

AircraftBluebook⁷

MARKETLINE

WINTER 2017 / VOL. 30 / ISSUE 4



GULFSTREAM G550

Market at a Glance

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Photo courtesy Gulfstream Aerospace

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Photo courtesy Embraer

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Situational Awareness

Business Jet Recovery Ahead, Forecast International Says

Molly McMillin reports in *The Weekly of Business Aviation*: Forecast International says it expects annual business jet production to increase from 647 aircraft in 2017 to 799 in 2020. Production is projected to slightly decline in 2021 and 2022 due to cyclical economic factors and quickly rebound in 2023. Annual output is then expected to rise steadily to 957 business jets by the year 2030, Forecast International said.

“Some segments of the business jet market have already been experiencing growth, as annual production of light and midsize jets has risen since 2013,” Forecast International senior aerospace analyst Raymond Jaworowski said. “This growth is expected to continue in the years ahead.”

Production of larger business jets has declined since 2013 but is expected to improve in the coming years, the forecast said.

Read more in *The Weekly of Business Aviation*.

Used Business Jets, Turboprops for Sale Decline in September

Molly McMillin reports in *The Weekly of Business Aviation*: The number of pre-owned business jets on the market declined in September, though it remains a buyer’s market, said JetNet, which released September and year-to-date figures on Oct. 30.

The percentage of the business jet fleet for sale declined to 10.4 percent in September from 11.5 percent a year ago.

“This is very good news, but we are just above the 10 percent line and still in a buyer’s market,” JetNet said. The number of pre-owned business jet sale transactions totaled 1,946 in the first nine months of 2017, a 5.9 percent increase over the same time a year ago.

Business jets are taking the same time to sell compared to a year ago with 313 average days on the market.

The number of business aircraft, helicopters and commercial airliners for sale fell to an average of 5.9 percent of the total fleet in September from 6.4 percent a year ago, with 6,060 for sale. For the first nine months of 2017, the number of transactions for all sectors totaled 6,576, with aircraft taking an average of 424 days to sell, up by 17 days from a year ago. Used turboprops spent an average of 309 days on the market, up 13 days from a year ago, while used turbine helicopters spent an average of 487 days on the market, up 50 from a year ago. Piston helicopters spent an average of 385 days on the market, up 44 days.

The number of business turboprop transactions declined 10.2 percent during the first nine months of 2017 with 911 sold. The percentage of the turboprop fleet on the market totaled 7.4 percent in September, down from 8.1 percent a year ago.

Read more in *The Weekly of Business Aviation*.

Used Business Jets for Sale, Pricing Decline in November

Molly McMillin reports in *The Weekly of Business Aviation*: The number of used business jets for sale in November declined 6 percent year-over-year, driven by a 19 percent reduction in the number of heavy jets on the market, according to a survey released by Jefferies.

The activity may be partly driven by lower prices, with pricing falling 14 percent on average compared to a year ago, the survey said.

“With the available fleet for sale as a percentage of the active fleet at nearly 20-year lows, the headwind for new jet sales from discounted used jets may start to evaporate once pricing improves,” Jefferies analyst Sheila Kahaoglu wrote in a note to investors.

The number of business jets for sale in November totaled 1,827, or 8.1 percent of the total fleet, including all models and vintages. The number is down slightly from 1,865 in October.

Heavy jet inventories fell 19 percent from a year ago, while medium jet inventories declined 3 percent and light jet inventories increased 1 percent.

Read more in *The Weekly of Business Aviation*.



Current Market Strength

CMS represents an aircraft's current strength in the market. An A+ rating indicates the aircraft is enjoying a very firm market. Prices for an A+ aircraft are steadily rising, and holding times are very short or nonexistent. At the opposite end of the spectrum, a C- aircraft is one

experiencing a very soft market. Its price is commonly discounted, and it often sets on the ramp in excess of eight months before selling. It is important to remember that Current Market Strength is not a forecast. It is valid only at Marketline's effective date of release.

2007/2008 Model	CMS	2007/2008 Model	CMS	2007/2008 Model	CMS
Beech Premier 1A.....	B-	Gulfstream G200.....	B	Cirrus SR22-G2.....	A-
Bombardier Global XRS.....	B+	Gulfstream G150.....	B	Cirrus SR20-G2.....	B+
Bombardier Challenger 604.....	B-	Hawker 800XP.....	B	Diamond DA40-180XLS Star.....	B
Bombardier Challenger 300.....	B	Hawker 400XP.....	C	Diamond DA20-C1 Eclipse.....	B-
Bombardier LearJet 60XR.....	B-	Beech King Air 350.....	A	Mooney M20TN Acclaim.....	B+
Bombardier Learjet.....	B+	Beech King Air B200.....	A	Mooney M20R Ovation.....	B+
Cessna Citation X.....	B-	Beech King Air C90GT.....	A	Piper PA46-350P Mirage.....	B+
Cessna Citation XLS.....	B	Cessna 208B Grand Caravan.....	A	Piper PA34-220T Seneca V.....	B+
Cessna Citation CJ3.....	A	Piaggio P180.....	B	Piper PA28R-201 Arrow.....	B
Cessna Citation CJ2.....	A	Pilatus PC-12/47.....	B	Piper PA28-181 Archer III.....	B
Dassault Falcon 900.....	A-	Piper PA46-500TP Meridian.....	B+	Evektor Sportstar (LSA).....	B-
Dassault Falcon 50EX.....	B-	Socata TBM850.....	B	Flight Design CTLS (LSA).....	B-
Dassault Falcon 2000EX.....	B+	Beech 58 Baron.....	B	Agusta A109 Grand.....	B-
Embraer EMB-135 Legacy.....	A-	Beech A36 Bonanza.....	A-	Bell 206 L-4.....	B+
Embraer Phenom 100.....	A	Cessna T206H Stationair.....	A-	Eurocopter AS350-B3.....	B-
Gulfstream G550.....	A-	Cessna 182T Skylane.....	A-	Robinson R44 Raven II.....	A
Gulfstream G450.....	A	Cessna 172S Skyhawk.....	A-	Sikorsky S-76C++.....	B-

OEM Updates from The Weekly of Business Aviation

- Total general aviation aircraft deliveries and billings decreased slightly in the third quarter compared to the same period in 2016, according to the General Aviation Manufacturers Association. By category, more business jets and piston aircraft were delivered in the third quarter of 2017 than the third quarter of 2016. Manufacturers delivered fewer turboprops and helicopters in the third quarter of 2017 compared to the third quarter of 2016. Nevertheless, year-to-date aircraft deliveries have increased 1.7 percent compared to totals through the third quarter of 2017. Bombardier delivered 31 business jets in the third quarter, which is down from 36 in 2016. Embraer delivered 20 aircraft, less than the 25 delivered one year ago. Gulfstream delivered 30 jets, three more than its third quarter 2016 figure. Textron Aviation delivered 32 Beechcraft aircraft, fewer than the 39 deliveries a year ago, and it delivered 116 Cessna aircraft, down from 129 in 2016.

- **Gulfstream Aerospace** has hit a “familiar drumbeat” during the past several quarters and several years, Jason Aiken, SVP and CFO of General Dynamics, Gulfstream’s parent company, said on a conference call with analysts in late October.
- **Bombardier** is on track to deliver 135 business jets in 2017. The manufacturer believes that number will be the low point, CEO Alain Bellmare told analysts in November. “We are seeing some good signs, especially in the U.S., across the full product range from the Challenger 350 to the Global 6000,” he said. “The rest of the world is pretty much unchanged right now, so we believe that there is upside potential in coming years.”
- On the **Textron Aviation** third-quarter earnings call, chairman and CEO Scott Donnelly said the company is holding the line on new product pricing even if it means missing out on some sales. “We will trade volume for price,” he said. Used business jet pricing levels remain too low despite a decline in the number of used aircraft on the market, he said.

