

## THE BRIGHT SIDE OF BUSINESS AVIATION

By Carl Janssens, ASA  | Chief Appraiser | Aviation Week Network

If anyone has any doubts with regard to the overall health and stability of the business aviation market, its overall performance over the last 90 days is an objective testament. The volatility in the global markets, sluggish news of economic growth indicators such as housing and employment statistics, the decline in crude oil pricing and a mix of fundamental principles targeted at humanity as a whole would suggest a very poor economic environment for business aviation. Granted, these days are not the best of times, but like the old adage goes, they're not the worst of times either. If anything, it is a demonstration of the determination to make each market segment within our industry more identifiable. There are more choices with greater flexibility on pricing versus mission/range/performance and cabin environment. This makes something for every business need. As for holding value, unless you have a set of keys to a Gulfstream G650, Cessna Citation CJ4 or an Embraer Phenom 300, expect some moderate form of depreciation. Depreciation should be expected in the jet and turbine business aviation segments.

As reflected in the BLUEBOOK-AT-A-GLANCE table on the right, trending continues to have a downward trend for the jet market. The good news is that there is some stability in pricing. Though markets will continue to decrease annually, there are some momentary plateaus. If one is curious about "what's up" this quarter, it turned out to be the Learjet 35, which is reported to have gained value from an otherwise stagnant historical performance. It was a 60/40 mix for the majority of the jet market for trending between stability and a downward trend from the summer quarter.

The turboprop market held firm for this reporting period with the majority of aircraft in this category holding value. The turboprop market continues to etch its character into mission-specific operations. Limited inventory of ready-to-fly aircraft opportunities are far less available than in the jet category making this a more competitive market.

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### BLUEBOOK-AT-A-GLANCE

#### JET

INCREASED	14
DECREASED	409
STABLE	630

#### TURBOPROP

INCREASED	2
DECREASED	59
STABLE	594

#### MULTI

INCREASED	82
DECREASED	54
STABLE	553

#### SINGLE

INCREASED	78
DECREASED	81
STABLE	2536

#### HELICOPTER

INCREASED	0
DECREASED	411
STABLE	790

Continued on page 3...

# PRICE DIVERGENCE...

By Dennis Rousseau | President and Founder | AircraftPost.com

In 2006, the average cost new for a Pro Line 4 equipped Lear 60 was about \$12.5 million. In 2007, the Lear 60XR entered service with the Pro Line 21 avionics and had an average cost new of about \$13 million. The \$500 thousand delta basically gave the operator a Pro Line 21 cockpit and redesigned interior. The engines, fuselage, empennage, etc., were unchanged and both aircraft certified under the same type certificate (TC), A10CE. In the last few months, a 2006 Lear 60 sold for \$3.8 million and a 2007 Lear 60XR sold for \$3.8 million.

