

- 1 Editorial
- 2 Outlook
- 4 Business Conditions
- 6 Fractional Program Deliveries
- 7 Increased Fractional / Charter Utilization
- 8 U.S. Fractional Business Jet Utilization
- 9 OEM Deliveries YTD in 2021
- 10 OEM Book-to-Bills in H1 2021
- 11 About JETNET iQ
- 12 Appendix

## Gotta Get You Into My Life

We know today that Paul McCartney wasn't singing about business airplanes when the Fab Four belted out their jazzy *Gotta Get You Into My Life* hit in 1966. Business aviation was an industry in its infancy. The notion of a certified large cabin business jet didn't yet exist. More than 97.5% of business turboprop and jet aircraft that have been produced to date had not yet been built. The 1960s were the time of the British Invasion, Concorde, and Apollo Moon shots, while our industry, and those who would create and nearly perfect it, were in their early formative stages.

From an aircraft operational perspective, there are few things more complex than providing high-quality on-demand service with a mixed fleet of aircraft to thousands of demanding customers, all of whom legitimately own their piece of the aircraft. The business models, decision tools, and intelligence systems needed to enable and optimize a fleet of crewed and impeccably maintained aircraft were not yet created. The 1960s did witness the emergence of Columbus, OH-based Executive Jet Aviation, the world's first large pioneer on-demand charter and aircraft management company. Under Rich Santulli's leadership, EJA would evolve to become NetJets and pioneer the concept of fractional aircraft ownership.

Enough already about the past. After growth spurts in the mid-1990s and pre-2009, fractional ownership is once again on the climb. The growth in fractional program flying since the onset of the COVID-19 pandemic has been, in a word, fabulous. Fueled by customers' desire for service, simplicity, security, and safety, who wouldn't want to get this into their life once experienced? This week's sponsor of JETNET iQ PULSE is PlaneSense, another industry pioneer and fractional fleet operator of the popular Pilatus PC-12 single-engine turboprop and PC-24 light jet. The company, which recently inducted its 74<sup>th</sup> (!!) PC-12, has been

***"The growth in fractional program flying since the onset of the COVID-19 pandemic has been, in a word, fabulous."***

continuously expanding from its home base in the U.S. Northeast since 1995, with more to come soon to an airport – including many with short runways – near you.

Want to learn more? Leaders of the business aviation industry will be in the room on September 15-16 at the swanky 1960s-era TWA Hotel at JFK Airport at our 10<sup>th</sup> JETNET iQ Summit. Only a few seats remain available – we hope that you will join us:

[www.jetnet.com/summit](http://www.jetnet.com/summit)