Used Aircraft Report: Embraer Phenom 100EV

Third-generation light jet is plusher, peppier and heavier

By Fred George | Senior Editor/Chief Pilot | *Business & Commercial Aviation*



Photo courtesy Embraer

Embraer had made significant improvements to the Phenom 100EV, short for 100 Evolution, that are aimed at helping it rise above the flood of entry-level light jets in the pre-owned market. Upgrades include peppier Pratt & Whitney Canada PW617F1-E turboprops, rated at 1,730 lb. thrust for takeoff and offering up to 15 percent more thrust for hot-and-high takeoffs. The newest Phenom 100 cruises up to 9 percent faster than the Phenom 100E, reaching 412 KTAS at FL 300 and 360 KTAS at FL 410.

With four people aboard, the aircraft can depart Toluca, Mexico, at 25C and fly nearly 1,200 nm, or more than four times the range of the second-generation Phenom 100E. Departing Denver on a 30C day, the aircraft can fly 1,200 nm with the same payload, which is almost 50 percent more range than that of the earlier aircraft.

Cockpits now feature Prodigy Touch, the same kit as on the latest Phenom 300s. It's powered by Garmin G3000 avionics having triple 14.1-in. displays vs. 12.4-in. displays for older models. The new aircraft has twin touch-screen controllers, a solid-state

weather radar and standard VNAV. Doppler turbulence detection, ground clutter suppression, Garmin Surface-Watch and reactive wind-shear warning are options.

The Phenom 100EV retains all the assets of earlier models, including a 35,000-hr. economic life, central maintenance computer for speedy diagnostics, oval lite cabin cross-section with 212 cu. ft. of volume and a 53-cu.-ft. aft external baggage compartment.

Interiors have been upgraded with better acoustical insulation, furnishings are plusher, and sidewall power outlets, now upgraded with USB power jacks, have been relocated for easier access. But all this adds weight, so Embraer bumped up maximum operating weights by as much as 121 lb.

Embraer says a spec Phenom 100EV has a 7,297-lb. single-pilot BOW. Operators say it's closer to 7,500 lb. for typically equipped aircraft, so the EV actually has a lower useful load than some previous models. Tanks-full payload is a scant 442 lb. Each additional 200-lb. passenger cuts range by 90 to 110 mi.

The Embraer Phenom 100EV potentially will be one of the best deals on the pre-owned market. It offers a roomy cabin, increased speed, operating efficiency and jetliner-like dispatch reliability.

The stronger engines cut time to climb to FL 370 from 24 min. to 19 min., and to FL 410 from 33 min. to 25 min. But they're also thirstier at high thrust settings. Plan on burning 950 to 1,000 lb. during the first hour and 700 lb. the second and third hours. You can still stretch range to 1,178 nm, but you'll have to throttle back to 340 KTAS to land with NBAA IFR reserves.

Brake Control Unit software revision 7 enhances stopping performance and inspires more confidence in the system. Standard automatic spoilers help keep the aircraft planted on the

pavement for better braking action, but operators say there's still room for improvement.

Pratt & Whitney ESP Gold rates are \$138 per engine per hour. Embraer Executive Care typically runs about

\$2,400 per month, plus \$229 per hour. Overall fuel burns are close to 850 lb. per hour.

The entry-level light jet market still is awash in inventory and the flood isn't going to recede anytime soon. That creates some great bargains for used aircraft buyers. The Embraer Phenom 100EV potentially will be one of the best deals on the pre-owned market. It offers a roomy cabin, increased speed, operating efficiency and jetliner-like dispatch reliability.

Embraer flooded the light jet market by delivering more than 300 aircraft from entry into service in late 2008 until production stagnated in 2013. The second-generation Phenom 100E boosted demand from 2013 to 2016. And now the third-generation 100EV is poised to debut on the pre-owned market.

It's easy to fly, quite roomy for a light jet, fuel efficient and relatively fast for its class. Embraer's support is top notch, rating second only to Gulfstream's support on some surveys. Basic maintenance intervals are 600 hr. or 12 months, whichever comes first. Average utilization is 200 hr. per year, according to Aircraft Bluebook, so most owner-operators only visit maintenance facilities once per year. Scheduled 600-hr./12-month inspections are becoming progressively more involved and expensive, culminating in the 2,400-hr./48-month inspection. Landing gear overhauls are due at eight years and the cost has yet to be determined. Engine maintenance intervals are 1,750 hr. for HSI and 3,500 hr. for TBO.

Embraer's spare parts prices have escalated in recent years. It's advisable to enroll in Embraer Executive Care (parts) or EEC+ (parts + labor) to contain costs. Watch out, though, for a steep increase in EEC rates after the five-year warranty expires.

As the Phenom 100EV becomes widely available on the pre-owned light jet market, resale prices are likely to soften. Patience on the part of used light jet buyers will be rewarded.

This aircraft report appears in a similar form in the September 2017 issues of Business & Commercial Aviation magazine.



Photo courtesy Nigel Prevett



Photo courtesy Embraer



Photo courtesy Embraer

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Gulfstream G550

Thirty of the 550 G550s in the fleet have sold in the last year

By Chris Reynolds, ASA | Editor/Aircraft Appraiser | *Aircraft Bluebook*

Aircraft Bluebook At-a-Glance has reviewed the current market status of the Gulfstream G550 business jet. Research for this study was obtained in part from Aircraft Bluebook, Aircraft Bluebook's Historical Value Reference, the FAA's registry web site and various trade services.

Demand

The G550 fleet sits at approximately 550 active aircraft. At the time of this writing, approximately 20 to 25 G550s, representing approximately 4.5 percent of the active fleet, were reported for sale. Over the last year, approximately 30 sales appear to have occurred with the days on market ranging anywhere from 200 to 300+ days.

Pricing

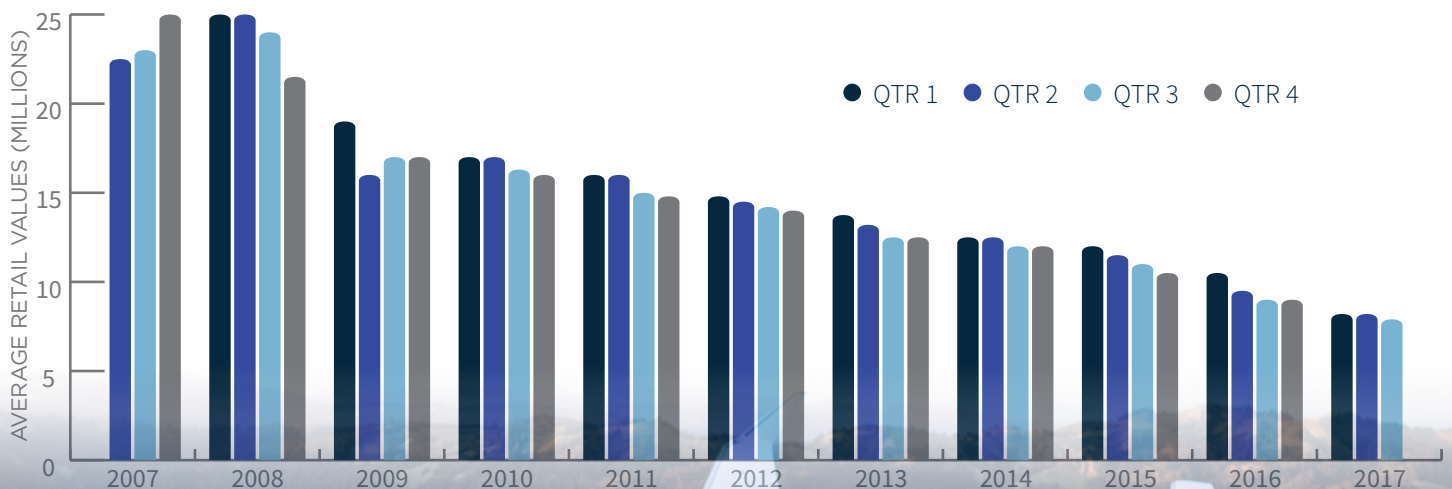
Current offerings in the G550 market range from \$15 million to \$37 million. Airframe time varies from 1000 hours to greater than 10,000 hours, depending on the year-model. Equipment including upgrades, such as FANS, time/condition, heavy maintenance checks, and engine

maintenance programs can significantly affect time on market and marketable value. (Aircraft Bluebook prices the G550 enrolled on Rolls-Royce Corporate Care.) For the winter 2017 Aircraft Bluebook, a 2007 Gulfstream G550 had a reported Average Retail Value of \$17 million, which represented no change from the previous quarter's Average Retail Value and represents a 15 percent decrease in value from the winter 2016 Aircraft Bluebook.

