

REPORT
MAX KINGSLEY-JONES
 IN LONDON

THEN THERE WERE THREE

Airlines are welcoming the prospect of the duopoly in the mainline jet market finally facing some serious challenges, but do any of the young pretenders really represent a viable threat?

For airlines in the market for a mainline narrowbody jet, things have suddenly become interesting. In the past 18 months the choice of suppliers has more than doubled.

Since the demise of McDonnell Douglas and its MD-80/90 line a decade ago after the takeover by Boeing, airlines have had only two doors to knock on when seeking a short-haul airliner in the 110- to 180-seat market. While the regional jet sector has constantly creaked under the weight of too many suppliers, no-one wanted to brave it in the space above.

Until now, that is. Bombardier, along with aircraft manufacturers in China and Russia, all have new-generation narrowbodies targeted at the mainline sector in development, and all of them have signed up customers. If they beat the odds and keep to schedule, these new jets should become realities over the next three to five years.

But can Bombardier compete head to head with the “big two”? And do the Chinese and Russian programmes represent little more than a job creation scheme that will rely purely on local sales to airlines instructed, or encouraged through sweeteners, to buy them?

Bombardier was the first to step up, with its all-new CSeries powered by Pratt & Whitney’s PW1000G geared turbofan, which was launched in 2008. Despite slow sales – and doubts in some quarters about Bombardier’s ability to go up against the big two – the 110- to 145-seater is already making its presence felt. Airbus, which launched its A320 New



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CLIVE LEWIS

Managing partner, Achieving the Difference

Engine Option (Neo) in December, has publicly stated that a desire to stop the CSeries was one of the criteria that drove the move.

Before the launch, Airbus’s executive vice-president programmes Tom Williams last year said that the company was planning to react “very strongly” to prevent Bombardier building a significant market penetration. He said that by developing the re-engined A320, Airbus would be offering an aircraft with “a lot more capacity, a lot more range and

exactly the same economics, so there will be no business case left for the CSeries”.

When the Neo launch finally came in December, Bombardier took a somewhat philosophical view, saying that it had always assumed such a response when developing the CSeries and that the Airbus decision vindicated its decision to adopt the GTF engine.

The industry is waiting to see what Boeing does in response to Neo, CSeries and the emerging manufacturers. It has been evaluating a possible re-engining of the 737, but has given strong indications that it will concentrate on developing an all-new single-aisle jet.

“Bombardier looks to have a well-positioned offering with the CSeries, which has generated interest in the traditional markets for Airbus and Boeing aircraft,” says analyst Clive Lewis, who is a managing partner at UK consultancy Achieving the Difference.

“Where Bombardier is not so strong in terms of market penetration with existing customers is in regions like Asia, where the high growth markets are. Bombardier is probably not a household name there as Airbus and Boeing are. It will achieve credible market share in Europe and North America, but will face a challenge trying to address the growth markets.”

Teal Group’s vice-president analysis Richard Aboulafia sees the CSeries as “a niche threat” to the incumbents. “There’s no question that Bombardier can build a very good 100/130-seat product. The only question is whether it can compete with Airbus, and probably Boeing, on price,” he says.



Bob Peatman

NEW ENTRANTS: SPECIFICATIONS

	Bombardier CSeries	Comac C919	Irkut MS-21
Seats	110-145	150	150-210
Powerplant	P&W PW1400G	CFM Leap-X	P&W PW1500G
Range (nm)	2,950	3,000	2,700-2,970
First delivery	Late 2013	2016	2016
Orders	90	100*	180*

*Includes options, MoUs, Lols etc. SOURCE: Flightglobal/manufacturers.

“After all, it isn’t competing with the average price for an A319. It is competing with Airbus’s marginal price for another A319 on top of the hundreds of A320s and A321s they’ll already building. Ditto for Boeing, if it decides to offer a new or re-engined narrowbody.”

“Given high fuel prices, Bombardier will be able to carve out some kind of niche. But it’s up against serious volume, which is always a huge advantage in this business.”

