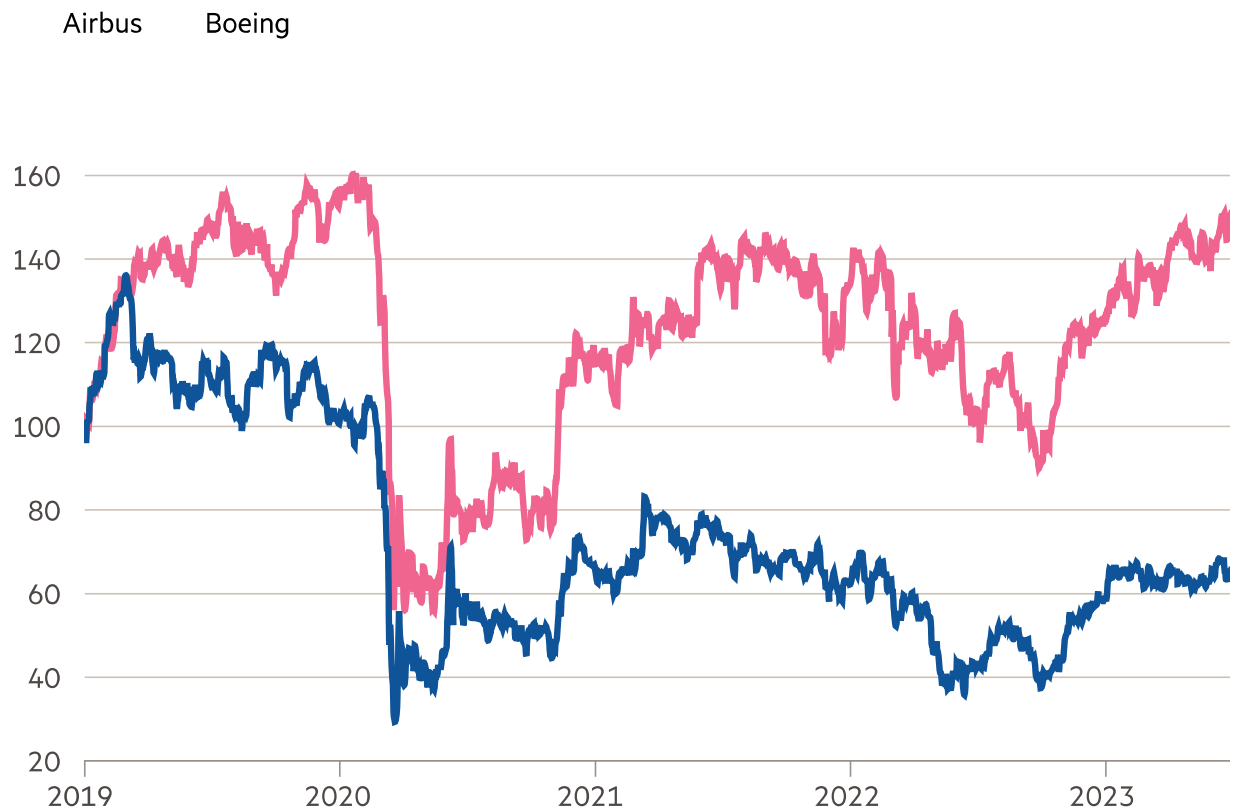
Instead of going for high speed, Boeing took a big gamble on the 747 jumbo jet, a high-capacity aircraft largely credited with making air travel more affordable. Its American rivals failed to keep up. Lockheed, as it was known before its merger with Martin Marietta, withdrew from the commercial market in the 1980s, and a weakened McDonnell Douglas combined with Boeing in 1997.

Then a true rival emerged in the shape of Airbus, a coalition of European aerospace companies formed by governments in 1967 which only became a single commercial entity in 2001.

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## Boeing shares have underperformed versus Airbus since the pandemic

Stocks rebased (\$)



The company started with a single airliner, the medium-sized A300, but went on to develop a range of planes to challenge each in Boeing's range. By 1999, according to Cirium, Airbus had a 50 per cent share of the single-aisle market largely thanks to the popular A320, which made its first flight in 1987.

Since then, the company has added new variants to the family, including the A320neo and A321neo, which have more economical engines, a key feature for airlines wanting to save money on fuel and reduce their carbon emissions. It was the arrival of the A320neo — and nearly losing an exclusive customer in American Airlines — that prompted Boeing to launch the 737 Max in 2011.

Boeing had to move quickly to head off the threat. It scrapped plans to develop an entirely new plane and instead offered American a revamped version of its bestselling 737: the Max. Not only would the Max be ready sooner but, like the A320neo, it would have fuel-efficient engines to satisfy the demand for savings.

The decision would prove fateful. The Max 8 crisis led to the grounding of the entire fleet for 20 months from March 2019. Coupled with disruption caused by the pandemic, which all but halted international air travel, Boeing suffered a heavy blow allowing Airbus to dominate the narrow-body market.

Boeing still leads with its widebody aircraft. The US company delivered 132 of the larger twin-aisle planes, including the 787, in 2023 compared with 96 from Airbus, which included 64 A350s. It also took more orders of widebodies than its rival.