Historical Values

A 2007 Gulfstream G550, whose market values have been tracked since the second quarter of 2007, was reported new with an average equipped price of \$54 million. Aircraft Bluebook's Historical Value Reference demonstrates the Gulfstream G550 market value performance by quarter in the graph for this 2007 model. The average retail value of this 10-year-old aircraft in the winter 2017 edition of Aircraft Bluebook represents approximately 31 percent of its new equipped price.

Other historical values can be obtained at Aircraft Bluebook's website, www.aircraftbluebook.com.



Ups and Downs

Jet transactions increase; values continue to decrease

By Carl Janssens, ASA | Chief Appraiser | *Aircraft Bluebook*

Another year in the bucket, one more in the history books, another chapter ending. These phrases describe inevitable, inertial change, and they sum up the used business aircraft market at the end of 2017.

For business aviation, as far as Aircraft Bluebook is concerned, 2017 was a year of continued growth. Growth in the pre-owned business jet segment can be measured by the number of changes in ownership (sales) that have occurred compared to previous years.

The number of business jets sold in the resale market year over year has increased over the last five years, according to Dennis Rousseau of AircraftPost. In 2012, there were 413 pre-owned business jet sales. In 2015, there was a total of 593 sales. In 2017, there were 801 sales. The sales involved both current production and out-of-production business jets tracked by AircraftPost.

Keep in mind the change in total transactions is not an economic indicator of value retention. On the contrary, although the number of sales has increased, business jet values, predictably, continue to depreciate.

To understand value retention and reported depreciation trends over this period, one only needs to refer to the values of any business jet in the Historical Value

Reference option in the online or CD version of Aircraft Bluebook or to study the graphs in this issue.

In general, the following statements summarize the activity in the jet and turboprop categories reflected in values published in Aircraft Bluebook:

- Transactions have improved dramatically, and values continue to move downward.
- Although pricing isn't holding, some models are selling well.
- On any given day, you can expect typical depreciation.
- Financing does not seem to be an issue for a North American or Western European buyer, as long as the buyer has proper credit.

Piston and helicopter activity remains somewhat stable. Time and condition are key factors in value retention. For airframes in excess of 25 years in age, modifications and cosmetics will have a greater impact on value.

Rousseau of AircraftPost has tracked time-sensitive sales of 10,350 make/model/year/serial number-specific aircraft among more than 55 current-generation business jet models, ranging in size from Lear 40 to the large-cabin Gulfstream G650. Make sure to read his 2017 year-end summary for business jets through the lens of AircraftPost. You'll find it on the following pages.

Average Retail Values of Individual Model-Years Compared to Previous Quarter

Jet	Turboprop	Multi	Single	Helicopter
Increased 0	Increased 10	Increased 38	Increased 134	Increased 0
Decreased 248	Decreased 101	Decreased 11	Decreased 176	Decreased 289
Stable 903	Stable 569	Stable 652	Stable 2452	Stable 978

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Year in Review

Mixed metrics mean market has not stabilized

By Dennis Rousseau | President and Founder | AircraftPost

The current market status and forecast halls have been filled with rhetoric over the last few months. As we bring 2017 to a close, let's review the numbers.

Inventory

The fact is 1,783 current-generation business jets, representing 17.2 percent of the fleet, came on the market in 2017 (as of Dec. 15). This figure compares to 1,699 (16.8 percent) in 2016 and 1,453 (15.1 percent) in 2015 and is a clear indication that inventories are increasing year over year.

As is the case when viewing inventories of most anything, the actual number on the market is only one side of the equation. When the number of aircraft on market is expressed as a percentage of the total aircraft in ser-

vice, the dynamics of the market are seen from a more realistic perspective. As the percentage of the fleet on the market increases, pricing tends to follow a downward trend. This phenomenon has certainly been the case for 2017.

Aircraft Brought on the Market and Then Withdrawn

One data point that seems to be overlooked yet is quite relevant in determining the health of pre-owned sales is the number of aircraft brought on the market and then withdrawn. Ten years ago, 2.9 percent of the aircraft that came on the market were subsequently withdrawn. In 2015, that number was 10 percent, representing 145 aircraft. Then, the number increased to 12 percent (204 aircraft) in 2016. For 2017, 14.6 percent (261 aircraft) of aircraft on the market were subsequently withdrawn.



Days on the Market

Days on the market (DOM) has always been a reliable indicator relative to the state of our markets. Over the last 10 years we have seen a low of 140 DOM in 2008 and a high of 310 in 2010. For 2017, 304 DOM as of Dec. 15 is approaching the results of 2010.

An increase in inventory and DOM does not bode well for market stabilization.

Transactions

With regard to transactions, 2017 has shown a 15 percent increase in the number of pre-owned aircraft sold compared to 2016 — 732 versus 620, respectively. However, as previously mentioned, price declines are typically tied to increased inventories.

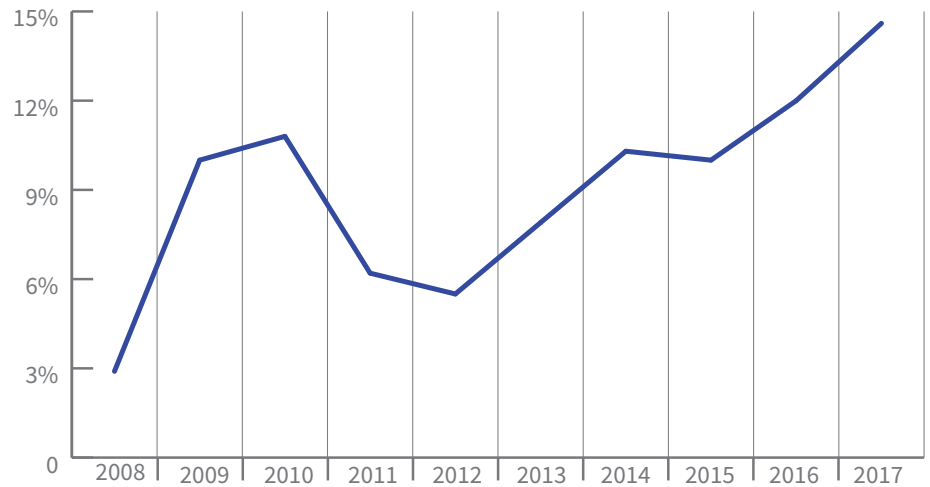
By way of example, all things being equal, a 2009 Hawker 900XP sold for \$4.9 million in 2016, and, by 2017, the same vintage aircraft sold for \$3.8 million, showing a decline of 22 percent in one year!

A 2008 Gulfstream G550 sold for \$32.1 million in 2015, \$26.1 million in 2016 and \$20.6 million in 2017, losing 35 percent of its value in three years! So as not to cherry pick, a 2013 Bombardier Global 6000 lost 35 percent in the same three-year period. A 2009 Falcon 900 EASy and 2014 Gulfstream G280 were both down 15 percent from 2016 to 2017! The good news is the Cessna CJ4 and Gulfstream G650 only depreciated 7 percent year over year.