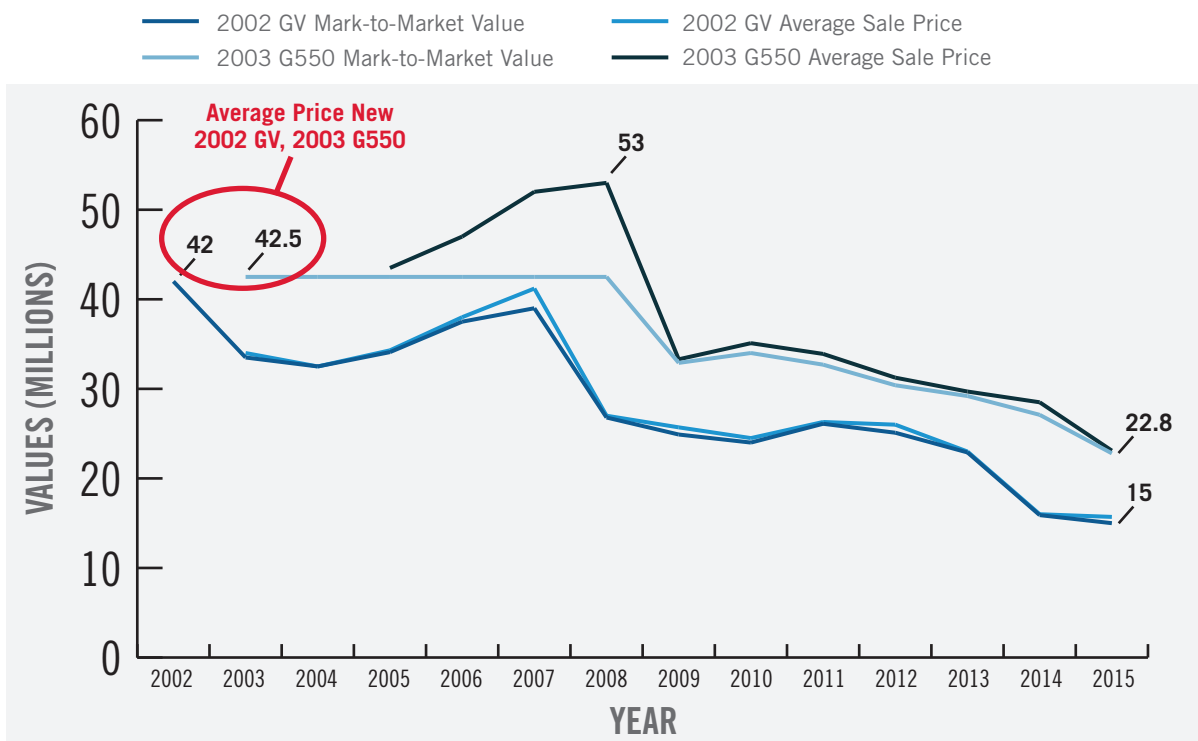
A 2007 Hawker 850 with 731-5BR engines had an average cost new of approximately \$13.5 million and today has a resale value of \$4.5 million. A 2007 Hawker 900XP with 731-50R engines sold new for roughly \$14.5 million and has a resale value of \$5.4 million. Other than engines, the aircraft are near identical (interior / exterior, Pro Line 21 cockpit) and have the same TC (A3EU). All things considered, the above-mentioned facts represent quite an interesting scenario for value retention and age-based depreciation.

However, when the original cost new price point exceeds the \$20 million mark, the results portray a different picture, regardless of the manufacturer. In 2005, Dassault delivered the CFE738 powered Falcon 2000 with the Pro

Line 4 cockpit (CRT displays) for about \$23 million. The same vintage Falcon 2000 equipped with the EASy cockpit and P&W engines had an original price new of about \$25 million. In the last few months, a 2005 legacy 2000 sold for roughly \$10 million whereas the same vintage 2000 EASy averaged \$14 million. Once again, the same type certificate (A50NM), fuselage, empennage and interior, etc., with a \$2 million delta when new, yet a \$4 million spread 10 years hence.

The Gulfstream GV and G550 are another example of this price divergence. A 2002 GV had an original price new of about \$42 million. Its successor, the G550, had an average price new of \$42.5 million in 2003. The primary difference between the aircraft was the introduction of the Plane View cockpit, replacing the CRTs in the GV with 4 LCDs in the 550. Both aircraft shared the same TC (A12EA), fuselage, wing, empennage, etc. The average selling price today for the 2002 GV is \$15 million compared to the 2003 G550's \$22.8 million. The Challenger 604 (Pro Line 4) and 605 (Pro Line 21) follows a similar pattern. However, as large as the pre-owned price spread seems, with global economic conditions worsening and new aircraft deliveries slowing, it's only a matter of time before the divergence becomes a convergence and aligns with the original price spread when new.

## GV G550 MARK-TO-MARKET VALUES



For the multi-engine piston category, increases in value were experienced in the Beech Baron segment, as well as select Piper twins. Time and condition contribute to time in market. Late model and early models modified with performance and technology upgrades tend to have limited market exposure when market priced.

The single-piston category shadows the multi-piston market. Operating costs have a defining impact when compared with the multi-twin and turbine market. This market segment demonstrated little trending when compared to the previous quarter.

Helicopters have become more susceptible to adverse market conditions, especially noted in the energy segment. Values have trended downward primarily due to less need of fossil fuel extraction.