Airbus's A230neo is photographed in Toulouse, south-west France. The aircraft has been promoted as having more efficient engines than previous models © Ed Jones/AFP/Getty Images

But the popularity of Airbus's single-aisle offering means the European group still has more orders than its US counterpart overall with a backlog of 8,598 to 5,626, respectively. A new customer wanting to order A320s would have to wait until the end of this decade for delivery.

“The market share has shifted heavily to Airbus with the launch of the A320neo. That is not going to change,” says Aengus Kelly, chief executive of AerCap, the world's largest aircraft lessor, adding that Boeing should focus on the next generation of planes and build a “serious competitor” to rival whatever Airbus might offer.

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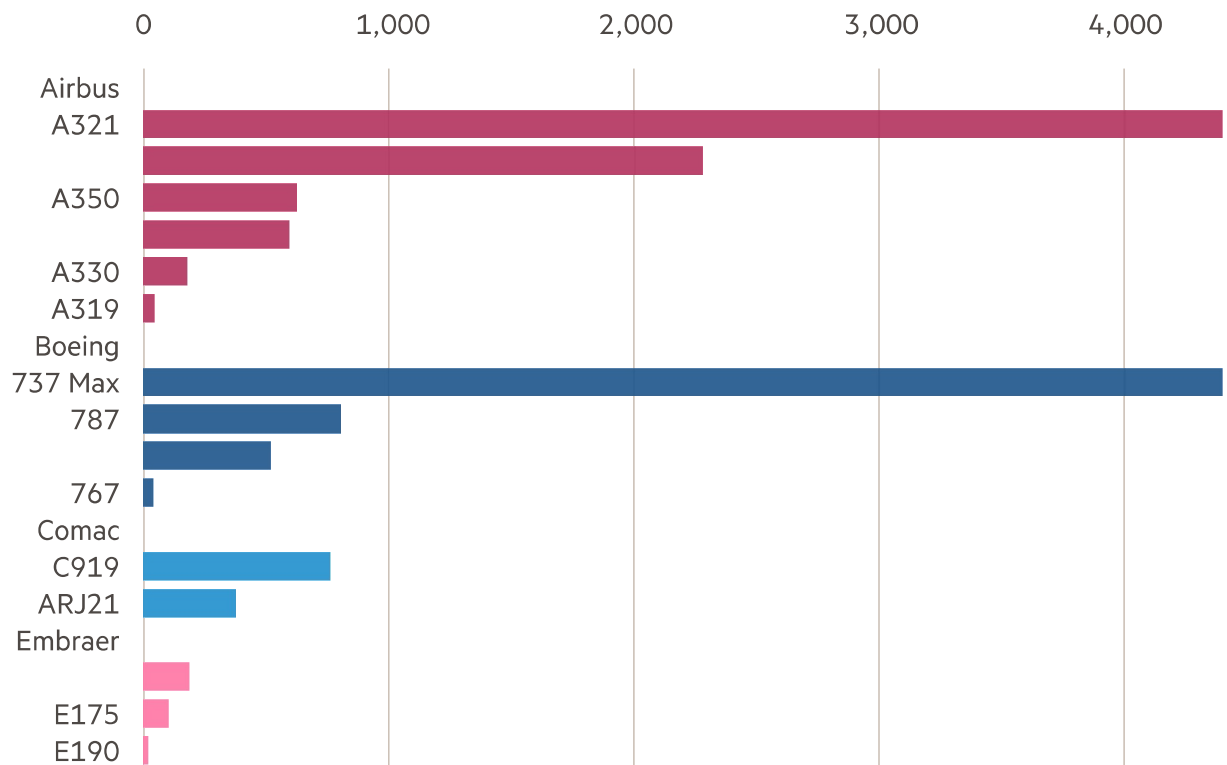
**Boeing's woes have reignited** questions over whether new competitors might emerge to challenge the long-standing duopoly between the American manufacturer

emerge to challenge the long-standing duopoly between the American manufacturer and Airbus.

One long-mooted potential disrupter is Comac, the Chinese plane maker. Beijing has made no secret of its ambition to take a chunk of the global commercial aviation market and has pumped an estimated \$72bn in state-related support to help develop Comac's single-aisle C919 passenger jet.

## Decades of work: Airbus has more orders than Boeing

Backlog of all commercial aircraft, passenger and cargo, end-2023



FINANCIAL TIMES

Source: Cirium

When the C919 made its inaugural flight in 2023 it marked a breakthrough in China's aims for technological self-sufficiency. But the aircraft is highly reliant on western suppliers for critical components, including communication and navigation systems, engines, landing gears, wheels and brakes.

Some industry executives, such as Ryanair's O'Leary, welcome greater competition. "The world needs three strong manufacturers," he says. "We would like to see Comac come up on the outside."

But the Comac aircraft is not without problems, he argues, calling it "a glorified



A320”. O’Leary adds: “So the more aircraft Comac produces, you’re drawing off the same engine suppliers, the same avionics suppliers . . . it’s an A320 in all but name.”