Rollie Vincent  
JETNET iQ Creator/Director



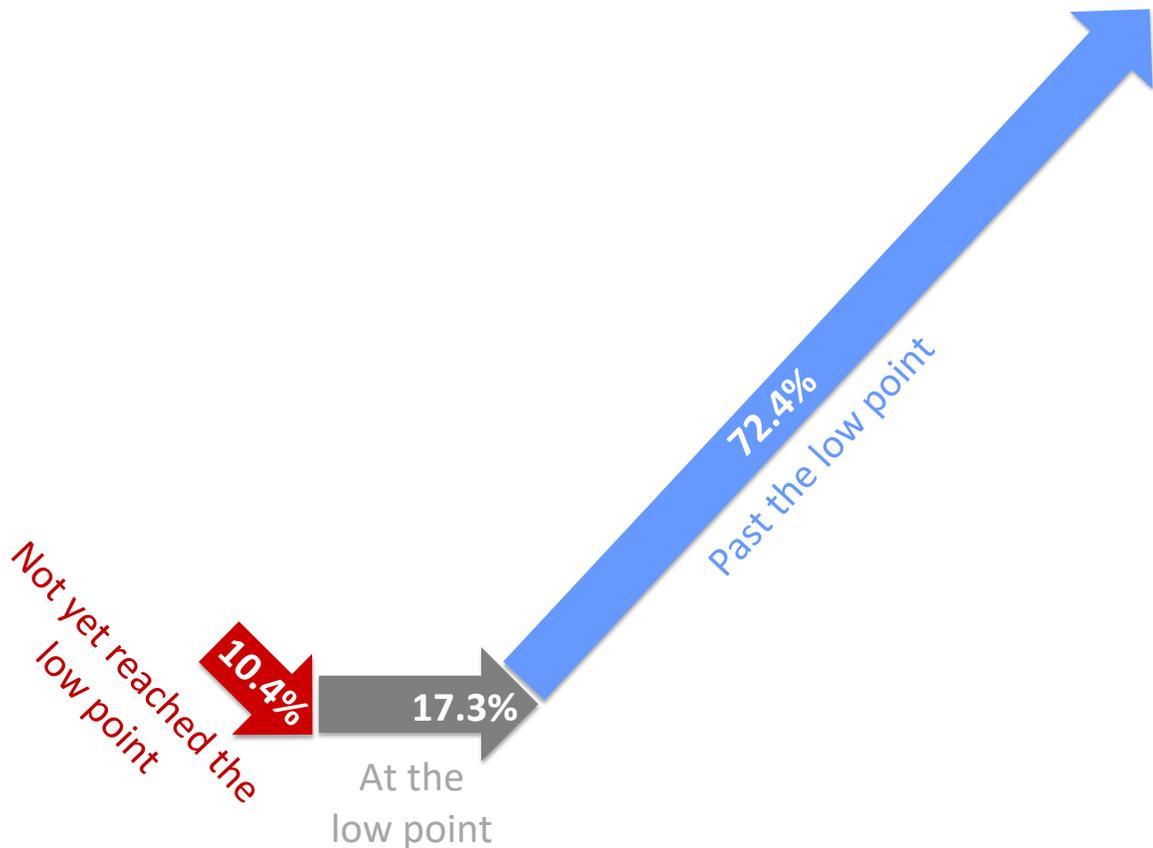
## Outlook

Despite the lingering COVID-19 headwinds and the proliferation of the Delta variant, the business aircraft owner / operator community is feeling very optimistic about the state of the industry within the current business cycle. More than 72% of respondents to our recently completed Q2 2021 JETNET iQ Global Business Aviation Survey indicated that they believed we were past the low point in the current business cycle. “Optimists” outnumbered “Pessimists” by a factor of 7-to-1 in Q2 2021, a compelling indicator of the mood of the market. Separate trackers in our surveys regarding aircraft purchase

intentions in the next 12 months have also bent upwards, as purchase probabilities have increased noticeably.

With numerous indicators reflecting market strength, including higher utilization of the fleet, brisk new / pre-owned / fractional aircraft sales, and the lowest pre-owned inventory\* levels JETNET has measured in more than 25 years, the outlook has improved substantially for business aviation so far in 2021.

### Where is the Business Aviation Industry in the Current Business Cycle? Q2 2021 JETNET iQ Survey



Source: JETNET iQ Q2 2021 Global Business Aviation Survey (n=506 respondents from 65 countries)

\*Note: “Inventory” is defined as the number of for-sale or for-lease aircraft listed on JETNET databases as a percentage of the in-service fleet

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## Business Conditions

### GDP



The Economist's **GDP growth forecasts** for 2021 are: U.S. +6.0%, Euro Area +4.4%, U.K. +5.7%, Mexico +6.4%, Brazil +5.5%, Canada +5.4%, China +8.5%, Russia +3.4%, and Australia +4.3%



**Business jet cycles** (take-offs and landings) in June 2021 were up by 37% YOY for U.S. Part 91, up by 129% YOY for U.S. Part 91K, up by 76% YOY for U.S. Part 135, and up by 91% at European airports



**Dow Jones Index** (U.S.) was up 27%,  
**FTSE 100** (U.K.) was up 15%,  
**CAC 40** (France) was up 35%, and  
**DAX 30** (Germany) was up 21%  
YOY from Aug. 11, 2020 to Aug. 11, 2021



U.S. Index of **Consumer Sentiment** was 81.2 in July 2021 vs. 85.5 in June 2021 and 72.5 in July 2020 YOY;  
Euro Area **Economic Sentiment Indicator** was 119.0 in July 2021, versus 117.9 in June 2021 and 84.2 in July 2020



**U.S. unemployment rate** (seasonally adjusted) was 5.4% in July 2021 representing ~8.7 million people, down 782K from June 2021 (5.9%)



U.S. **Purchasing Manager Index** (Manufacturing PMI) was 59.5 in July 2021, versus 54.2 in July 2020;  
Euro Area **Business Climate Indicator** was 1.90 in July 2021, versus -1.8 in July 2020



**Transactions of pre-owned business aircraft** in Jan.-Jun. 2021 were 1,425 jets and 745 turboprops, up 47% and up 41% YOY (JETNET as of August 11, 2021)



**Business aircraft deliveries** in 2021 YTD are 296 jets (including Cirrus, Boeing, Airbus) and 144 turboprops (JETNET as of August 11, 2021)

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; the JETNET iQ Summit returns with new life, new ideas and a new location at the neo-retro, super swanky TWA Hotel located at the JFK Airport. Reconnect with colleagues, business leaders and old friends in this exciting new space, where the past meets the future. Come and celebrate our 10th iQ Summit...*back in time*. Visit [jetnet.com/summit](http://jetnet.com/summit) for more info.