SERIOUS THREAT

But while the new Canadian twinjet could be an irritant, it is the “national projects”, as one Boeing executive once described them, coming from Russia and, more significantly, China, that arguably represent the more serious threat to Airbus and Boeing’s equilibrium in the long term.

The two countries’ state-run manufacturers have adopted advanced engines from Western suppliers as the cornerstone of their plans for clean-sheet new generation single-aisles in the 100- to 200-seat category.

For Russia, this represents possibly a last

chance to return to the glory days of high-volume airliner manufacturing of the Soviet era, whereas for China the endgame is arguably more feasible. That is: to ensure that its local industry rides the wave of its airline boom in the coming years.

As now planned, the two new airliners – Russia’s MS-21 and China’s Comac C919 – are conventional in profile but will incorporate advanced materials and new generation engines. The MS-21, which is being developed by Irkut under the umbrella of United Aircraft (UAC), will be powered by a version of P&W’s GTF closely related to the PW1100G under development for the A320neo. Similarly Comac’s new twinjet will use a version of the Neo’s other engine option, the CFM International Leap-X advanced turbofan.

Before the Neo’s launch last year, Airbus’s chief salesman John Leahy said that “the important thing that goes into our equation when considering re-engining, is that there is no reason for CSeries, the C919 or the MS-21 if you re-engine the A320 because you’ll have better economics than these new airplanes”.

He believes that an upgraded A320 or 737 would “force those companies to look at a redesign or a perhaps even a delay”.

Lewis thinks that Airbus’s decision to re-engine the A320 with powerplants similar to those on the CSeries has given Bombardier’s salesmen something to think about. “The CSeries’ major advantage was next-generation engines, and I think that Airbus’s response is strategically excellent, it levels the playing field in terms of engine technology when its already got the other advantages that being the established player gives it – and the rate it is bringing in orders seems to back that up. As an operator, there is a longer and more visible track record bringing these aircraft to market for Airbus than there is for Bombardier.”

TIME FACTOR

Lewis likens the question about the size of the threat from new suppliers to the time when Ford was examining whether it needed to take the Japanese car manufacturers seriously: “It is pretty serious, but time is the big factor. It really took Airbus 15 years and the introduction of a second aircraft family [A320] to become established and a serious competitor to Boeing,” he says.

Similarly, Brazil’s Embraer only really became established as a major player in the regional sector 20 years after first being created, once it had its initial 50-seat jet family operating in significant numbers and the larger E-Jet models was in development.

“These new entrants are going to be play-

ers for 15 years, but it will take that order of magnitude – more than a decade and another aircraft type in another segment – for them to truly arrive,” says Lewis. “This gives the manufacturers time to prove themselves as credible in terms of delivering on time, delivering to performance and being able to support the aircraft.”

Leahy often says that with Airbus having taken several decades to establish itself, a similar timescale will be required for a serious newcomer like China. But the reality is that Toulouse began to make its presence felt right from when its first product, the A300 widebody twinjet, was launched in 1970. Key “home country” airlines including Air France, Lufthansa and Iberia purchased the 250-seater, preventing, or limiting, the penetration into the European market of the US-built short-haul trijets such as the Lockheed TriStar and McDonnell Douglas DC-10-10.

OUT-DELIVERING SEATTLE

With Airbus now consistently out-delivering Seattle, it is remarkable to consider that it is only in the past decade or so that its production rose consistently beyond one-third of the overall mainline aircraft shipments. It finally broke the 50% share threshold in 2003 – 29 years after it shipped its first A300.

So like the Airbus evolution, the threat from new entrants may be a slow burn, initially denting the full market potential of the established players before they become fully fledged rivals towards the middle of the century.

“We spend a lot of time asking ourselves how we are going to compete,” Boeing Commercial Airplanes vice-president of strategic planning and analysis Jerry Allyn told attendees at February’s annual US Federal Aviation Administration forecast conference. He later conceded that in the long term, with their government support and 50-year planning window, “the Chinese are unstoppable”.