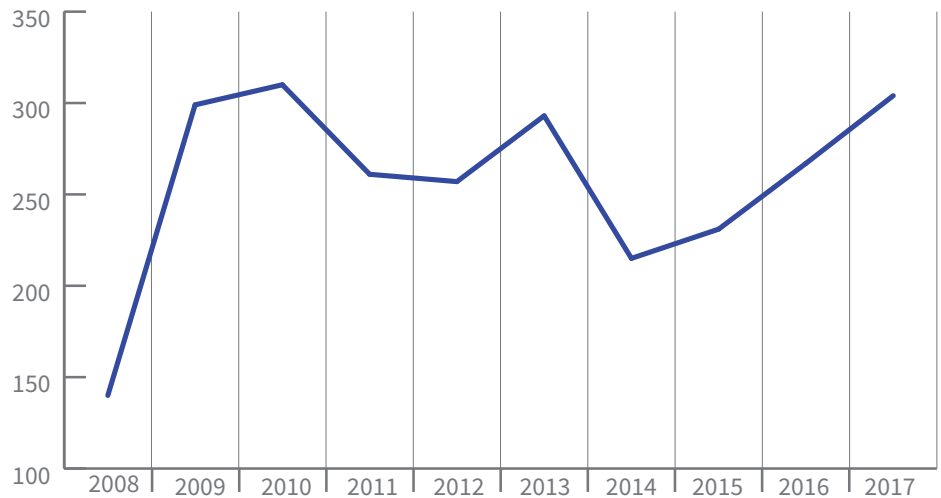
One other interesting data point is depicted in the Total Percentage of the Fleet — Market/Sales Comparison graph. In 2011, we actually saw prices stabilize when 11 percent of the fleet was on the market and nearly half, or 4.7 percent of the fleet, sold. Fast-forward to 2017, and we see 17.2 percent of the current-generation fleet on the market and only 7.1 percent being absorbed as transactions.

With new aircraft sales on a precipitous decline and the pre-owned markets offering unprecedented “deals,” 2018 should be interesting to say the least.

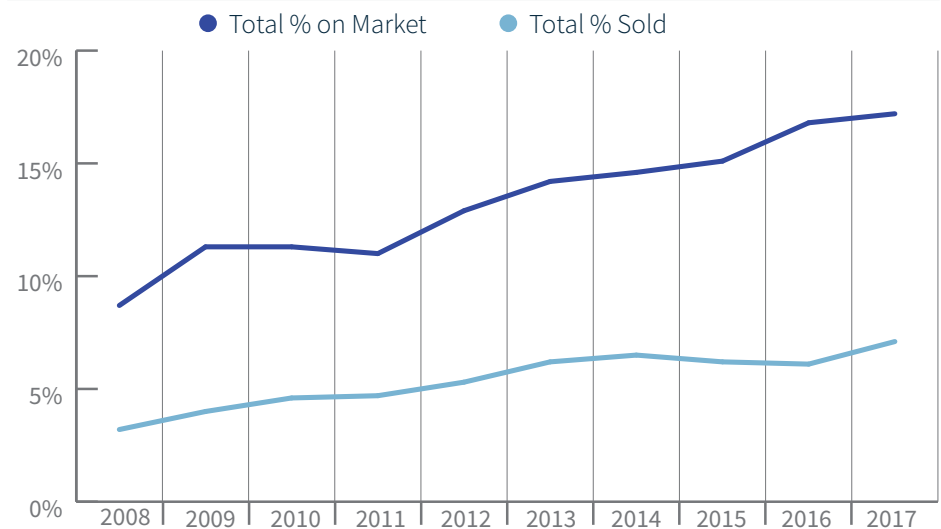
Percent of Aircraft Withdrawn from Market



Average Days on the Market



Total Percentage of the Fleet — Market/Sales Comparison





Research Rankings

THESE 25 AIRCRAFT TYPES RECEIVED THE MOST PAGE VIEWS ON AIRCRAFTBLUEBOOK.COM AND THE AIRCRAFT BLUEBOOK HISTORICAL VALUE REFERENCE DURING THE MOST RECENT THREE-MONTH AIRCRAFT BLUEBOOK REPORTING PERIOD.

Top Aircraft Types on AircraftBluebook.com

Rank	Aircraft Type	Previous Rank	Trend
1	DASSAULT FALCON 2000/DX/EX/EASy/LX/S	2	↑
2	BOMBARDIER CHALLENGER 300	3	↑
3	GULFSTREAM G500/G550	1	↓
4	CESSNA 182 SKYLANE	7	↑
5	GULFSTREAM G350/G450	4	↓
6	BEECH SUPER KING AIR 200	10	↑
7	DASSAULT FALCON 7X	9	↑
8	BEECH SUPER KING AIR (B300) 350	14	↑
9	BOMBARDIER GLOBAL EXPRESS	11	↑
10	DASSAULT FALCON 900	6	↓
11	BOMBARDIER CHALLENGER 605	27	↑
12	CESSNA 172 SKYHAWK	5	↓
13	CESSNA CITATION XLS/+	20	↑
14	BEECH KING AIR C90B/C90GT (1995 & up)	8	↓
15	EMBRAER LEGACY 600/650	13	↓
16	AIRBUS AS 350	12	↓
17	HAWKER 800/XP/XPi/850	17	—
18	GULFSTREAM G650	22	↑
19	BOMBARDIER LEARJET 45/45XR	25	↑
20	EMBRAER PHENOM 300	19	↓
21	CESSNA 172 SKYHAWK (1975 - 1986)	18	↓
22	BEECH SUPER KING AIR B200/GT (1995 - 2012)	26	↑
23	CIRRUS SR22	16	↓
24	CESSNA 172 SKYHAWK (1997 & up)	23	↓
25	GULFSTREAM G-200 (Formerly Galaxy Business Jet)	21	↓

Top Aircraft Types in the Historical Value Reference

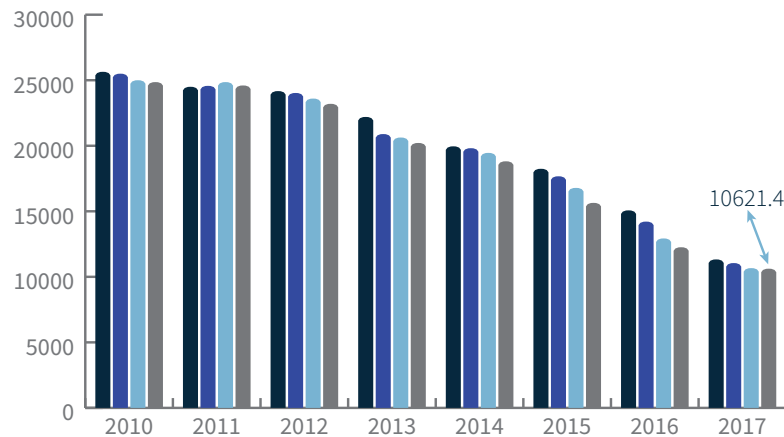
Rank	Aircraft Type	Previous Rank	Trend
1	DASSAULT FALCON 2000/DX/EX/EASy/LX/S	2	↑
2	GULFSTREAM G500/G550	1	↓
3	CESSNA 172 SKYHAWK	7	↑
4	GULFSTREAM G650	6	↑
5	BOMBARDIER GLOBAL 6000	4	↓
6	DASSAULT FALCON 7X	3	↓
7	BOMBARDIER CHALLENGER 300	10	↑
8	BOMBARDIER GLOBAL EXPRESS	11	↑
9	CESSNA CITATION XLS/+	8	↓
10	DASSAULT FALCON 900	5	↓
11	GULFSTREAM G350/G450	9	↓
12	BOMBARDIER CHALLENGER 605	15	↑
13	BEECH SUPER KING AIR (B300) 350	12	↓
14	CESSNA CITATION SOVEREIGN 680 (2004 - 2013)	14	—
15	PILATUS PC-12/47E NG (2009 & up)	27	↑
16	EMBRAER LEGACY 600/650	17	↑
17	GULFSTREAM G-200 (Formerly Galaxy Business Jet)	36	↑
18	GULFSTREAM G-IV	19	↑
19	BOMBARDIER CHALLENGER CL-604	31	↑
20	CESSNA 150	30	↑
21	ROBINSON R44 ASTRO/CLIPPER/RAVEN	49	↑
22	PILATUS PC-12 (1995 - 2008)	47	↑
23	BOMBARDIER GLOBAL 5000 (2012 & up)	22	↓
24	CESSNA CITATION X (1996 - 2012)	24	—
25	BOMBARDIER GLOBAL 5000 (2005 - 2011)	20	↓



Aircraft Values and Indicators

Large Jet

The Large Jet chart depicts the average price (in thousands) of the seven jets listed. Each model's year will precede the name of the aircraft.