# JETNET iQ Summit

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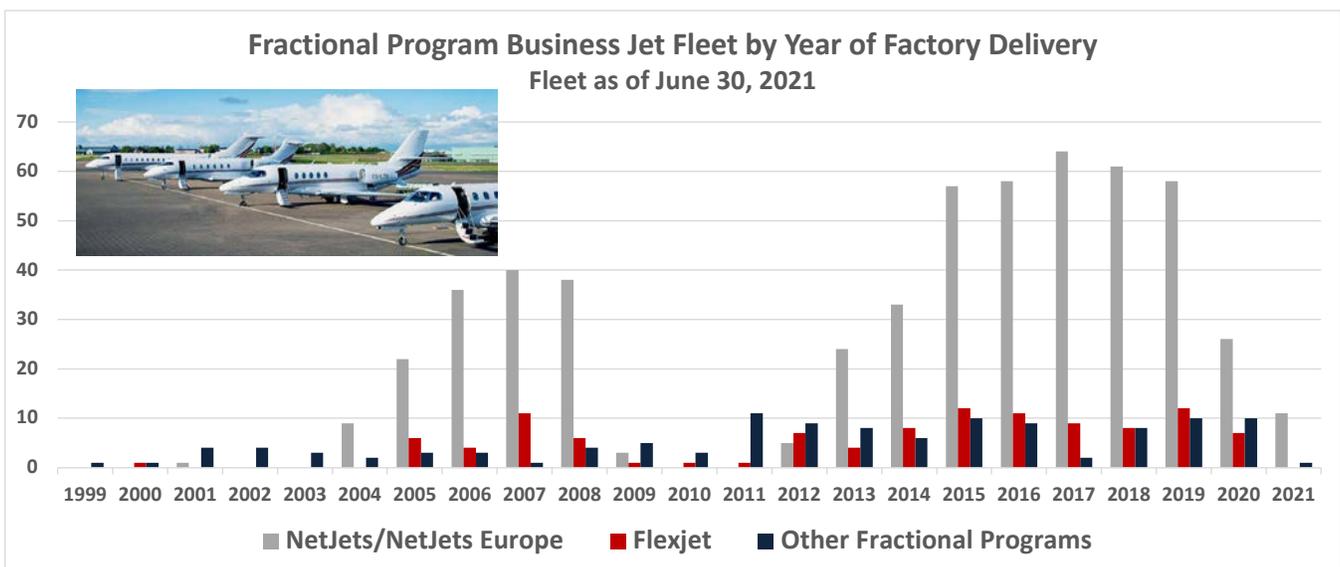
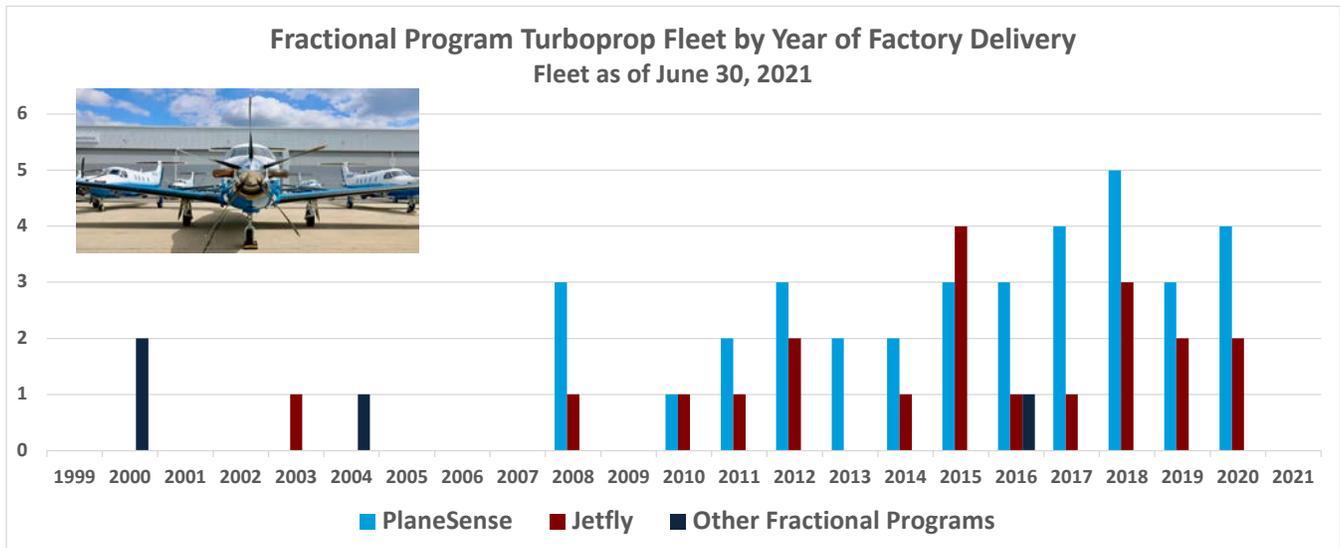
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## Fractional Program Deliveries

