

## A Series of Interesting Events

1. *Until next time...*

### Key Takeaways

*"Those who have knowledge, don't predict. Those who don't predict, don't have knowledge."*

Lao Tzu

### Third Way No More, 直到下一次 <sup>1</sup>

C-Series and Airbus. The dust has begun to settle, much as been said, discussed, pontificated and categorized to extremes rarely heard since the toxic USAF tanker competition. At this stage of the takeover of the C-Series program by Airbus, it would undoubtedly be beneficial to pause and assess; not necessarily to comment on the linear "knowns" and other "obvious" facts as some may have already well presented, but instead to establish a possible course of action and possible events for the key players being impacted by this transaction, Airbus, Bombardier, COMAC, Boeing and UTC. As a first step, we will examine the tactical issues arising from this partnership; that is to say what are the immediate or near term impacts, then we will switch our focus to strategic considerations, primarily those impacting industrial and product development strategies.

#### What has changed near to medium term:

In summary, a lot and little; what French people call a "Normand's answer". Clearly, on its own, the C-Series program is not out of the woods yet. The stars have not yet fully aligned and a relative uncertainty may continue for some time. One thing is certain, the takeover of the program by Airbus will restore confidence in the stability of the program and this probably will have a direct & positive impact on sales in the near term.

We probably have not seen the end of the Boeing's complaint to the US Department of Commerce. Although we felt this would end it initially, it is highly unlikely that this issue will entirely disappear for now. A portion of these tariffs may still be enforceable even after the partnership Bombardier-Airbus is finalized, and could lead to a succession of claims and counter claims that may impact the C-Series sales price and possibly even US market access. We will have some level of clarity in February.... The Boeing case always had some level of merit for us at AIR, and the US commerce department's position pertaining to launch aid and equity investments from the Province of Québec and Canada are correctly singled out as subsidies under US law. It would however have been greatly appropriate to equally examine the 737-700 sale to UAL from Bombardier's point of view to have a more balanced view on the Delta case, for which Boeing did not propose a 737 solution it must be noted, again. Unfortunately, this case could drag on, especially since the experience of the current Airbus-Boeing WTO case has amply demonstrated that the strategic nature of aircraft manufacturing makes it fundamentally distorted from absolutist free market principles; and because of the risk and capital expenses involved, often requires aid and subsidies to bring programmes to market. How this is done is at the heart of the problem, and is another debate that we will gracefully dodge at this juncture.

**What to look for near term:** The deal is still subject to regulatory approval and will not be finalized until sometime next year.

What to look for in the medium term:

- Airbus sales and support will come in strong to boost C-Series outlook. Bombardier will benefit from economy of scale deals as Airbus procurement will inevitably weigh in in pricing. Better clarity about future of the aircraft will drive interest near to medium term. C-Series can be an efficient network augmentator, primarily for LCCs. Longer and thinner routes are also enabled thru the better economics of the CS300 aircraft.
- Like Han Solo, CS500 is being frozen in carbonite, it's as good as a flat-line. Bombardier's marketing pitch is for a five-abreast aircraft in the 100-150 seat category, and six-abreast aircraft in the 150-200 seat category. A six-abreast C Series might be even more uncomfortable than some current narrowbodies... Furthermore, a CS500 introduction would limit the Airbus commonality line if the A320 was to be replaced by the CS500, only keeping the A321.

