

- 1 Editorial
- 2 Outlook
- 3 Business Conditions
- 4 Mood of the Market
- 5 Pre-Owned Business Aircraft Inventory for Sale – Jets and Turboprops
- 6 Pre-Owned Business Aircraft Inventory for Sale by Size Category
- 7 Pre-Owned Business Jet Transactions and Inventory
- 8 About JETNET iQ
- 9 Appendix

Lean On Me

Almost 50 years after Bill Withers wrote and recorded his timeless R&B classic *Lean On Me*, the song now resonates more than ever with its messages of resilience and fortitude in the face of hardship. While no one has yet followed Bill's unique career path – from a day job as an assembler of aircraft toilets to triple-Grammy Award winning performing artist – his unquestionable success is both an inspiration and clarion call for those listening: to remember your roots and reach out to help someone in need.

While we can be thankful that business aviation as an industry is performing comparatively well during the global pandemic, we know that wave after wave of COVID-19 variants instill fear into markets and disrespect man-made jurisdictional boundaries. With troubling gaps in national and regional vaccination rates, is it any wonder that the latest Omicron variant was first detected in southern Africa?

While government and NGO aid programmes are instrumental in distributing life-saving vaccines to the developing world, Africa stands out as an entire continent in need of much more help than it is getting in the fight against COVID-19. With fears of a virulent Omicron strain driving a sudden shutdown of international airline flights, much of southern Africa has instantly become even

further isolated from everywhere else. Now, and as before, business and general aviation service providers are at the leading edge in providing much-needed access to some of the world's hardest-to-reach places. With just 1,300 of the world's fixed-wing turbine business aircraft fleet, representing about 3% of the world fleet, Africa understandably doesn't get much of our industry's spotlight. But headline numbers – as with headlines themselves – can be misleading.

The origin of humanity, a global center of biodiversity, and home to the world's youngest and most genetically diverse human population, the contributions of Africa and its 1.4 billion people don't always get the appreciation they deserve in the more economically developed world. Business and general aviation is playing a vital role at the forefront in delivering desperately needed humanitarian aid, medicines and equipment, and access to health experts where they are needed most. Although it is doubtful that Bill was even thinking of aviation when he composed *Lean On Me*, what a welcome sight it must be to see help arriving when and where it is needed most.

*"I'll be your friend
I'll help you carry on...
For it won't be long
Till I'm gonna need
somebody to lean on."*