### By Year of Factory Delivery Based on Fleets as of June 30, 2021

While the spigot of new business jet deliveries into the various fractional programs was mostly shut down in 2020 with the onset of the COVID-19 pandemic, clear signals of strengthening end markets are very apparent. After aircraft order deferrals and cancellations at the peak of coronavirus concerns in 2020, this year we see higher utilization,

fractional sales, pilot hiring, and incremental training. NetJets leadership recently referenced their intention to take 50 aircraft deliveries in 2021; whether these are fleet additions or replacements for aircraft originally delivered prior to 2009 will be watched carefully.



Source: JETNET / JETNET iQ based on in-service fleet as of June 30, 2021

## Increased Fractional / Charter Utilization

### Will Trends of the Last Six Months Continue?

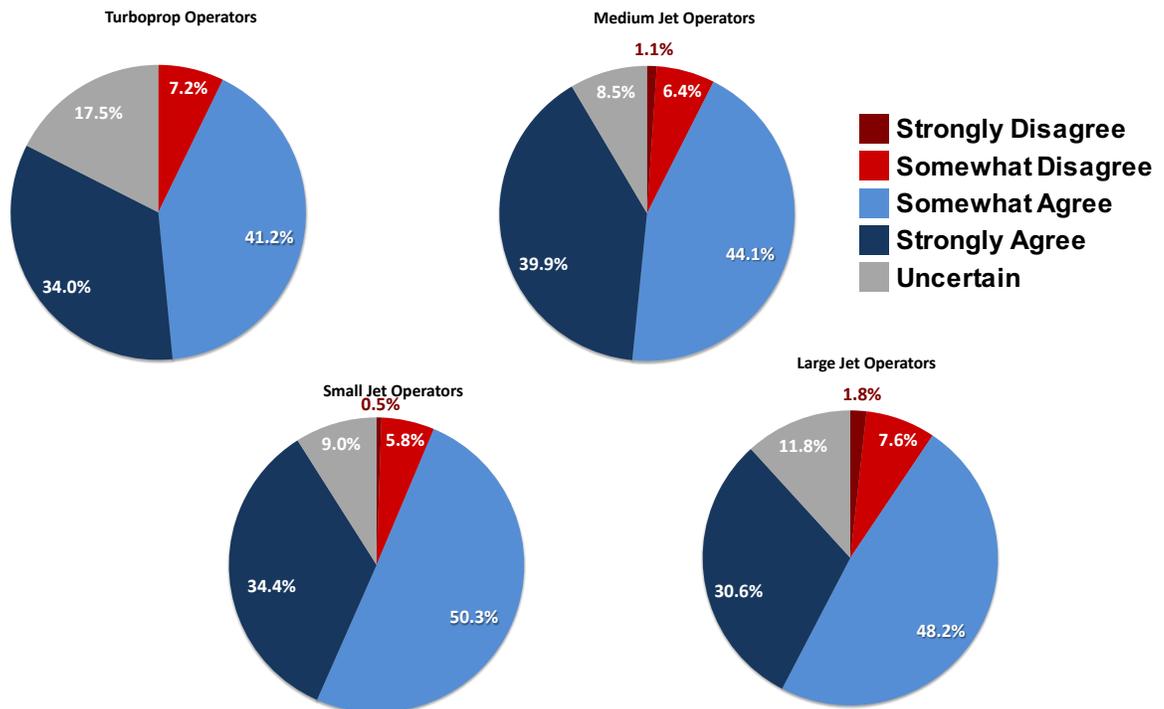
Regardless of the size of aircraft that they currently own or operate, business aircraft customers are mostly bullish on the potential for continued strength in charter and fractional flight operations. As entry points for many customers into business aviation, on-demand and fractional ownership services offer access to concierge-level private air services

without the large capital commitments required of whole airplane ownership. More and more HNWI and SMEs are experiencing private aviation for the first time through charter and fractional services – some probably wondering how they ever lived without these services to help them stitch together their personal and professional lives.