Aboulafia concurs that China’s Comac will eventually become a threat. “The first product – the ARJ21 regional jet – is completely useless. Its second product – the C919 – looks pretty marginal, but unlike the ARJ21 it might enter domestic service in more than token numbers,” he says. “The Chinese jet airliner industry will take decades to establish itself on world markets. But given the resources they are planning to make available, they’ll probably get there, eventually.”

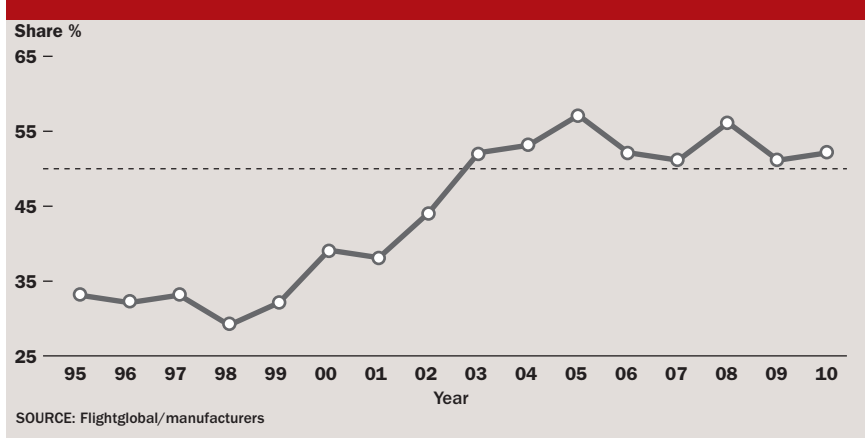
Lewis sees the greatest success for Chinese and Russian offerings in their home markets “not least because of government intervention”.

It has emerged that Aeroflot wanted incentives from the Russian government and Russian airframers in exchange for its acquisition of locally built aircraft. Last year the airline agreed to order 126 new Russian-built airliners before 2020, including 50 MS-21s, and has requested that they be priced competitively.



The C Series has gained customers, but at a slow pace so far

AIRBUS PRODUCTION MARKET SHARE – 1995-2010



“The Chinese airliner industry will take decades to establish itself on world markets, but it’ll get there eventually”

Aeroflot general director Vitaly Savelyev has sought the removal of import taxes and customs duties from western-supplied components as well as industry standard support and reduced lease rentals.

“The advantage for Comac is that its home territory is a massive growth market, so if they achieve a reasonable market share then that will result in a reasonable production figure,” says Lewis.

Between them, Airbus and Boeing have delivered almost 1,700 airliners into the Chinese market – indeed the former has a final assembly line in the country, which will be producing at least four A320s a month. The two rivals’ combined backlog from Chinese airlines stands at around 670 units – or 10% of their total orderbook, but the C919 threat-

ens to dent their prospects of cleaning up among the airlines from now on.

Comac signalled its intent to grab a share of the business at the Zuhai air show last year when the first C919 customers were announced. These comprised Air China, China Southern Airlines, China Eastern Airlines, Hainan Airlines, Chinese lessor CDB Leasing Company (CLC) and US lessor GECAS (sister company to GE Aircraft Engines, which is a partner in Leap-X builder CFM International). Between them they signed for 100 orders and options.

CHINA DEMAND

In Flightglobal Insight’s recently published Commercial Fleet Forecast (CFF) 2011-2030, which was produced in association with Achieving the Difference, Lewis predicts demand from China for 3,700 passenger aircraft in the 121- to 200-seat category, covering both replacement and growth requirements. Of these, Lewis forecasts that more than 20% – or 700 units – will be of Chinese origin.

Thanks to this strong local success, the Flightglobal CFF predicts that the C919 will take 7% market share of the 12,000 deliveries

globally in the 121- to 200-seat category over the next 20 years. Obviously the bulk (88%) of this demand will be for Airbus and Boeing types, with the MS-21 and CSeries each capturing around 2%, says Lewis.

He believes that the MS-21 has missed its opportunity to replace Russia's Tupolev Tu-154 fleet as almost all of these old trijets have been replaced by 737s or A320s, be they secondhand or new. "So the actual Russian market is growth and the replacement of 737s and A320s, which means that it might be a little more challenging. They are going to fare better in Russia, than the rest of the world, where its share will be very low."