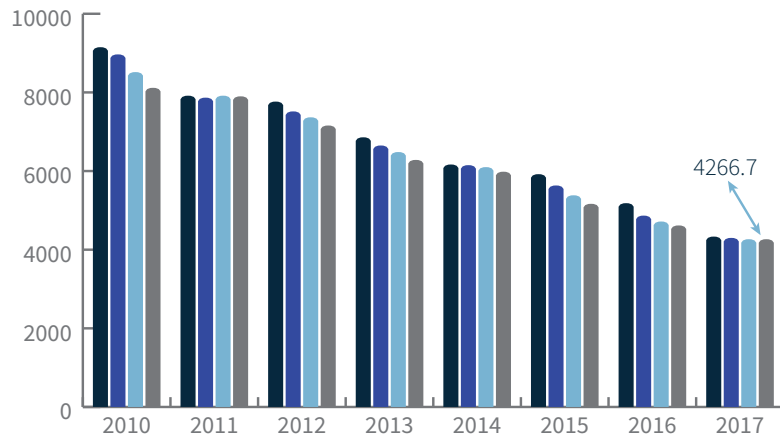


YEAR/MODEL	% CHANGE
2006 Bombardier Global Express	0.0
2007 Bombardier Challenger 605	0.0
2005 Dassault Falcon 900EX EASy	-2.5
2005 Dassault Falcon 2000EX EASy	-4.4
2005 Gulfstream G550	0.0
2005 Gulfstream G450	0.0
2005 Embraer EMB135 Legacy	0.0

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

Medium Jet

The Medium Jet chart depicts the average price (in thousands) of the six jets listed. Each model's year will precede the name of the aircraft.



YEAR/MODEL	% CHANGE
2005 Bombardier Challenger 300	0.0
2005 Bombardier Lear 45XR	0.0
2005 Cessna Citation Sovereign	0.0
2005 Cessna Citation XLS	0.0
2006 Gulfstream G150	0.0
2005 Hawker 800XP	0.0

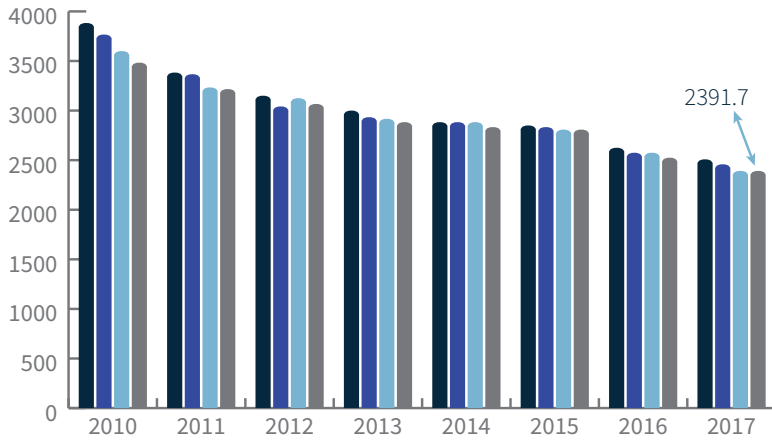
● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

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 email info@aircraftbluebook.com directly.
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Small Jet

The Small Jet chart depicts the average price (in thousands) of the six jets listed. Each model's year will precede the name of the aircraft.

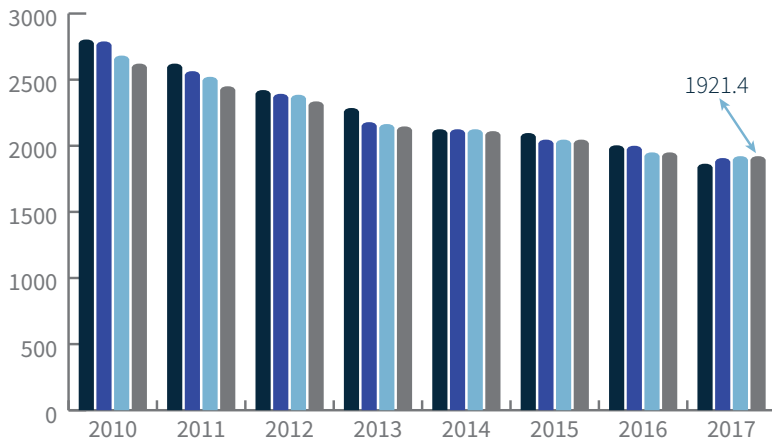


YEAR/MODEL	% CHANGE
2005 Beech Premier 1	0.0
2005 Cessna Citation CJ2+	0.0
2006 Cessna 510 Mustang	0.0
2008 Embraer Phenom 100	0.0
2009 Embraer Phenom 300	0.0
2005 Hawker 400XP	0.0

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

Turboprop

The Turboprop chart depicts the average price (in thousands) of the seven turboprops listed. Each model's year will precede the name of the aircraft.

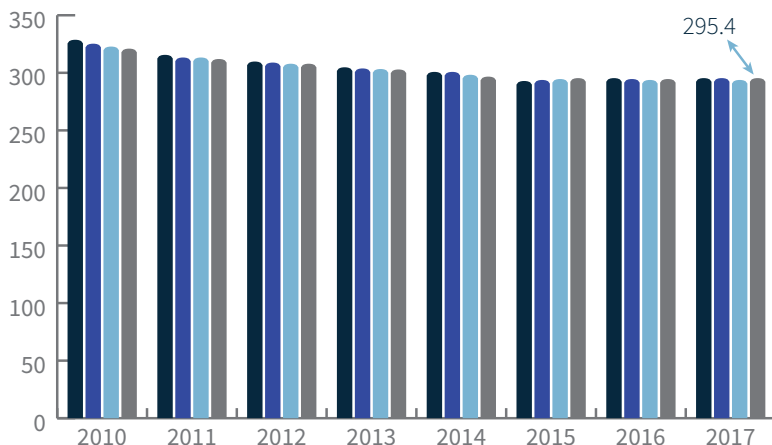


YEAR/MODEL	% CHANGE
2005 Beech King Air 350	0.0
2005 Beech King Air B200	0.0
2005 Beech King Air C-90B	0.0
2005 Cessna 208 Grand Caravan	0.0
2005 Piaggio Avanti P180	0.0
2005 Pilatus PC-12/45	0.0
2005 Socata TBM 700C2	0.0

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

Single-/Multi-Piston

The Single-/Multi-Piston chart depicts the average price (in thousands) of the 12 aircraft listed. Each model's year will precede the name of the aircraft.

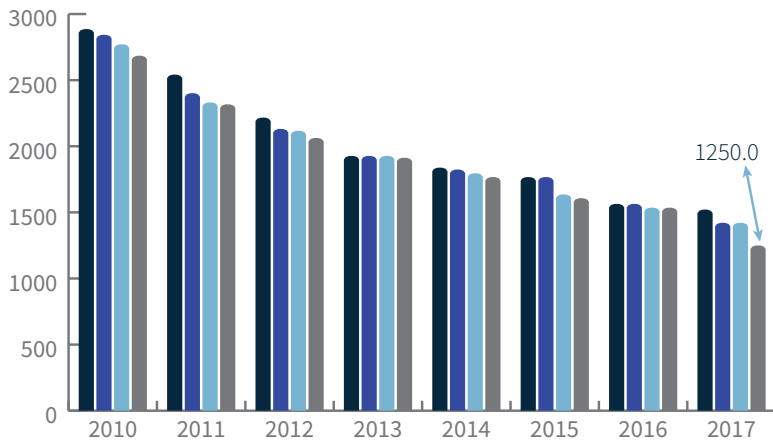


YEAR/MODEL	% CHANGE
2005 Beech 58 Baron	0.0
2005 Diamond DA42 Twin Star	0.0
2005 Piper PA34-220T Seneca V	0.0
2005 Beech A36 Bonanza	0.0
2005 Cessna/Columbia 400	+4.2
2005 Cessna 182T Skylane	0.0
2005 Cessna T206H Turbo Stationair	0.0
2005 Cessna 172S Skyhawk SP	+6.7
2005 Cirrus SR22-G2	0.0
2005 Diamond DA40-180 Star	0.0
2005 Piper PA46-350P Mirage	0.0
2005 Piper PA28R-201 Arrow	0.0

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

Helicopter

The Helicopter chart depicts the average price (in thousands) of the seven helicopters listed. Each model's year will precede the name of the aircraft.