### Q2 2021 JETNET iQ Survey: Worldwide

I believe that increased utilization in fractional / charter operations seen over the past six months will continue into the future



Source: JETNET iQ Q2 2021 Global Business Aviation Survey (n=506 business aircraft owner / operator respondents from 65 countries)

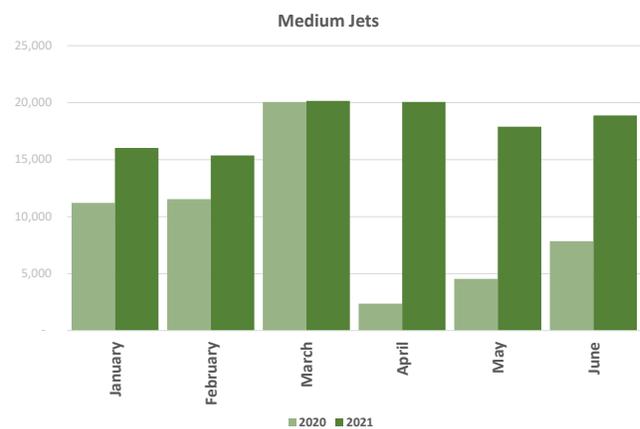
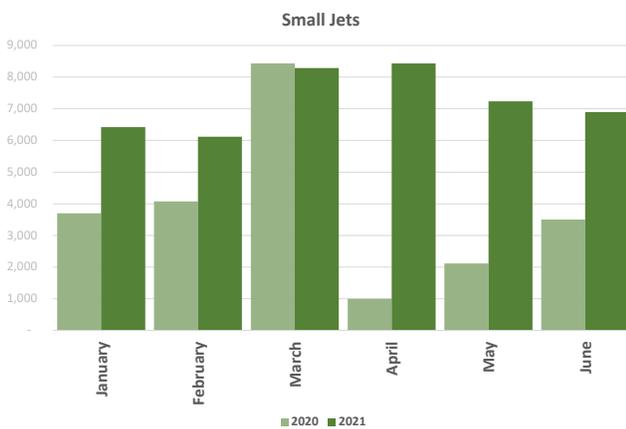
## U.S. Fractional Business Jet Utilization

### Rebounding to New Heights

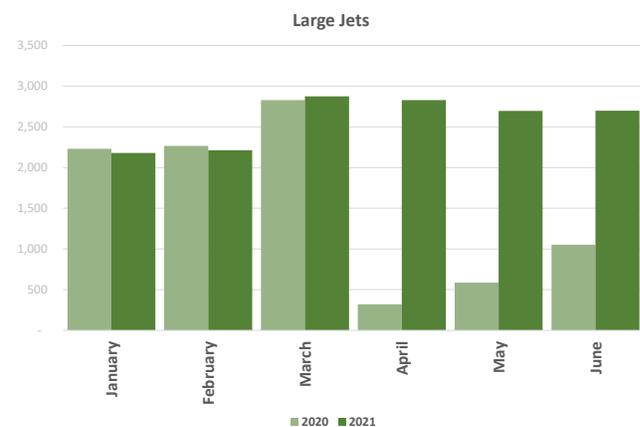
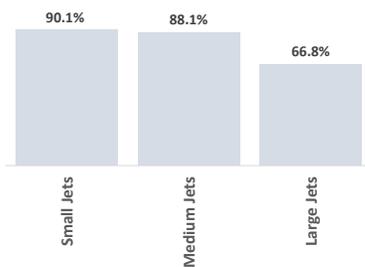
U.S. business jet flight operations collapsed across all operational and aircraft size categories in April 2020 in the immediate aftermath of the WHO's declaration of a worldwide coronavirus pandemic. Through the first half of 2021, fractional jet cycles are up ~90% YOY for the Small and Medium Jet categories, and up 67% YOY for Large Jets,

despite on-going border restrictions that continue to dampen international demand and flight activity. Customer interest in fractional Small Jets like the Embraer Phenom 300 and Pilatus PC-24 has blossomed, as customers flock to more accessible / affordable aircraft that are well suited to today's less far-flung missions.