Rollie Vincent
JETNET iQ Creator/Director



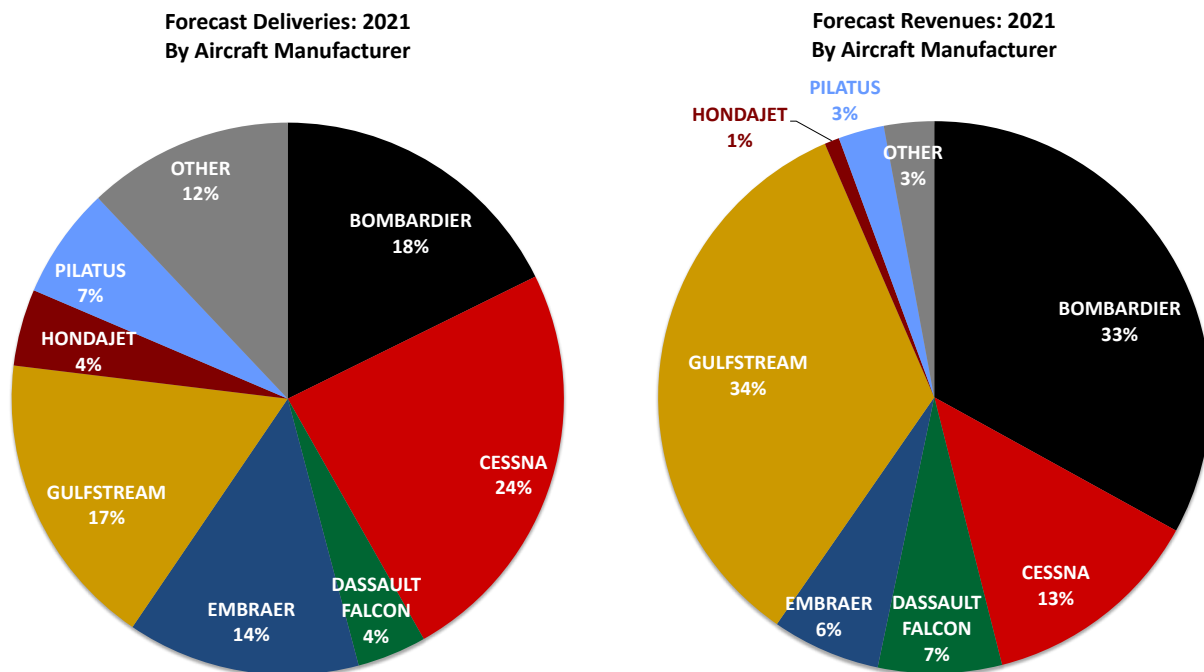
Outlook

We expect that business jet manufacturers will deliver just shy of 700 new business jets in 2021, up ~11% over the COVID-reduced levels of 2020. Year-over-year delivery volume increases will be broad-based across all aircraft size categories, led by a resurgent Textron Aviation. Would-be buyers of late-model pre-owned aircraft have had few if any good alternatives to select from for much of the past 12+ months, further bolstering OEM sales in an environment of stronger pricing. For the OEMs, 2021 has been and will continue to be a year to long remember, when orders were well in excess of deliveries, and firm order backlogs were replenished. Challenges in matching demand with available supply – “Step right up and reserve your 2023 delivery positions, ladies and gentlemen – are a sign of the times (the good times) that manufacturers have been facing, most for the past 16-17

months. Working with suppliers to accelerate production and/or to transition out of older models is a recurring challenge for most OEMs, who not that long ago were metering down aircraft build rates and furloughing personnel to manage through the COVID crisis.

With still limited visibility into OEM production plans for 2022, our recently updated outlook is for ~770 jet deliveries next year, up a further 12% over where we believe this year will end. Further production rate increases are on the horizon, bolstered by robust demand signals, but constraints driven by highly competitive labor markets throughout the aerospace supply chain represent tangible limits to growth that are a front-and-center focus of management.

JETNET iQ 2021 Business Jet Delivery Forecast – Units and Revenues



Source: JETNET iQ Q3 2021 Report and Forecast including single-engine Personal Jets

Business Conditions

GDP

The Economist's **GDP growth forecasts** for 2021 are: U.S. +5.5%, Euro Area +5.0%, U.K. +6.4%, Mexico +6.1%, Brazil +5.0%, Canada +5.4%, China +7.9%, Russia +4.2%, and Australia +3.8%



Business jet cycles (take-offs and landings) in October 2021 were up by 19% YOY for U.S. Part 91, up by 115% YOY for U.S. Part 91K, up by 61% YOY for U.S. Part 135, and up by 76% for European EASA 145 operations



Dow Jones Index (U.S.) was up 18%,
FTSE 100 (U.K.) was up 13%,
CAC 40 (France) was up 23%, and
DAX 30 (Germany) was up 15%
YOY from Nov. 30, 2020 to Nov. 30, 2021



U.S. Index of **Consumer Sentiment** was 67.4 in Oct. 2021 vs. 71.7 in Sept. 2021 and 76.9 in Nov. 2020 YOY;
Euro Area **Economic Sentiment Indicator** was 116.5 in Nov. 2021 vs. 118.6 in Oct. 2021 and 88.6 in Nov. 2020



U.S. unemployment rate (seasonally adjusted) was 4.6% in October 2021 representing ~7.4 million unemployed people, down 255,000 from Sep. 2021 (4.8%)