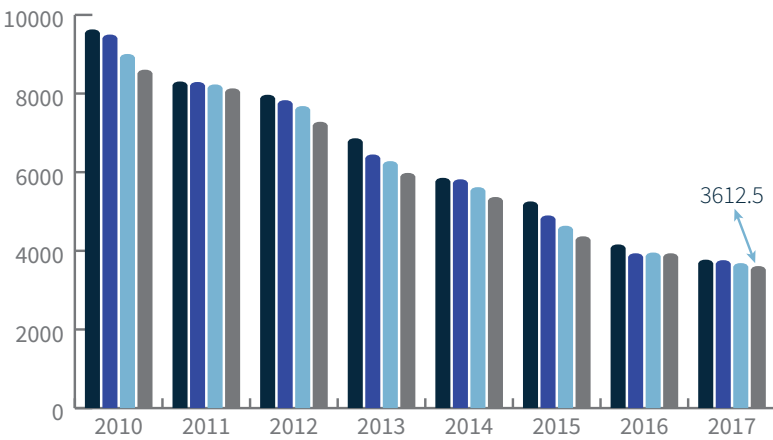


YEAR/MODEL	% CHANGE
2005 Agusta A109E Power	0.0
2005 Bell 430	0.0
2005 Airbus EC130B4	8.0
2005 Airbus AS350B-3 Ecureuil	0.0
2004 Enstrom 280FX	0.0
2005 Robinson R44 Raven	0.0
2005 Sikorsky S-76C+	-35.5

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

Legacy Jet

The Legacy Jet chart depicts the average price (in thousands) of the eight jets listed. Each model's year will precede the name of the aircraft. Legacy Aircraft are those produced prior to the year 2000.

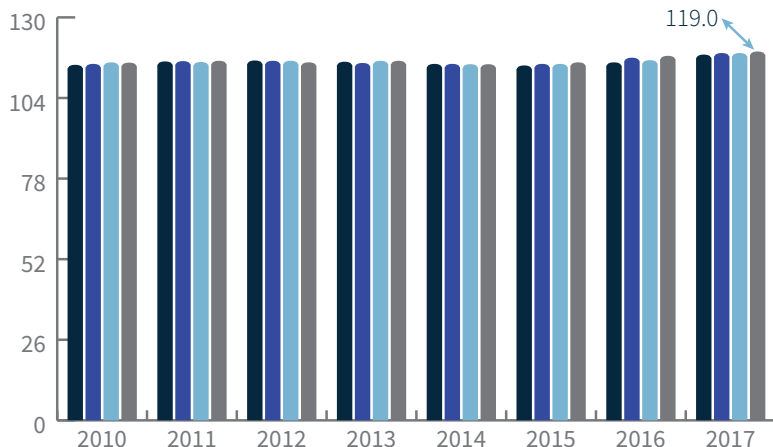


YEAR/MODEL	% CHANGE
1996 Bombardier Challenger 604	-10.0
1996 Bombardier Lear 31A	0.0
1996 Cessna Citation Ultra	-0.0
1996 Dassault Falcon 900B	-3.8
1997 Dassault Falcon 50EX	0.0
1996 Gulfstream GV	0.0
1996 Gulfstream GIVSP	0.0
1996 Hawker 800XP	0.0

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

Legacy Piston

The Legacy Piston chart depicts the average price (in thousands) of the ten piston aircraft listed. Each model's year will precede the name of the aircraft. Legacy Aircraft are those produced prior to the year 2000.

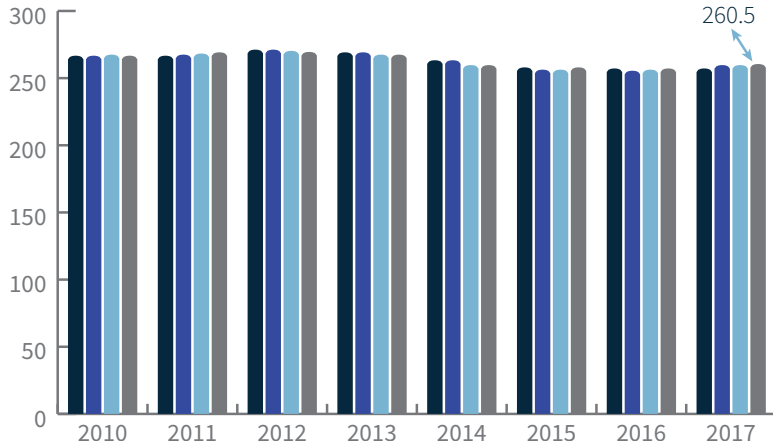


YEAR/MODEL	% CHANGE
1990 Beech A36 Bonanza	0.0
1990 Beech F33 Bonanza	0.0
1986 Cessna 210 Centurion II	0.0
1986 Cessna 172P Skyhawk B	+9.4
1985 Cessna 152 Commuter II	0.0
1990 Mooney 252TSE	0.0
1990 Piper PA-28-236 Dakota	0.0
1990 Piper PA-28R-201 Arrow	0.0
1990 Piper PA-28-181 Archer II	0.0
1990 Piper PA-28-161 Warrior II	0.0

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

Legacy Multi-Engine Piston

The Legacy Multi-Engine Piston chart depicts the average price (in thousands) of the six aircraft listed. Each model's year will precede the name of the aircraft. Legacy Aircraft are those produced prior to the year 2000.



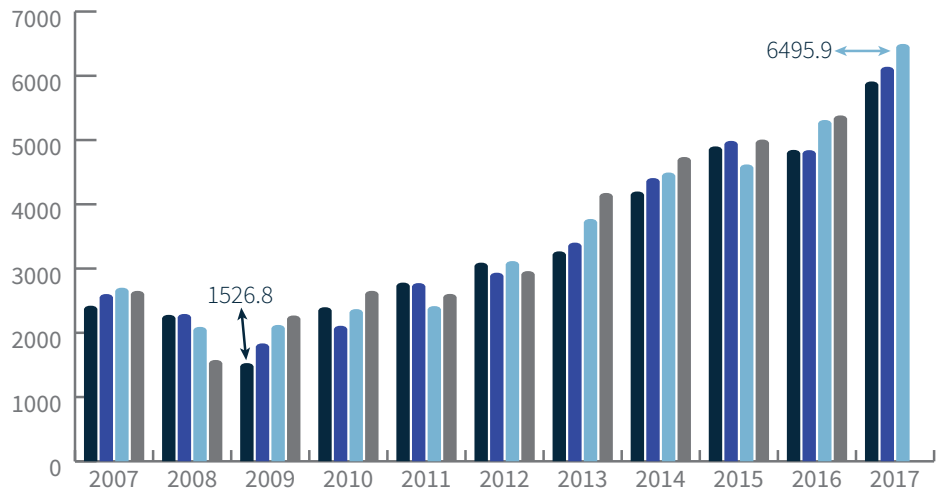
YEAR/MODEL	% CHANGE
1986 Beech 58P Pressurized Baron	0.0
1990 Beech 58 Baron	0.0
1985 Cessna 421 Eagle III	0.0
1981 Cessna 310R II	+3.9
1982 Piper PA-310C Navajo	0.0
1990 Piper PA-34-220T Seneca III	0.0

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

NASDAQ

Consider this graph and those that follow to be crosschecks. The general aviation and business aircraft market does not operate in a vacuum but is a part of the bigger picture.

