

Aircraft Market Update

Newsletter, Winter 2016



This issue provides insight into the health of the business aviation industry and informs on the latest news from the recent National Business Aviation Association (NBAA) annual convention this past November in Las Vegas.

The full recovery of the business aviation industry from the 2008-2009 financial crisis, anticipated by many industry experts to begin in 2011, is still on hold.

Business Aviation Market Update

There has been little improvement in the overall state of the business aviation industry since the economic downturn in 2008. With most leading economic indicators returning to normal or near-normal, the question of why the business aviation industry has not followed suit is certainly a valid one.

The newer (models that are five years or less), larger jet market – long the market's strong suit in terms of value retention and low available inventory – has begun to soften considerably over the last 18 to 24 months.

Consider three-year-old models of the largest offerings of the "Big 3" manufacturers: Bombardier, Gulfstream and Dassault Falcon.

Compare the latest Current Value for a 2013 model as quoted in *The Aircraft Bluebook and Aircraft Value Reference (Vref)* with that model's average equipped price when new in 2013.

Change in Average Retail Value (2013-2015)

2013 Aircraft Models	Range	Average Equipped Price* (MM)	Aircraft Blue Book		Aircraft Value Reference (Vref)		Average Value Lost
			Current Value (MM)	Value Lost in Two Years	Current Value (MM)	Value Lost in Two Years	
Bombardier Challenger 605	4,050nm	\$31.00	\$19.00	38.70%	\$18.75	39.50%	39.10%
Bombardier Global 5000	5,520nm	\$48.90	\$35.00	28.40%	\$34.50	29.40%	28.90%
Bombardier Global 6000	6,160nm	\$60.50	\$45.00	25.60%	\$42.00	30.60%	28.10%
Gulfstream G450	4,300nm	\$41.00	\$28.00	31.70%	\$28.25	31.10%	31.40%
Gulfstream G550	6,710nm	\$58.50	\$45.00	23.10%	\$45.00	23.10%	23.10%
Gulfstream G650	7,000nm	\$64.50	\$67.00	-3.90%	\$67.50	-4.70%	-4.30%
Dassault Falcon 2000LXS	4,075nm	\$32.40	\$27.50	15.10%	\$27.50	15.10%	15.10%
Dassault Falcon 900LX	4,695nm	\$42.40	\$32.00	24.50%	\$34.75	18%	21.30%
Dassault Falcon 7X	5,760nm	\$52.30	\$42.00	19.70%	\$40.00	23.50%	21.60%

*Bluebook price for a new 2013 aircraft equipped with that model's most popular options.
All dollar amounts are in US Dollars.

In just two to three years (depending on the 2013 delivery month), every model except the Gulfstream G650 has lost an incredible amount of value. Why? Here are three possible reasons:

Discounting

Bombardier, in an effort to raise cash following substantial cost overruns in development of its C-Series regional airliner, has taken to discounting new aircraft very aggressively. Not to be outdone, Gulfstream and, to a lesser extent, Dassault, have also taken to discounting new product to levels heretofore unseen in the industry.

In a classic “trickle-down” effect, lower prices for new aircraft mean lower prices for pre-owned aircraft. An acquisition budget that just a short time ago could afford a two or three year old model can now buy a brand new one, resulting in the prices of the lightly used planes dropping and consequently, older aircraft prices dropping as well.

New Models

While new models offering more range, bigger cabins, more modern avionics and entertainment, etc. are necessary to the vitality of the industry, they tend to adversely affect values of the models they are intended to replace, such as:

New Model		Old Model
G500	impacts	G450
Falcon 5X	impacts	Falcon 900LX
Challenger 650	impacts	Challenger 605

China's Economy

Full of the promise of new aircraft sales in 2010-2011, China's economy has cooled to the point where many aircraft delivered a few years ago are now for sale and orders on yet-to-be-delivered aircraft have been canceled.

2015 NBAA Annual Convention Highlights

While the convention in November may have lacked the new program launch attention of 2013 (Dassault Falcon 5X) and 2014 (Gulfstream G500 and G600), there were many interesting and noteworthy developments.