### Part 91K Flight Cycles: January-June 2020 versus January-June 2021



Part 91K Flight Activity January-June:  
Year-Over-Year Change (2021 vs 2020)



Source: U.S. FAA and JETNET; Note: 1 flight cycle = 1 takeoff and landing; for aircraft size category definitions, please see the Appendix

## OEM Deliveries Year-to-Date in 2021

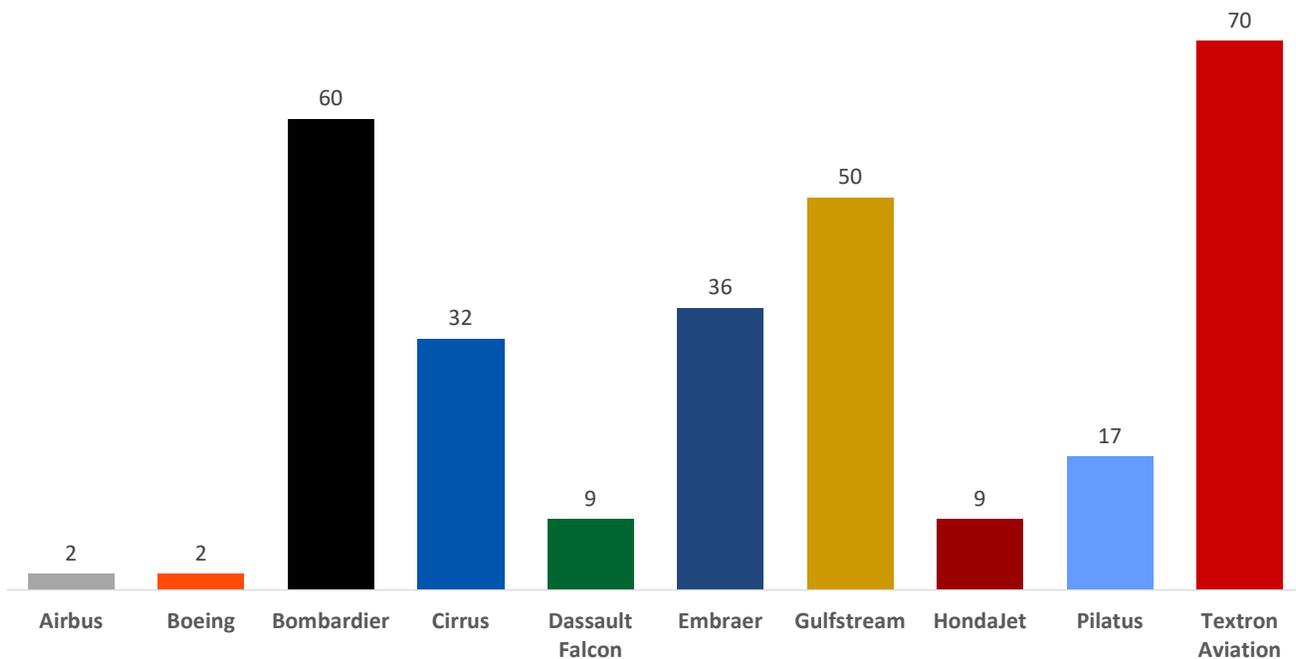
### New Business Jet Deliveries per JETNET

JETNET databases have recorded 287 new business jet deliveries year-to-date through early August 2021. The most delivered aircraft YTD is the Cirrus Vision SF50, followed by the Global 7500, Embraer Phenom 300E, and the Pilatus PC-24. Perennial volume leader Textron Aviation leads all OEMs with

70 shipments so far this year. Combined, Textron Aviation's Very Light and Light Jet models (Citation M2, CJ3+, CJ4GEN2) accounted for 54% of the company's new jet deliveries YTD, a reflection of the relative strength of the lower end of the market.

### 2021 YTD Business Jet Deliveries by Manufacturer

All OEMs - 287 New Business Jets in Total as of August 7, 2021  
(Source: JETNET)