U.S. **Purchasing Manager Index** (Manufacturing PMI) was 60.8 in Oct. 2021 vs. 61.0 in Sep. 2021 and 59.3 in Oct. 2020;
Euro Area **Business Climate Indicator** was 1.80 in Nov. 2021 vs. 1.75 in Oct. 2021, and -0.67 in Nov. 2020



Transactions of pre-owned business aircraft in Jan.-Sep. 2021 were 2,416 jets and 1,226 turboprops, up 44% and up 35% YOY (JETNET as of Nov. 30, 2021)



Business aircraft deliveries in 2021 YTD are 504 jets (including Cirrus, Boeing, Airbus) and 244 turboprops (JETNET as of Nov. 30, 2021)

Mood of the Market

The mood of the worldwide business aircraft owner / operator community so far in Q4 2021 remains very optimistic. Net Optimism, the difference in the percentage of respondents who believe that we are past the low point in the current business cycle less those who believe we have not yet reached the low point, is ~61% in Q4 2021 as we near the halfway mark in respondent recruiting to the Q4 2021 JETNET iQ Global Business Aviation Survey.

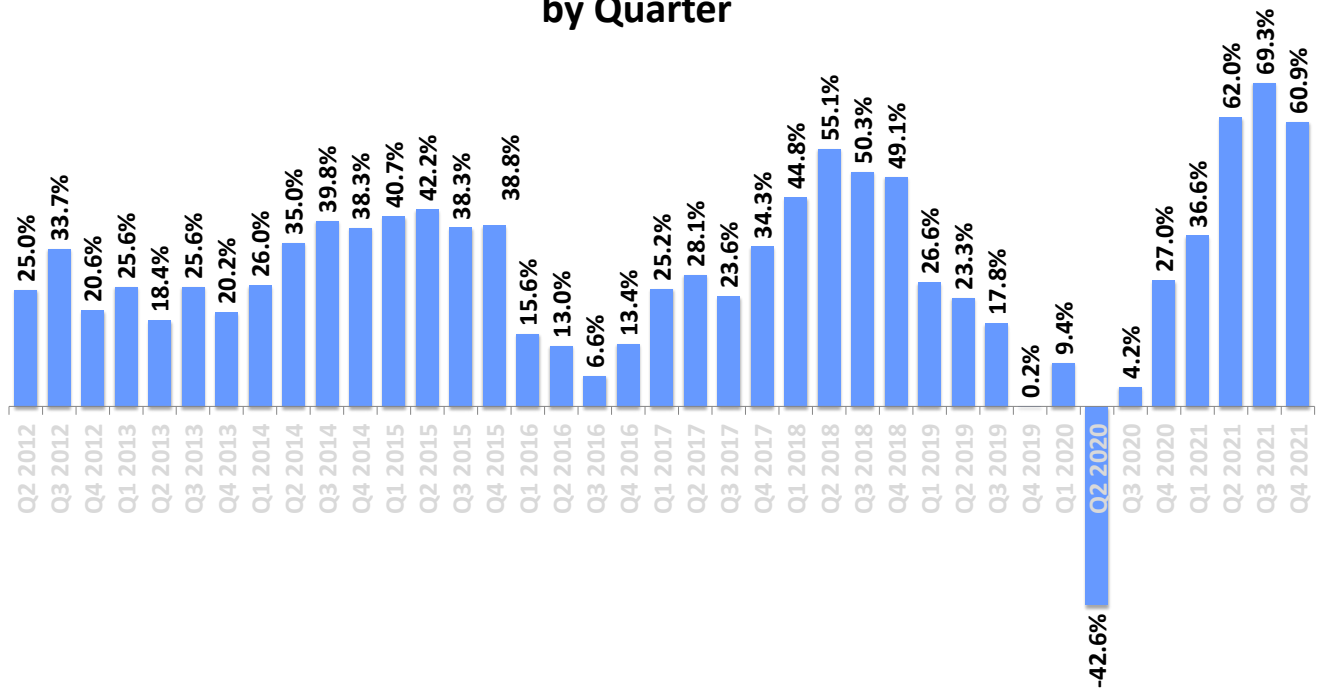
“Optimists” are outnumbering “Pessimists” by a factor of 4.8-to-1 so far in Q4 2021, a strong indicator but substantially lower than the ~9-to-1 result registered in Q3 2021. With the Omicron variant only reported to the WHO on November 24, 2021, we will be

