Rate 60 for single-aisles – a production increase too far?

Both major airframers are committed to increasing monthly production of their narrowbody families to meet current and projected orders. However, with new entrants arriving on the market, we assess whether market demand is likely to remain strong enough to support such ambitious output plans.

At a pre-Paris air show briefing in Toulouse, Airbus’s chief commercial officer, customers John Leahy once again raised the prospect of the airframer increasing its ubiquitous A320 single-aisle family production rate to 60 aircraft per month by 2018. Boeing has also talked about prospects for production of its 737 family increasing to a similar rate, raising the spectre of more than 1,400 narrowbody aircraft delivering annually from the two leading manufacturers by the end of this decade. And with Bombardier, Comac and Irkut also aspiring to bring aircraft to the market in this sector, annual deliveries could be even higher.

At the same time, we continue to hear questions from the market, particularly from investors and operating lessors, over the justification for such rate hikes. At present, demand for new aircraft remains robust and backlogs are at record highs, albeit for delivery over a significantly longer delivery horizon than has historically been the case.

It is this strength of demand that the OEMs cite as justification for their plans. But the naysayers cite enduring industry cyclicality and potential for some “black swan” event – another 9/11 or a global financial crash, say – as risks that could weaken demand even as OEMs increase their rates.

SINGLE- AISLE PASSENGER FLEET GROWTH

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SOURCE: Innovata – part of Flightglobal
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Simple trend analysis and arithmetic can help us to understand the issues at play here and quantify any evolving risk. Our Ascend Fleets database gives us the starting point at the end of 2014 of 12,561 single-aisle passenger jets in service. Under current production rates and future committed rate increases, Airbus and Boeing are estimated to be planning to deliver 1,002, 1,040, 1,117, 1,192 and 1,212 single-aisle aircraft annually between 2015 and 2019. These plans see each OEM manufacturing at rate 42 today, with Airbus increasing to rate 50 by early 2017 and Boeing increasing to rate 52 in 2018. Deducting around 400 aircraft retirements from the current fleet annually, which is the average single-aisle retirement volume we have seen since 2008, and also adjusting the delivery stream to remove the typical 2.5% of single-aisle deliveries that go into non-passenger roles (such as corporate jets or special mission aircraft), results in an average annual single-aisle fleet growth over that period of 4.9%. As our chart shows, that growth is marginally above the long-term trend since 1990 and also above the average annual growth we have seen since 2008 of 4.3% and over the past 10 years of 3.8%.

So under current rate plans and fleet trend, there does appear to be a potentially small surplus of single-aisle deliveries planned over the next five years. This also neglects to include those evolving new programmes mentioned earlier. With the CSeries set to finally enter service next year, and Comac and Irkut aspiring to also bring their products to market before the end of this decade, any evolving surplus would be inflamed by a few hundred more aircraft.

Now thinking about potential rate 60 at each of Airbus and Boeing, with the former speaking about some time in 2018 and the latter perhaps reacting with a similar increase in 2019 as it transitions 737 to an all Max output, the fleet growths seen in 2018 and 2019 increase significantly above the trend to 5.7% in 2018 and 6.5% in 2019 (assuming still 400 retirements annually).

What are the implications of such potential fleet growth? Analysis of our Innovata airline schedules database indicates that over the past ten years average single-aisle seats per departure have increased by 0.9% per annum and average single-aisle sector length has increased by 0.8% per annum. At the same time, overall capacity offered by single-aisle aircraft has increased by average at 6.2% per annum. Over that same 10-year period the single-aisle fleet growth has been 3.8% per annum, indicating that increasing installed seats, longer sector lengths and increased aircraft utilisation have driven productivity increases in this sector of 2.4% per annum.

So returning to the currently committed production scenario, if we assume the same productivity increases endure over the next five years, the average 4.9% fleet growth implied will deliver 7.3% more single-aisle capacity. And the “rate 60” scenario set out actually implies a 7.7% single-aisle capacity growth over the next five years.

There is one final variable in this capacity balance equation. Again returning to Innovata, over the last 10 years the share of global scheduled airline capacity flown by single-aisle aircraft has increased by 2.4% per annum so that in 2015 52.6% of the overall network will be flown by such aircraft types.
If we also extrapolate this trend over the next five years, this growth effectively cancels the productivity gains and implies that for the current committed production to be absorbed into the fleet, a global capacity growth of 4.9% is required. Assuming that increasing airline efficiency continues to drive load factors upwards, that would require average global annual passenger growth in excess of 4.9% over the next five years. And for the “rate 60” scenario, that growth would need to be in excess of 5.3%.

With 2015 traffic growth year to date of 7.4%, at the global level, these scenarios suddenly sound achievable. But let’s not forget that despite the ongoing development of three new programmes in this sector this calculation omits the presence of any of those players arriving to market before the end of the decade.

CSeries, at least, will certainly achieve that, thereby increasing the traffic growths required to assimilate the new single-aisle deliveries into the fleet. Let’s also not forget that our enduringly cyclical sector is already seven years into the current cycle which began with the downturn in 2008. Whilst every cycle is different, the risk that the increasing rates arrive towards the back end of this cycle must be at least borne in mind, since any decline in new aircraft demand in the face of these increased rates can only lead to increasing retirement rates as airlines adjust capacity plans to more closely match demand.

But at face value this macro calculation suggests that there is justification for current and future planned single-aisle production rates. However, that justification leaves no room for new competitors and requires the current aggressive shift of capacity into single-aisle (from both twin-aisle and regional jets) to be sustained. With twin-aisle production rates also increasing presently as 787 and A350 continue their ramp up, this latter looks like a risk.

It also requires 2,000 of today’s 13,000 or so passenger single-aisles to be retired from the fleet in the next five years (which incidentally would result in all passenger single-aisles built before 1996 retiring from service over that period). Any increase beyond planned rates, all the way to rate 60, may be a different proposition though.

Towards the end of the decade when the downturn risk increases, single-aisle fleet growths will need to accelerate further if this scenario is to be accommodated. Ascend will continue to observe OEM plans with interest and monitor developments in this fascinating demand and supply driven market.

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