Textron/Cessna

Textron/Cessna Aviation is intent on becoming a player in the larger end of the business jet market. Long the leader in the light- and midsize-jet segments, Cessna acknowledged losing sales due to having no product to offer otherwise loyal customers wanting to increase in size and range. Following Cessna's recent addition of the \$16.3MM nine-passenger Citation Latitude, which earned FAA certification in June, with first deliveries in August, are two larger aircraft.

The \$23.9MM super-midsize Longitude and \$30MM - \$33MM large cabin Hemisphere are aimed at increasing Textron/Cessna market share.

Cessna debuted its new Citation Longitude business jet and announced plans to enter the large business jet category with the clean-sheet, 4,500-nautical mile Citation Hemisphere.



Source: Textron Aviation, Inc.

The first flight of the Citation Longitude, a 3,400nm range transcontinental jet, is expected in 2016 with entry into service targeted for 2017. The Hemisphere will feature the widest cabin of its class (8.5ft at maximum width), a flat floor (no sunken aisle as on other Citations), a new wing and 4,500nm range. It is still in development with first flight expected in 2019.

Dassault

Although the Falcon 5X airframe design and construction are complete, certification has been delayed. The first test Falcon 5X vehicle was rolled out in Merignac, France in June, but has yet to fly due to issues with Snecma's Silvercrest engine – test programs have discovered slight deformation of the engine casing during high-temperature testing. Snecma anticipates the engine issue will be resolved in 12 months.

A “green” – unpainted and unfinished interior – Falcon 8X was on display at NBAA and was scheduled to fly to Dassault's Little Rock completion facility after the show.

The 6,450nm Falcon 8X is on schedule for European and FAA certification in mid-2016 with first customer deliveries by year-end.



Source: Dassault Falcon Jet Corp.

Gulfstream

Making its NBAA debut only six months after first flight, Gulfstream's new G500 garnered a lot of attention. This long-awaited G450 replacement is designed to deliver 5,000nm at Mach 0.85, a larger, quieter cabin, much-improved fuel efficiency and lower operating costs.



© Gulfstream Aerospace Corporation

The larger-wing, longer-fuselage, 6,200nm G600 is well into development and the manufacturing of the first flight test aircraft is progressing. The program is on track for first flight in 2017, certification in late-2018 and for first customer deliveries in 2019, all dates being approximately one year behind the G500.

Pilatus

Swiss manufacturer Pilatus, noted for the PC-12 series turboprop, has entered the jet market with the PC-24. A full-scale cabin mockup was on display in the convention hall at the Pilatus booth. Currently in flight-test, the \$8.9MM PC-24 will cruise at 425 knots, have a 4-passenger range of 1,950nm and be able to operate from unpaved runways. With Pilatus claiming 84 sales in the first two days of offer, the PC-24 is on schedule for late-2017 deliveries.



Source: Pilatus Aircraft LTD

Aerion



Source: Aerion Corporation

Aerion announced it was partnering with Airbus in a “technology sharing” agreement for the AS2. Airbus will provide commercial and marketing advice, and may manufacture the jet should the project ever get to that stage. Aerion will share certain supersonic technologies with Airbus.

AS2 range estimates are 4,750nm at Mach 1.4, increasing to 5,300nm at Mach 0.95. The \$120MM AS2 is targeted for first flight in 2021 and certification in 2023.

More than 10 years after Aerion introduced the first design of the AS2 supersonic business jet, the project has taken significant steps toward fruition.

Summary

It would appear that 2016 will be another challenging year for the business aviation industry. Now, some seven years into the worst bear market this industry has endured, the old “normal” must give way to a new reality characterized by higher rates of depreciation and inventory coupled with fewer sales and lower sale price expectations. A truly bright light for potential buyers is there are great deals to be had.

John Basileo

Tel: (212) 559-1894
john.basileo@citi.com

Citi Private Bank Aircraft Finance

153 East 53rd Street, 21st Floor
New York, NY 10022

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