closely monitoring the Q4 2021 dip in owner / operator optimism as additional Survey responses are gathered in the remaining few weeks of this year. Whether the Omicron variant is as dangerous to human health as it is transmissible, and whether governments’ quick policy response to invoke travel shutdowns is appropriate and measured, remains to be seen. In the meantime, the Delta variant, slow-to-recover supply chains, tight labor markets, and spiking inflation make for not-so-restful bedtime reading for leaders of government and industry. For now, the “really good times” in the current upswing provide opportunities to rebuild and strengthen our businesses for the inevitable up-and-down swings of our cyclical market.

Business Aircraft Owner / Operator Sentiment

JETNET iQ Q4 2021 JETNET iQ Global Business Aviation Survey (in progress)

Overall Worldwide Net Optimism by Quarter



Source: JETNET iQ Q4 2021 Global Business Aviation Survey of 221 business aircraft owners / operators to date (~44% reporting on the way to 500+ respondents expected); survey is in progress with expected completion by the end of 2021

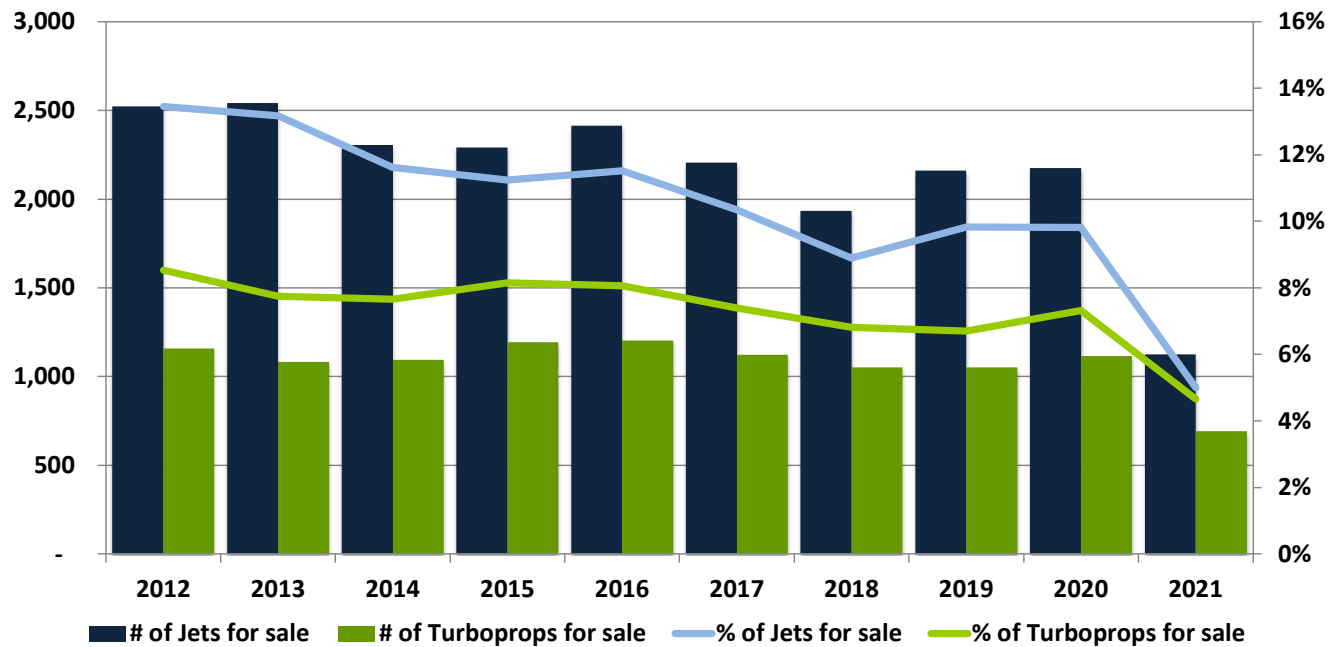
Pre-Owned Business Aircraft Inventory For Sale – Jets and Turboprops