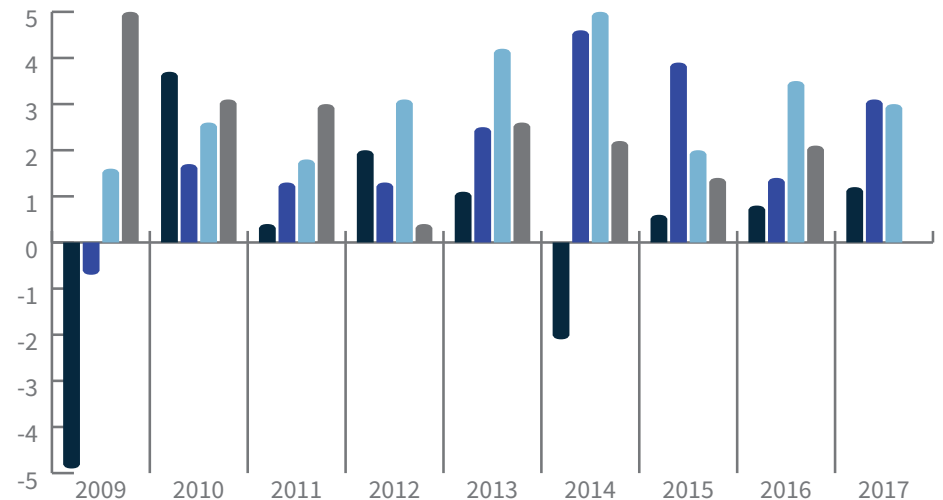
● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4



U.S. Real GDP

Each data point represents the BEA's final figure or latest estimate of the quarter-to-quarter seasonally adjusted annual rates of change in real GDP "based on chained 2005 dollars." The study begins with the first quarter in 2006.

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

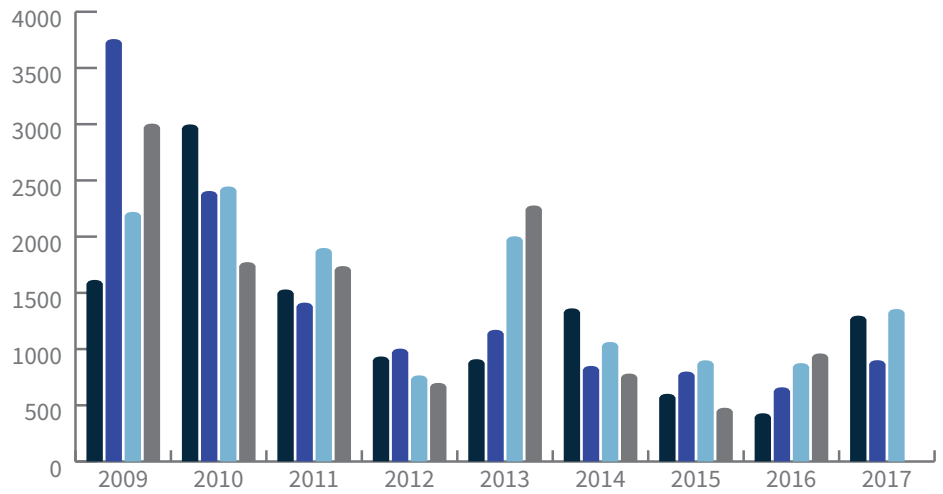


Baltic Dry Index

Index as of final day of quarter: The Baltic Dry Index is an indicator of the price of shipping major raw materials by sea.

Source: Lloyd's List

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

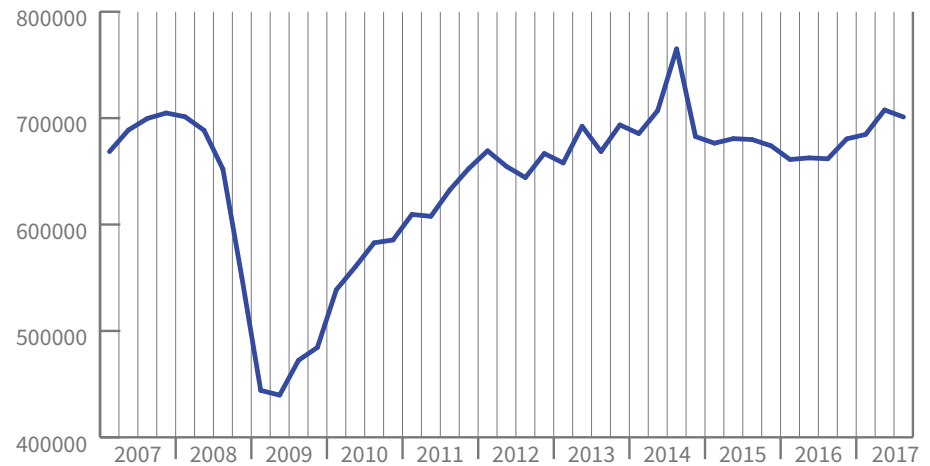


U.S. New Orders of Durable Goods

Millions of U.S. dollars. Seasonally adjusted.

Source: U.S. Census Bureau, *Manufacturers' Shipments, Inventories and Orders*. Data retrieved Aug. 23, 2017.

● QTR 1 ● QTR 2 ● QTR 3 ● QTR 4

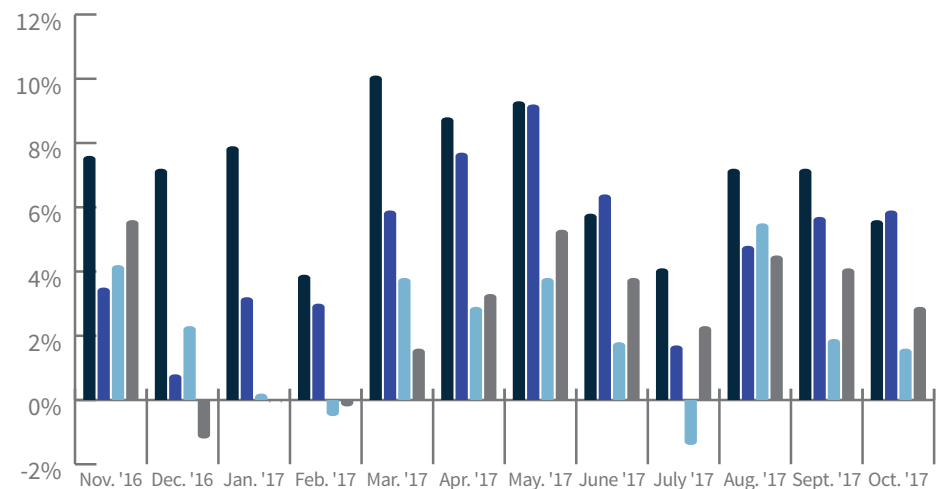


Flight Activity

“TRAQPak data is aircraft flight number-specific arrival and departure information on all IFR flights in the U.S., including Alaska, Hawaii, the Caribbean and Canada. For purposes of the TRAQPak Monthly Aircraft Activity Report, FAR Part 135 flight data represents all flight activity of aircraft on a Part 135 charter certificate regardless of individual flight mission (excluding cargo, scheduled Part 135, and fractional operators).”

Source: ARGUS TRAQPak.

● Large Jet Activity YOY
 ● Mid-size Jet Activity YOY
 ● Light Jet Activity YOY
 ● Turboprop Activity YOY



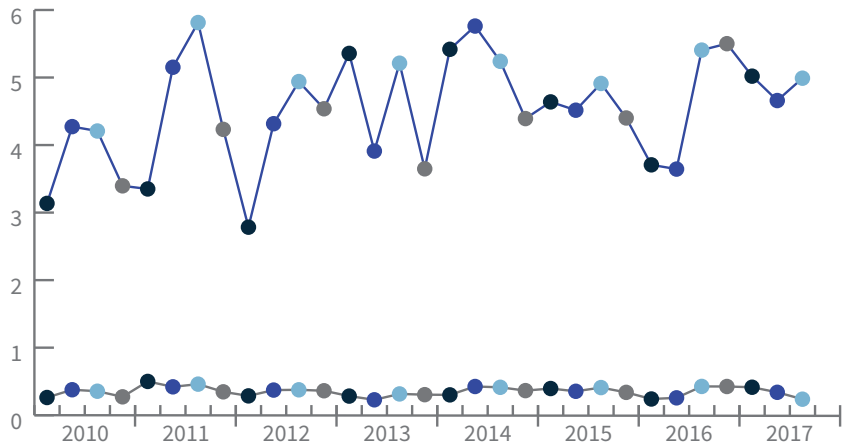


Change of Status

Single/Multi

The blue line in the chart depicts change-of-status data for single-engine piston aircraft. The gray line represents multi-engine piston aircraft.

