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'Underwhelming' ARJ21 draws flak

China's regional jet needs exports, but whose going to buy it, ask analysts

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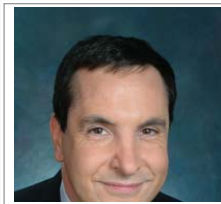
China's ARJ21-700 will be flying into a crowded marketplace dominated by two established manu-facturers and containing two more possible competitors when it likely takes off for the first time this month.

And while its prospects at home are looking a little perkier, thanks to an order for up to 100 aircraft from Shenzhen Airlines, doubts remain about significant sales outside the country needed to make the programme really pay its way.

So far only Lao Airlines has joined the Shenzhen carrier - which is buying the ARJ21 for its commuter start-up, Kunpeng Airlines - Shandong Airlines, Shanghai Airlines, Xiamen Airlines and Shenzhen Financial Leasing Co. in signing up to buy the 78-seater being assembled in Shanghai by the giant AVIC 1 combine.

Its two purchases are dwarfed by the other 169 orders and commitments that all come from within China. Media reports said there are hopes for more non-domestic sales soon, but two analysts tracking China's first solo commercial jet project to fly since the Shanghai Y-10 in 1980 remain to be convinced. AVIC's lack of an overseas network and its rivals' financing capabilities are among the factors contributing to their scepticism.

“Exports, beyond irrelevant markets like Laos, are very unlikely due to AVIC's inadequate product support, sales and financing



capabilities,” said Richard Aboulafia, senior aviation analyst with aerospace and defence analysts, the Teal Group, in a report on the aircraft’s prospects.

Aboulafia believes those sales are necessary. “I don’t think domestic demand will do the job. They really have to move beyond China,” he told Orient Aviation.

But he doesn’t see that happening. “Most of all, there’s no compelling reason to buy it. There’s nothing technologically impressive about it. If anything it is underwhelming,” he said.

Nor does the Shenzhen order change his view that the programme is destined to struggle, with only a 50-50 chance of entering full series production. “I don’t think [Shenzhen Airlines’] purchase terms will mandate they take delivery of all these aircraft,” he said.

Even allowing for government help with research costs and production related expenses, Aboulafia can’t see the ARJ21 turning a profit.

“I’m not even sure they will get recurring costs for the price they are going to reach for each sale,” he said.

Raymond Jaworowski, senior aerospace analyst at Forecast International, which produces an annual regional aircraft forecast as part of its aviation research activities, agreed AVIC 1 faces an uphill task when it comes to overseas sales.

“At least at first many airlines will look at the ARJ21 as an unproven commodity, particularly in comparison to competing products from



'There's no compelling reason to buy [the ARJ21]. There's notheing technologically impressive about it' Richard Aboulafia, Senior Aviation Analyst, The Teal Group



well-established manufacturers such as Bombardier and Embraer,” he said.



ARJ21-700: Lao Airlines the only overseas carrier to have ordered the regional jet

“In addition, the lack of a true global sales and product network is a big disadvantage.

Product support is a key consideration for airlines when they make an aircraft purchase decision. Such a network can be built through partnerships, but it will take time and investment.”

Jaworowski believes Bombardier, which has signed an agreement to cooperate in developing an ARJ21-900 100-seater stretch, could help there. But he also pointed to tough competition from Bombardier’s souped up CRJ700s and CRJ900s now on the market and the constant enhancements to Embraer’s E-Jet family.

Then there are the Russian and Japanese entrants to consider. The first flight of Russia’s Sukhoi Superjet has been delayed until May or June, reports say, but Sukhoi is already pushing for sales in the region to add to the 98 orders and 73 options already secured elsewhere.

Mitsubishi Heavy Industries’ proposed 70 to 90-seater – the MRJ – is being offered to the market, although a programme launch is still pending (see separate story). The company said a final decision will be made in the northern Spring.

That aircraft will benefit from skills learned manufacturing parts for Boeing and, in particular, the carbon composite wings for the B787. “The commercial basis is going to be different [from the ARJ],” said Lance Gatling, a Tokyo aerospace consultant and former Boeing executive. “Mitsubishi will probably have to invest more, because their aircraft will be higher tech.

“In return they will probably be rewarded with an aircraft that has higher fuel economy, perhaps lower maintenance requirements and

the use of their composites experience.”