The synchronized drop off in inventory for sale, both in nominal and in fleet percentage terms, has been a hallmark of business aviation in the COVID-19 era. The slow decline in inventory, temporarily reversed in 2020, has markedly accelerated in 2021, particularly in the case of pre-owned jets. Less than 1,000 jets and 650 turboprops across all models, size categories and age classes were available for sale at publication deadline, representing about 4.3% of jets and 4.1% of the turboprop fleet in service. These are historically low levels of availability, unprecedented in more than 25 years of JETNET data collection and analysis.



Business Jets and Turboprops For Sale as Percentage of Fleet
September 2012 - September 2021

Business Jets and Turboprops for sale
September 2012 - September 2021



Source: JETNET / JETNET IQ analysis

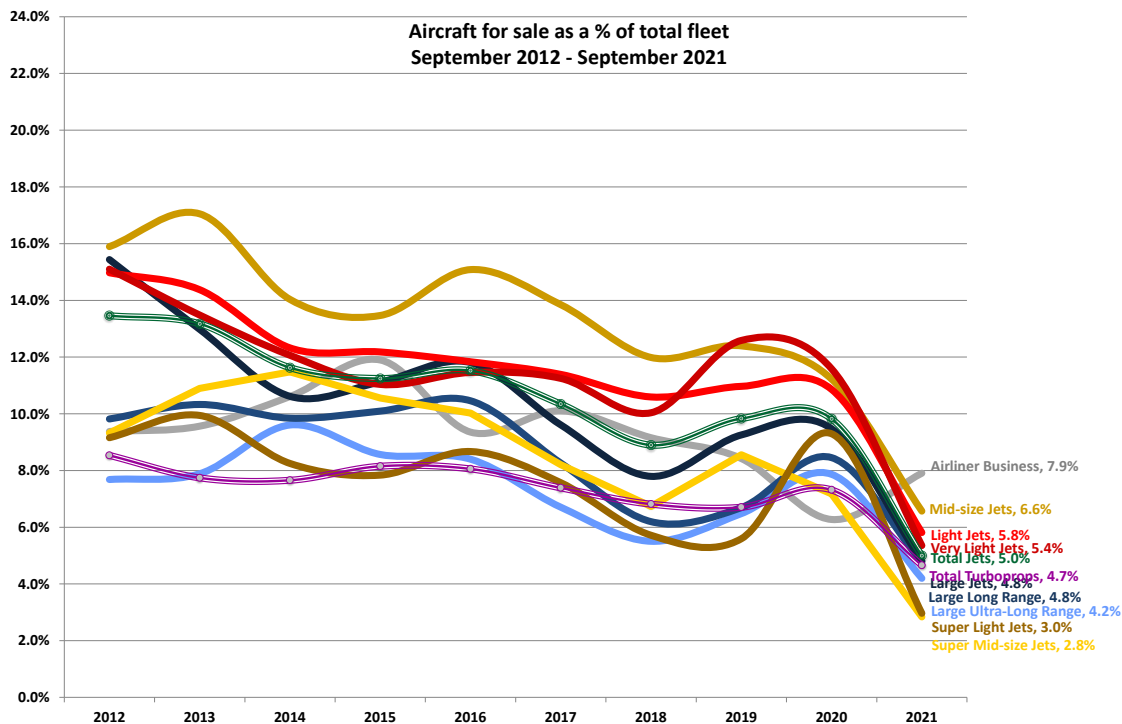
Pre-Owned Business Aircraft Inventory For Sale by Size Category