Source: JETNET / JETNET IQ

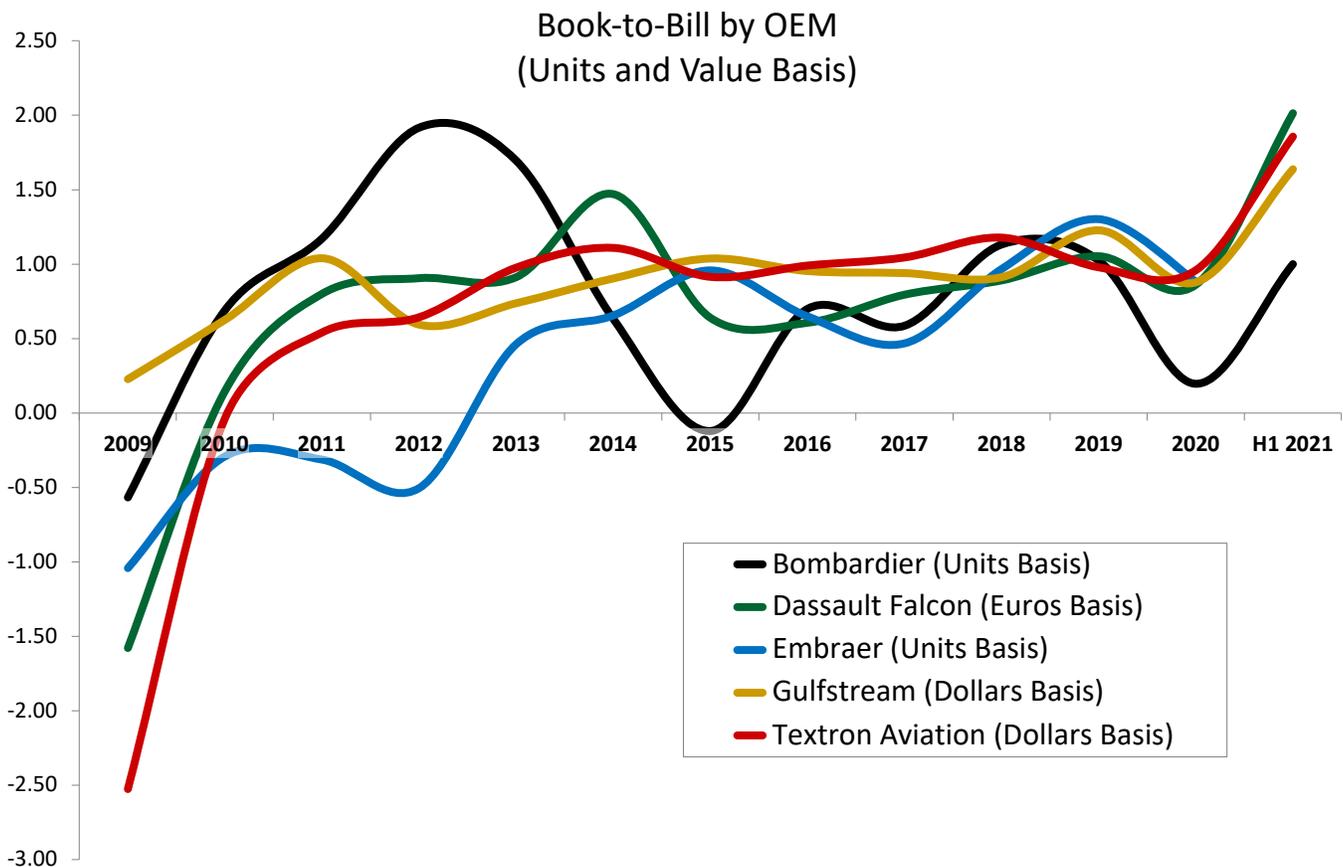
## OEM Book-to-Bills in H1 2021

### Order Rates Are Accelerating Faster Than Deliveries

Book-to-bill performance hovered near 1.0-to-1 for most OEMs in 2020, which is quite solid performance given widespread factory shutdowns and supply chain disruptions. Year-to-date in 2021, book-to-bills have accelerated into the 1.6- to 2.0 range for most OEMs, with a brisk pace of fresh new orders outpacing deliveries to customers. Most of the estimated \$6B of backlog erosion in 2020 amongst the “Big 5” business aircraft manufacturers appears to have been concentrated in the Large Jet segment in the period soon

after the pandemic declaration, although most customer contract activity involved order deferrals and not outright cancellations.

Dollar-denominated firm order backlogs at Dassault, Textron Aviation, and Gulfstream were up strongly in H1 2021, which bodes well for pricing integrity for the OEMs and better residual value retention for aircraft owners, lenders, and lessors.



Sources: Regulatory filings; JETNET iQ estimates; Embraer book-to-bill at the end of H1 2021 cannot yet be estimated due to limited information

## About JETNET iQ

JETNET iQ is a business aviation market research, analysis and forecasting service consisting of three main elements:

- **JETNET iQ Reports** are the definitive analytical reference for business aviation, incorporating quarterly state-of-the-industry analyses, owner / operator surveys, and detailed delivery and fleet forecasts;
- **JETNET iQ Summits** are annual industry conferences providing unique data, insights and networking opportunities; and
- **JETNET iQ Consulting** provides customized research and analysis for clients on a project-by-project basis.