Aboulafia sees no threat to the global suppliers from Russia's airliner industry. "The best the Russians can hope for is to protect a small fraction of what they once had in the business," he says. "The Sukhoi Superjet might find a niche due to its Italian industry support. But the MS-21 looks like a socialist-era state-economy fantasy."

Like Airbus four decades ago, the new entrants know they need to break into the overseas markets to really enjoy success, but as Toulouse found out, achieving this is not simply about creating a competitive product.

SUKHOI SUCCESS

The Sukhoi Superjet regional jet has had some international success, helped by the fact that its Russian builder has tied up with Italy's Alenia Aeronautica to boost its credibility – and in-service support capability – on the global stage. The company is pitching its 100-seater at Delta Air Lines' requirement for up to 200 new narrowbodies, but most observers see this as a very long shot.

Ryanair recently indicated that not only was it now big enough to break the low-cost carriers' single-type fleet rule but more controversially that it might be interested in the Chinese and Russian types.

"We're talking to everybody – the Russians and the Chinese as well," deputy chief executive Michael Cawley said recently when asked about the airline's discussions regarding new narrowbodies.

Cawley's fellow deputy chief executive Howard Millar likens the influx of suppliers in civil aviation to events in the computer industry: "At first there was just IBM and a few others. Now there is a whole load of manufacturers. When China started producing televisions, the Americans said they had no experience, but by God they've got good at it. Over the next 10-15 years a lot is going to happen."

Lewis thinks it is "highly possible" that a western budget airline could agree a big deal for one of the new types: "A low-cost carrier in North America or in one of the high growth markets could go for one in serious numbers, where the old business model of low purchase price or lower cost of debt could be revived."



China's C919 is conventional in looks, but is powered by advanced turbofans from CFM

But any lower cost of ownership benefit a deal with Comac or Irkut might bring must be weighed up against several basic risks.

"These are untested suppliers so there is a risk that they may not be delivered on time – not that is a risk you seem to avoid by going to Airbus or Boeing – and whether they will perform as advertised," Lewis says.

Aboulafia also sees potential worries surrounding finance for the new offerings: "Customers and manufacturers both need to work with finance providers to create features that make an aircraft an appealing asset," he says.

"But the finance providers who determine this appeal also own large portfolios of jets, and they tend to be quite conservative. The new manufacturers with close connections with state-owned banks and lessors might have an advantage here."

Lewis says another concern that applies to all the new entrants is a lack of a global support mechanism: "The first operator in any territory might end up being the lone operator which means you don't have the scale advantages, the spares pool and technical know-how etc."

Narrowbody demand has been booming in recent years, with production across Airbus and Boeing's plants heading towards 80 aircraft a month. However Lewis warns that the timing of the narrowbody replacement cycle could be "unfortunate" for the new entrants: "We've got different things going on in different parts of the world. In North America there was a replacement cycle under way when the economic crisis hit, but airlines in the majority of cases have taken their new aircraft and parked a lot of fairly young ones to keep capacity growth restrained. That cycle is approaching the end, and what will happen to all those aircraft in the desert?"

"In Europe, the growth in the narrowbody fleet in the past 10 years has been almost exclusively with the low-cost carriers, but we're approaching the end of that investment cycle as those airlines have got the aircraft

they need. So in North America and Europe you are left with very low growth demand as they are both mature territories.

"So the only really big lump in narrowbody demand will come from growth, mostly in Asia Pacific, which means that we're heading into a period when maybe there will be less growth demand globally. And if many of the young, parked airliners come back into service, then things are pointing to a downturn in narrowbody demand around 2016 – which is when all these new aircraft are due to enter service." ■

FLEET FORECAST

Flightglobal Insight has teamed up with Clive Lewis of consultancy Achieving the Difference, and the UK's Bristol Business School, to provide an independent forecast for the world airliner fleet over the next 20 years.

Purchase the full report at:

flightglobal.com/forecast