Since mid-2020, the synchronized drop in pre-owned business aircraft inventory available for sale has been unprecedented. With the sole exception of the Airliner Business Jet category, all size segments have tightened simultaneously as buyer demand in the COVID-19 era has surged. Aircraft originally delivered within the past 5 years are essentially harder to find than the proverbial needle in a towering Kansas haystack. Asking (and getting) prices have increased across the board, supporting stronger residual values and

temporary conditions whereby some pre-owned aircraft are trading at higher than 100% residuals. This is a classic condition of a bubble market; the good news this time around is that OEM production rates have not accelerated as they did in 2007/2008, held back by a combination of diminished supply chain capacities and cautious management teams happy to oversee stronger pricing and backlog replenishment after a long period of slow to no growth in either of these key performance metrics.



Business Jets For Sale as Percentage of Fleet by Size Category Through End of September 2021



Source: JETNET / JETNET IQ analysis

Pre-Owned Business Jet Transactions and Inventory

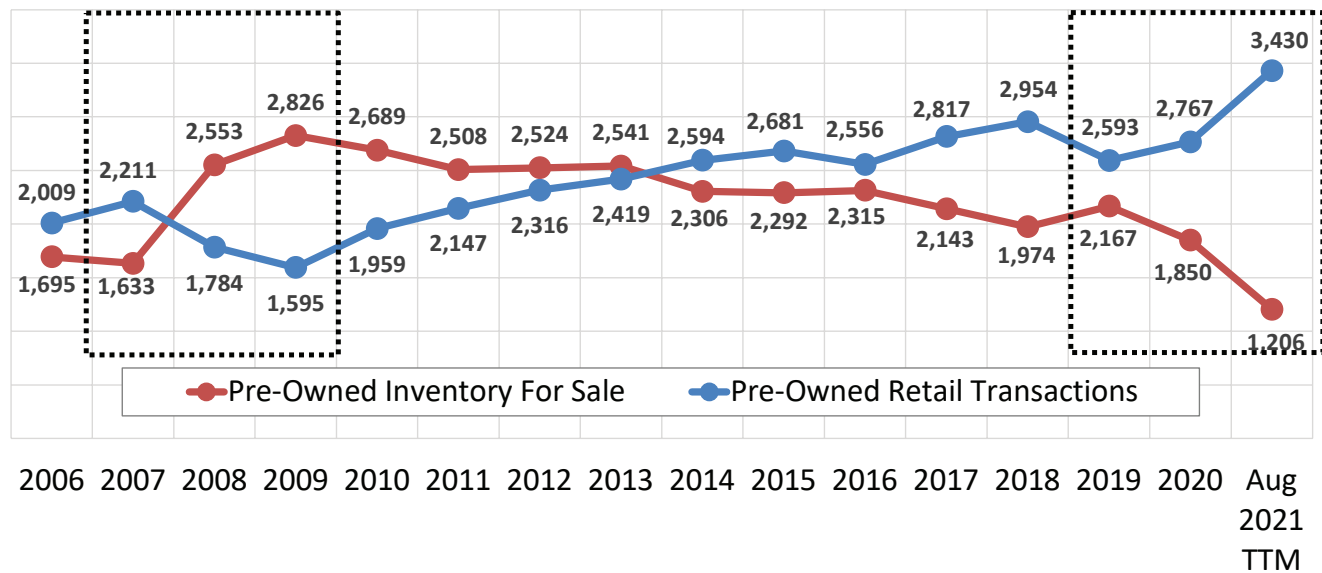
Today's pre-owned business jet market is in many ways the mirror-opposite of that in the 2008-2009 period of the Global Financial Crisis and recovery. At that time, inventory spiked, demand faltered, prices / residual values plunged, and the image of business aviation was damaged. Today, the opposite is basically true. At the time of publication, just 999 business jets were listed as for-sale or lease in

the JETNET database, representing just 4.4% of the in-service fleet. This is the lowest inventory level measured by JETNET in at least 25 years of collecting these sorts of data. For OEMs and aircraft sellers, today's good times are a pleasant development in a dynamic marketplace since Q1 2020.