JETNET iQ Reports are available in various formats on a subscription basis, and are published regularly by JETNET LLC, 101 First Street, Utica, NY 13501 - **currently offered at 11 different levels**. JETNET iQ is a partnership between JETNET LLC of Utica, New York and Rolland Vincent Associates, LLC, of Plano, Texas.

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Since late 2010, JETNET has conducted quarterly surveys of the worldwide community of business aircraft owners and operators in order to gauge customer sentiment, brand perceptions, aircraft purchase, selling, and utilization expectations, and other factors. JETNET iQ Global Business Aviation Surveys are password-protected and by invitation-only. Potential respondents are drawn randomly from the JETNET worldwide database of business jet and business turboprop owners and operators; they are initially contacted by telephone and/or e-mail by JETNET's team of multilingual researchers. Target respondents include chief pilots, directors of aviation, and senior management. Each survey includes at least 500 respondents in 50 or more countries each quarter, and respondents closely reflect the worldwide distribution of the business jet and turboprop community.

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Tel: 315-797-4420, ext. 254

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## Appendix

### Data sources:

**Real GDP growth forecasts (2021):** The Economist – August 7, 2021

<https://www.economist.com/economic-and-financial-indicators/2021/08/07/economic-data-commodities-and-markets>

#### Stock Markets:

Dow Jones Industrial Average: <http://ca.spindices.com/indices/equity/dow-jones-industrial-average>

London Stock Exchange (FTSE 100): <https://www.londonstockexchange.com/indices/ftse-100>

Euronext Paris (CAC 40): <https://live.euronext.com/en/product/indices/FR0003500008-XPAR>

Frankfurt Stock Exchange (DAX 30): <https://www.boerse-frankfurt.de/indices/dax?mic=XETR>

**Initial Unemployment Claims:** Bureau of Labor Statistics (U.S.); <https://www.dol.gov/ui/data.pdf>; “SA” = seasonally adjusted

**Unemployment:** Bureau of Labor Statistics (U.S.); <https://www.bls.gov/news.release/pdf/empisit.pdf>

**Consumer Confidence:** University of Michigan Survey of Consumers (U.S.); <http://www.sca.isr.umich.edu>

European Commission (Euro Area) – Economic Sentiment Indicator; [https://ec.europa.eu/info/sites/info/files/full\\_bcs\\_2021\\_06\\_en.pdf](https://ec.europa.eu/info/sites/info/files/full_bcs_2021_06_en.pdf)

**Business Confidence:** U.S. ISM Manufacturing PMI (U.S.)

<https://www.ismworld.org/globalassets/pub/research-and-surveys/rob/pmi/rob202107pmi.pdf>

Eurostat (Euro Area); <https://ec.europa.eu/eurostat/databrowser/view/teibs010/default/table?lang=en>

[https://ec.europa.eu/eurostat/databrowser/view/ei\\_bsci\\_m\\_r2/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ei_bsci_m_r2/default/table?lang=en)

**Business aircraft fleet, deliveries, transactions, days-on-market (DOM), utilization:** JETNET; GAMA

**Survey results:** JETNET iQ Global Business Aviation Surveys (Quarterly)

**Photo credits:** Page 1 and 6 (top): PlaneSense; Page 6 (bottom): NetJets; Page 7: Jetfly Aviation; All other photos / images: Rolland Vincent Associates, LLC / JETNET iQ

### Definitions and Abbreviations:

For the purposes of these Reports, business aircraft may be classified into 4 primary categories, reflecting propulsion, price, performance, and weight class differences. These categories are: Turboprops (Single-Engine Turboprops - SETP and Multi-Engine Turboprops - METP), Small Jets (Personal Jets, Very Light Jets, Light Jets), Medium Jets (Super-Light Jet, Mid-Size Jet, Super Mid-Size Jet), and Large Jets (Large Jet, Large Long-Range Jet, Large Ultra Long-Range Jet, Airline Business Jet). The “Personal Jet” category includes single-engine turboprop-powered models, today represented by the Cirrus Vision Jet.

B&GA: Business & General Aviation  
EIS: Entry in Service  
FBO: Fixed Base Operator (private air terminal)  
FTSE: Financial Times Stock Exchange (London)  
GAMA: General Aviation Manufacturers Association  
GDP: Gross Domestic Product

HNWI: High Net Worth Individual  
MTOW: Maximum Takeoff Weight  
NGO: Non-Governmental Organization  
OEM: Original Equipment Manufacturer  
QOQ: Quarter over Quarter  
QTD: Quarter to Date

S&P: Standard & Poor's  
TTM: Trailing Twelve Months  
WHO: World Health Organization  
YOY: Year over Year  
YTD: Year to Date

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