The ARJ21, which is due to enter into service in late 2009, does have the benefit of input from some of the world’s best suppliers. It will be powered by two General Electric CF34-10A engines, Liebherr is providing the landing gear, Rockwell Collins the avionics and Honeywell the flight controls. Others on board include Smiths, Sagem, Fisher and Parker Hannifin. Wings and fuselage sections are being made by Xi’an Aircraft Co and the nose section by Chengdu Aerospace – both AVIC 1 companies.

Its weight worries Teal’s Aboulafia. The ARJ21 is heavier on a per seat basis than any of its competitors, he said. But Jaworowski pointed to its hot and high capabilities and its ability to operate on short runways as a plus point, which could help it find a niche market.

Those kinds of operations, especially in the west of China where air transport is seen as an important factor in economic development, are important to the ARJ21’s success. AVIC 1 is hoping to take 60% of the domestic market for mid-sized regional jets, producing 50 a year at first, state news agency Xinhua said.

And, overall, there is demand for commuter-size aircraft in the country. Bombardier is forecasting up to 1,600 20 to 149-seaters will be needed in China in the next 20 years. Embraer sees a requirement for 730 aircraft between 30 and 120 seats.

The government wants as much of that made in-country as possible and it is using the ARJ21 as a stepping stone in its larger plans to create its own mainframe manufacturing industry, following next with a 150-seater. Xi’an Aircraft is also making the 50-seat MA60 turboprop.

But Embraer, in particular, is already well placed. Harbin Embraer, the joint venture between the Brazilian manufacturer and AVIC 11, has sold 50 ERJ145 50-seaters to Hainan Airlines, now re-grouped

under Grand China Air, in an order that also includes 50 larger E-Jets that directly rival the ARJ21.

“We believe the Chinese regional aviation market is big enough to accommodate aircraft of more than one type,” said Embraer China managing director, Guan Donguan. “It is always good to have competitive products which benefit both the airlines and passengers with more choices.”

Trung Ngo, Bombardier vice-president marketing and communications, also sees room for movement. “We have a fairly wide base of customers and, although we have had a lull in sales recently, we believe there to be a pent-up demand for regional jets which could work towards larger aircraft, such as the CRJ900 and CRJ1000 in the coming period,” he said.

“There is demand for feeder services to larger airplanes. More importantly, there is a government intent to develop certain regions of China.”

The concern among outside manufacturers is that domestic airlines will favour a home-grown product for political reasons, or that state pressure will push them to buy locally. But Aboulafia believes the new found pragmatism among Chinese operators means the ARJ21 may have to stand largely on its own feet, pointing to the fact that one domestic operator – Grand China Air – has opted for a competitor when making a large purchase.

“China could force its national airlines to take these planes and violate the WTO ATCA (Agreement on Trade in Civil Aircraft) agreement. It only holds observer status, so that would not be a problem,” he said in his report.

“But that would damage the airlines’ competitiveness, just as they are increasingly subject to competition from foreign carriers. The government, in effect, would need to choose between a national aircraft and healthy national airlines. And the airlines don’t care ...

[They] are looking for the best value and the most appropriate planes, not something built in-country.”

Aboulafia is also unsure of AVIC 1’s motives. “It’s difficult to tell if the ARJ21 is an earnest effort to meet market needs and help develop a national industry, or mere privatisation bait,” he said. “China has mooted privatising its state-owned aerospace companies. The prospect of a national jet is a good way to entice investors.”

Jaworowski sees the programme helping lay the groundwork for the manufacture of larger commercial aircraft, particularly in terms of forming partnerships with western suppliers and establishing those sales, marketing and product support infrastructures, which the ARJ21 currently lacks. “Indeed, the 150-seater could turn out to be an ARJ21 derivative,” he said.

But the existence of western partners will only go some way to convincing the market outside China to get on board with sales of the ARJ21. “The incorporation of western systems does help somewhat but, by itself, it will not alleviate all of the uncertainty that airlines may feel about the new aircraft,” added Jaworowski.

Increased competition may bring prices of regional jets down, but airlines outside China can be expected to stick to the “tried and true” and favour Bombardier and Embraer, he said. Leasing companies will follow the same path, because established models are easier to place with operators.

“This market is growing, but it is not booming. It is faced with some limitations on its prospects for future growth, perhaps foremost among which are the continuing existence of scope clauses – [in pilot contracts, restricting the capacity of regional jets flown by legacy airlines] – affecting the sale of 90-plus seaters,” said Jaworowski.

However tough it may be for the ARJ21 to compete in the outside

world – and AVIC 1 continually stresses that this, by necessity, is a long-term project – China’s new baby will want to avoid the fate of the Y-10, its most recent home-grown predecessor. That programme was cancelled with just two prototypes built.