Business Jet Transactions and Inventory Trends
2006 – 2021 Through August (TTM Basis)

**Pre-Owned Business Jet Inventory
and Pre-Owned Whole Retail Transactions - Worldwide**



Source: JETNET / JETNET IQ analysis; TTM = Trailing Twelve Months

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 Advisory** 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.

Material in this publication may not be reproduced, stored in a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise) without the prior written permission of the publisher.

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.

For more information on JETNET iQ, please contact:

Rolland Vincent, JETNET iQ Creator/Director

Tel: 1-972-439-2069

e-mail: rollie@jetnet.com

To subscribe to JETNET iQ Reports or inquire into sponsorship of JETNET iQ PULSE, please contact:

Paul Cardarelli, JETNET Vice President of Sales

Tel: 315-797-4420, ext. 254

e-mail: paul@jetnet.com

Appendix

Data sources:

Real GDP growth forecasts (2021): The Economist – November 27, 2021

<https://www.economist.com/economic-and-financial-indicators/2021/11/27/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/empst.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_08_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

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

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

Photo / Image credits: 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

Disclaimer:

Certain statements in this report constitute forward-looking statements or statements which may be deemed or construed to be forward-looking statements. The words "forecast", "anticipate", "estimate", "project", "intend", "expect", "should", "believe", and similar expressions are intended to identify forward-looking statements. These forward-looking statements involve, and are subject to known and unknown risks, uncertainties and other factors which could cause actual results, performance (financial or operating) or achievements to differ from the future results, performance (financial or operating) or achievements expressed or implied by such forward-looking statements. These forward-looking statements are based on beliefs, assumptions and estimates based on information currently available to JETNET LLC (JETNET), and are subject to certain risks and uncertainties that could cause actual results to differ materially from historical results or those anticipated, depending on a variety of factors, including: significant disruptions in air travel (including as a result of terrorist acts), regulatory and tax changes, labor disruptions, currency exchange rate fluctuations, aerospace program development and management risks, aerospace supplier and customer financing issues, economic and aviation/aerospace market stability, competition, consolidation and profitability. Should one or more of these risks or uncertainties materialize adversely, or should underlying assumptions or estimates prove incorrect, actual results may vary materially from those described. All forward-looking statements attributable to JETNET and its officers, directors, shareholders, employees, agents, and affiliates herein are expressly qualified in their entirety by the abovementioned cautionary statement. JETNET disclaims any obligation to update forward-looking statements contained in this report, except as may be required by law. JETNET makes no representations or warranties concerning the accuracy and adequacy of any data, analyses, forecasts, or reports it provides, and shall not be liable, in any manner, for the Customer's reliance on this information. In no event shall JETNET be liable for any direct, indirect, special or consequential damages in connection with or arising out of furnishing data, analyses, forecasts, or reports to the user.

➤➤ ELEVATE YOUR iQ

JETNET iQ: A Market Research, Strategy, and Forecasting Service For Business Aviation, in Three Components:

- JETNET iQ Reports: Definitive analytical references incorporating state-of-the-industry analyses, owner/operator surveys, and detailed multi-year forecasts.
- JETNET iQ Summits: Thought-leadership forums providing state-of-the-market perspectives and networking opportunities.
- JETNET iQ Consulting: Customized research and analysis for clients requiring proprietary insights.



➤➤ KNOW MORE.

The World Leader in Aviation Market Intelligence
800.553.8638 +1.315.797.4420 jetnet.com