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- The Airbus Alabama investment was already a brilliant move no doubt – it proves its worth in this instance. There is little doubt that the already significant US manufactured C-Series content will be further compounded by the Mobile FAL proximity to customer Delta Air Lines. This potentially leads to some tension between Congress, Alabama and the administration. Where will they now stand? The Mobile FAL could help reduce the tariffs imposed to the C-Series however, some tariffs could still be imposed to either assembled or partially assembled aircraft. One thing, Airbus, Delta and Bombardier will need to be creative.
- MAX 7 is facing question time. What is now Boeing’s response to ensure that existing customers and new ones remain on-board? We briefly discussed it yesterday with the vice president and general manager of the 737 MAX, Keith Leverkusen and came out with a renewed sense of “cautious” optimism for some of the MAX7 target customers and niche markets (our next note will review this situation report with Keith Leverkusen).
- That “small” F-18 deal for St Louis is now looking like a big deal from a defense strategy point of view – is this signaling a course correction from Canada and eventually other potential global customers? We believe Boeing’s actions have potentially damaged several other capture efforts as it reintroduces the “supplier political reliability” variable into foreign procurement decisions. India may be particularly sensitive to this element.
- Delta will get its C-Series and is unlikely to pay all the tariffs recently imposed by Commerce if it negotiated its contract correctly, leaving any import costs into Bombardier’s lap. Delta is the major test since they will write the C-Series operational playbook.
- Spirit and Jet Blue and possibly another US airline are likely to commit to C-Series within 12 months – good.
- This deal has extraordinary supply chain implication and this at many levels (UTC concentration, sourcing).
- How about a vote of confidence from Airbus towards UTC’s ability to solve GTF and remedy to design and production issues sooner, rather than later?
- We are however not revising our C-Series forecast at this very early juncture- we remain at around 950 deliveries to 2030, although we will accept that we might revise it upward once key issues have been resolved.

**Premature plaudits?** That said, it is imperative that the C-Series continue to deliver on performance improvement, especially with respect to engine performance, UTC still has many issues to resolve and has made considerable progress. We are reiterating that we are not so concerned about a negative near time impact on the MAX portfolio. The risk for Boeing is not for its core NG and MAX operators, where we currently view limited risk for Chicago. It will however probably take some time for a trend to materialize as to how the C-Series will further its market penetration from the bottom up and integrate into the Airbus family of narrowbody aircraft, there are many paths available, it greatly depends on what Airbus decides to do with 320NEO and single aisle options in the future. The test case is called Delta Air Lines.

## Strategic Implications

Two elements dominate here:

First, is this partnership a first step towards a deeper integration Airbus-Bombardier, and as such, what will be the impact(s) on Airbus narrowbody product development strategy?

Second, is this also phase one of an active Airbus and European capture strategy towards the Canadian defense market? The answer to both is a soft yes for now. Yes, Airbus could decide to absorb some of the technologies that C-Series has to offer but this might only materialize later in the development of the next generation narrowbody aircraft. We view the VARTM technology used for the C-Series wing as of major interest to Airbus; however, the applications near term are possibly limited in most scenarios. To do a new wing on the A321 family possibly orphans what has been dubbed by many as the A321/32X evolutions and is in no way a match for the NMA over time. Airbus must respond in kind to Boeing in that segment. The A322/A330NEO strategy can work but it also has a shorter lifespan. It essentially is a low capex strategy which has a lot of merits and has the advantage of providing significant near term market traction in a market environment with stable operational variables. From a production angle, Airbus has now a pressure relieve valve called the C-Series. It can sequence A320/A321s in its FALs better and do away with the A319 grain of sand. This means increased efficiencies and slightly better slots availability. Airbus shrewdly puts some pressure on Boeing with some production increase at Rockwell Collins, not a major element, but one to keep an eye on nevertheless, especially in the event that C-Series sales begin to accelerate.

Defence: is Canada going rogue? Again, a hard one to answer, but the mood towards US suppliers there is possibly the worst since the CF-105 and Black Friday. Airbus has now a play on Canadian defence markets, not just Airbus incidentally. Boeing and the US government, despite some of the legal merits of the complaint, have damaged their image of “Trusted Supplier” in the words of the Trudeau administration. For Airbus, Saab, Dassault and BAE Systems, the Canadian market has migrated from the realm of the “untouchable” to “let’s give it a go”. Forthcoming procurements will test this theory in the next few years.

First, the RCAF tanker recapitalization is a near shoe-in for the A330MRTT. It is what Canada needs, a versatile multirole platform that matches the CONOPS best.