Despite widespread scepticism that Comac can be a viable competitor anytime soon, technological development by China — including advancements in sectors including computer chips and electric vehicles — has caused some consternation in the west. Incremental progress has also been made in domestic alternatives for C919’s foreign suppliers, such as aluminium-lithium alloys, ultra-high strength steel carbon fibres and some avionics components.



An investigator examines a section of the Alaska Airlines aircraft that had experienced a mid-air blowout of a door plug on the fuselage, leading to the temporary grounding of Boeing’s Max 9s © NTSB/AP

“Domestication of aircraft production [in China] will come faster than everyone thinks,” says Fu Shan, a professor in automation at Shanghai Jiao Tong University whose team worked on compliance testing for the C919.

In the meantime, Comac is constrained by two factors, says David Yu, an aviation industry expert who teaches at New York University in Shanghai. The first is the slow pace of increase in its production, the second its need for foreign regulatory approvals to enter new markets.

“The problem is about timing. You’re looking at fewer than five [new aircraft] per month — that is very low numbers,” he says. “[Comac] is also not certified [outside of China], so the campaigns that they would want to do in the US, Europe or other parts of the world still have these regulatory hurdles.”

AerCap's Kelly points to the enormous technological challenges that go with building aircraft and engines. He predicts it will take Comac "another 20-30 years to match what Boeing and Airbus currently do".

Until then, China will remain a large market for both Airbus and Boeing. The US plane maker last week delivered its first 737 Max to a Chinese airline since the fleet was grounded in the wake of the Max 8 crashes, a timely boost for the company.

But there are other potential challengers. Brazil's Embraer, for example, could perhaps be encouraged to expand further into the civil aerospace market. The aerospace and defence group, which explored a tie-up with Boeing four years ago, is the leading producer of regional jets which typically have up to 120 seats. Its latest and largest model, the 195-E2, can carry up to 132 passengers.



The second commercial flight of the C919 aircraft developed by China's state-backed aerospace champion, Comac. The company could present the first serious competition in the sector for decades © Yin Liqin/China News Service via Getty Images

"They make really good aeroplanes," says Bank of America's Epstein. While Embraer has not expressed a desire to compete with Airbus or Boeing, that could change, Epstein adds, "if you have airlines coming to you saying these guys are not delivering . . . then maybe you think twice about it."

Others in the industry say Embraer will be cautious about taking on the two giants of aviation. Bombardier, Canada's former industrial champion, was almost bankrupted attempting to do just that with its C series, a small single-aisle offering. Bombardier

ended up partnering with Airbus on the model in 2017 before selling out to the European giant and quitting the commercial sector in 2020 to focus on private jets.

All these signs suggest meaningful competition for the two major players is still some way off.

“The duopoly is working”, says Nick Cunningham at Agency Partners a consultancy in London. “There is no competition worth talking of yet, though the Comac C919 will very gradually displace the Max 8 and A320neo in China.”

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**While some critics argue** the duopoly risks holding back innovation in the sector, others believe the rising cost of new technology in a notoriously expensive industry is the bigger hurdle.

New aircraft used to take about seven years to develop, but now it takes a decade or more, says Cunningham's colleague Sash Tusa. Derivatives of models took four to five years and that has risen to about seven years. This all adds to the cost of developing new aircraft.



Rescuers work at the scene of an Ethiopian Airlines crash in 2019. It was the second fatal crash involving Boeing's Max 737 aircraft after an incident the year before left more than 100 dead © Mulugeta Ayene/AP

“Partly, this is a simple ‘time is money’ thing, and increased regulatory checks extend the entire development process,” says Tusa, noting that safety standards are more

demanding. But even small improvements in performance cost more today as existing civil aircraft technology approaches its limits, he adds.

Several long-term Boeing watchers believe the only way the company can regain significant market share will be by launching a new single-aisle aircraft. The company has maintained it does not plan to develop a new model until the mid-2030s as it believes fuel efficiency gains are not yet available to warrant a new development.

“What I think [the airlines] really want is for Boeing to come back to life and offer them new products,” says Richard Aboulafia of Aerodynamic Advisory.

There would be risks: can Boeing, which still has significant debt, fund such a development; and what does it do about the Max aircraft on order by airlines whose deliveries extend well into the 2030s?

“They are capable of building an aeroplane right now that can compete with the A321neo . . . It would cost them, but this is about the future of their company and of American aerospace,” says one long-term observer.

“Boeing has a lot of risks out there,” says Bruce McClelland, senior contributing analyst at aerospace consultancy Teal Group. “Their balance sheet’s a bit heavy in debt,” he adds, noting that while a US government bailout may be remote, it is not unthinkable.

For now, Boeing can rely on the fact that its customers need its planes. “Where’re they going to go? Airbus is sold out through 2030. Boeing has availability, and [airlines] want to grow,” adds McClelland. “As long as that dynamic lasts, Boeing has a little bit more forgiveness space.”

*Additional reporting by Ding Wenjie in Beijing, Chan Ho-him in Hong Kong and Edward White in Shanghai*

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