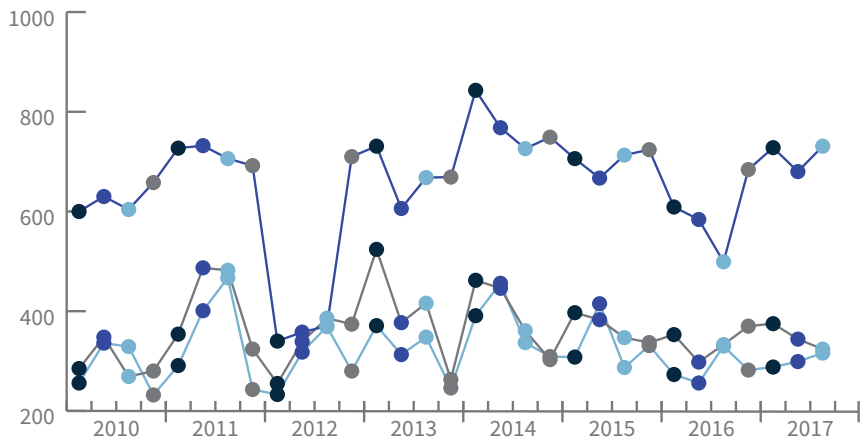
- Single: 4990
- Multi: 237
- QTR 1 ● QTR 2 ● QTR 3 ● QTR 4



Jet/Turboprop/Heli

The dark blue line in the chart represents change-of-status information for jets. The gray line depicts turboprops, and the light blue line represents helicopters.

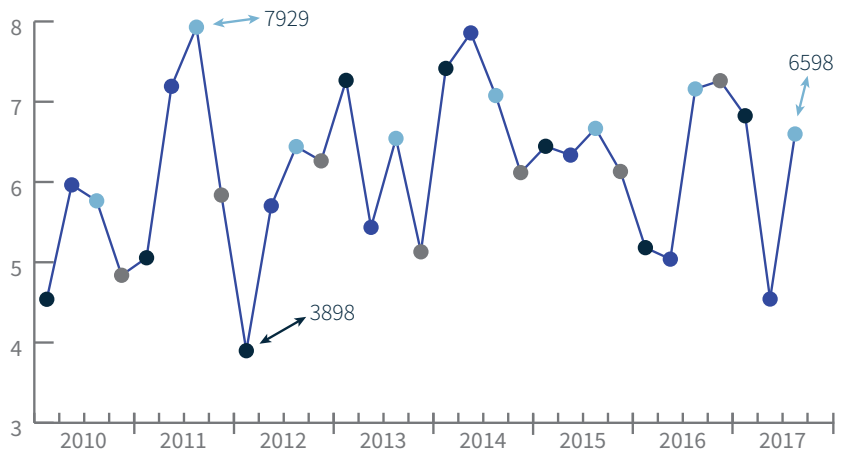
- Jet: 731
- Turboprop: 324
- Heli: 316
- QTR 1 ● QTR 2 ● QTR 3 ● QTR 4



Total Market

Depicts change-of-status data for all aircraft included in the Aircraft Bluebook. The numbers are from the FAA Registry. Gliders, homebuilts, airliners and other aircraft not found in the Bluebook are not included in this study.

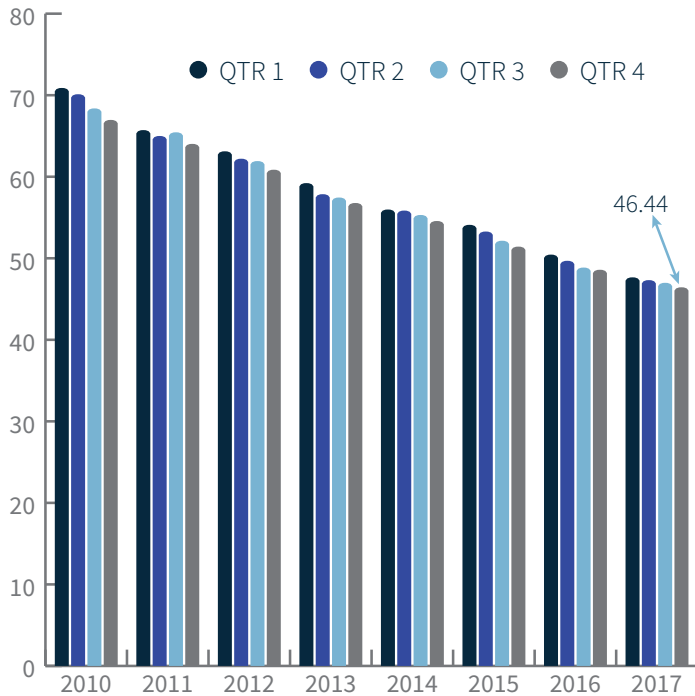
- Total Market
- QTR 1 ● QTR 2 ● QTR 3 ● QTR 4





Business Aviation Trends

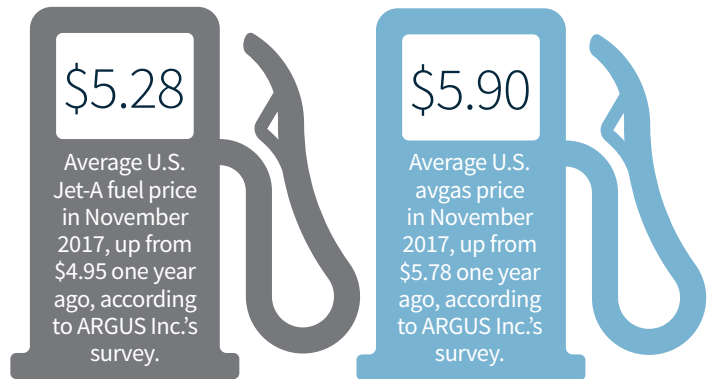
Used Aircraft Market



-4.7% Decrease in AircraftBluebook.com traffic during the most recent three-month Aircraft Bluebook reporting period, compared to the same period in 2016.

+10.6% Increase in traffic on ACUKWIK.com during the most recent three-month Aircraft Bluebook reporting period, compared to the same period in 2016.

+23.2% Increase in AirCharterGuide.com traffic during the most recent three-month Aircraft Bluebook reporting period, compared to the same period in 2016.



All of the aircraft included in the aircraft segment graphs on the following pages have a composite score that is presented in the Used Aircraft Market graph. Data points are represented in relationship to the respective new delivered historical price that is equal to 100%. The measure of change is reported in the actual percentage of value in relation to new. The delta between reporting periods can be concluded as the percentage of change.

ARGUS TRAQPak: Year-over-Year Change in Flight Activity

Period	All Flight Activity	Part 91 Activity	Part 135 Activity	Fractional Activity
November 2016	4.9%	4.1%	7.6%	1.2%
December 2016	1.4%	-3.6%	9.5%	0.0%
January 2017	2.0%	0.2%	4.0%	4.0%
February 2017	1.3%	-1.2%	3.7%	5.0%
March 2017	4.6%	2.8%	7.3%	4.7%
April 2017	5.3%	0.5%	11.3%	8.5%
May 2017	6.5%	2.1%	13.3%	6.9%
June 2017	4.3%	1.2%	8.9%	4.9%
July 2017	1.4%	-2.1%	6.7%	1.3%
August 2017	5.2%	0.9%	10.9%	7.0%
September 2017	5.2%	1.0%	11.8%	3.6%
October 2017	4.1%	2.0%	7.9%	2.2%

Aircraft **Bluebook** **JET APPRAISALS**

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