Second, the much debated TACAIR procurement programme, and this gets tasty. While the F-18 would have been a highly efficient solution, politics have negated it. Where to go now and to bridge to a permanent solution is the issue. This is where Airbus and its partners will need to be creative, again. Typhoon is a very good interceptor aircraft with advanced sensor and weapon system packages but, it is expensive as a bridging option and has limited interoperability options with the US partner. Rafale is the best multirole option, with a clearly defined growth path for French and export customers, which could make it more attractive against the F-35, its sole competitor in the market place today. Gripen is a

superlatively efficient, cost effective and capable option as well, but it suffers from shorter legs and a slight performance deficit, mostly against Rafale. Still, any of these aircraft can fit RCAF's needs. There is also another bridging option which could either consist of purchasing used F-18s or opt for a major upgrade to the current fleet until F-35 becomes fully able. If we were to voice an opinion, Rafale is top of the range from a capability standpoint now, but little Gripen is probably the best option for a budget conscious DND.

C-Series versatility as a special mission aircraft baseline is also a potential interesting option for Airbus. It could very well look into the aircraft capabilities as an ASW solution. While P-8 is doing well with customers needing advanced capabilities near term, France, Germany, Malaysia, Spain and others will be looking to replace their fleets in the 2020s, perhaps time for Airbus to examine together with Bombardier what the C-Series could do there. Similarly, C-Series can likely be adapted for AEW, SIGINT or ELINT missions. These evolving markets are going to be in need of new platforms soon, even though the role of a single sensor aircraft will naturally evolve in an operational network characterized by increasingly distributed sensor nodes.

China and COMAC: incorrectly labeled as "loser" by many following the announcement; the company and the Chinese government will remain focused on its long term strategy of development. Admittedly, rumors were rife about a possible partial or total takeover of Bombardier by COMAC. COMAC would have indeed benefited from Bombardier's know-how in many fields, primarily industrial and commercial. The strategy is not entirely clear there, has Boeing pushed Bombardier in the arms of Airbus to deny COMAC access? Is there a strategy from government and industry actors to further deny China access to technology which may accelerate its rise as an aerospace player? With this new situation, one could say that China may have been right to abstain (or miss the opportunity) in the end. An organic development of the C919 and CRJ929 programs will potentially bring more benefits in the long run as opposed to trying to integrate Bombardier's competences, culture and capabilities within COMAC, which could have turned into a destabilizing factor and an execution risk. This scenario would probably have benefited Boeing and Airbus given China's airframe demand over 20 years and beyond, plans. Remember, China does not suffer from this frenzy that demands a response to everything yesterday; the process of development there is measured, controlled and deliberate. By choosing a stable long term strategy, China will become one of the great defense and commercial aerospace power, not tomorrow, but by the mid 2030s, it's not talk, it's 99% fact. It wouldn't be inconceivable to see Canada agree to let the Q400 programme go to China as a means to keep industrial ties.

## Truth and Consequences

Aside from the political crisis that has emerged from this series of interesting events, Airbus may have checkmated Boeing on this one. However, we are still dealing with some fundamental unresolved issues. Airbus is going after a segment where profitability is decreasing and competitive fragmentation is increasing. In our opinion, Boeing's best response is no response, although they could look at furthering their Embraer partnership. Boeing will find more solace in continuing product & services development, improving MAX family performance and customer support solutions, and getting aircraft to market on time and on specs. Some have suggested that Boeing should bring the Future Single Aisle (FSA) much earlier to counter Airbus. Not only is this showing a profound lack of understanding of industrial and financial realities, but there is absolutely no competitive need to do so at this very early stage. What Boeing may do is revise the FSA market positioning and technology choices slightly earlier to disrupt C-Series market traction, but we are still not looking at a new narrowbody until the early 30s. Someone I respect tremendously put it very smartly to me last week about C-Series for being "part of the family, but not a blood relative". There is perhaps a potential product positioning shift to evaluate there for Airbus.

Finally, something tells me that we have not seen all what 2017 has to surprise us with yet, note to all, the circus' next stop is the Dubai Airshow.

After the earthquake and associated tremors have ended, it is clear to us that this was really always about China, and slowing down its aerospace market ascension.

Take the long way home

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