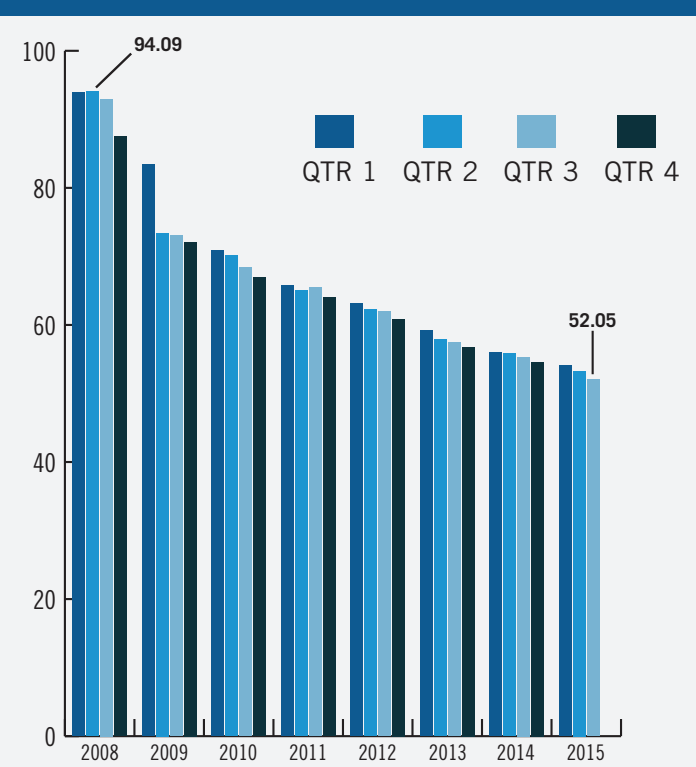
## CURRENT MARKET STRENGTH

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. *See chart below.*

## MARKETLINE CHARTS

All of the listed aircraft 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.

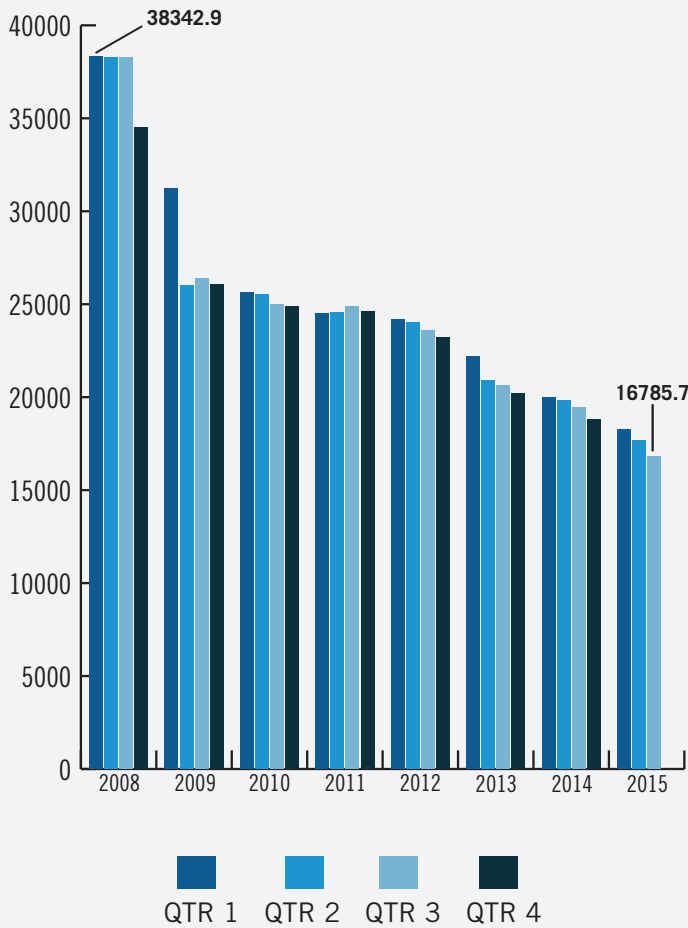
### USED AIRCRAFT MARKET



## CURRENT MARKET STRENGTH (CMS)

2007/2008 Model	CMS	2007/2008 Model	CMS	2007/2008 Model	CMS
Beech Premier 1A	B-	Gulfstream G-200	B	Cirrus SR22-G2	B
Bombardier Global XRS	A	Gulfstream G150	B	Cirrus SR20-G2	B-
Bombardier Challenger 604	B	Hawker 800XP	B	Diamond DA40-180XLS Star	B
Bombardier Challenger 300	A	Hawker 400XP	C	Diamond DA20-C1 Eclipse	B-
Bombardier LearJet 60XR	B-	Beech King Air 350	A	Mooney M20TN Acclaim	B-
Bombardier LearJet	A-	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	A	Beech 58 Baron	B+	Agusta A109 Grand	A-
Embraer EMB-135 Legacy	A-	Beech A36 Bonanza	B+	Bell 206 L-4	A-
Embraer Phenom 100	A	Cessna T206H Stationair	B+	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++	A-

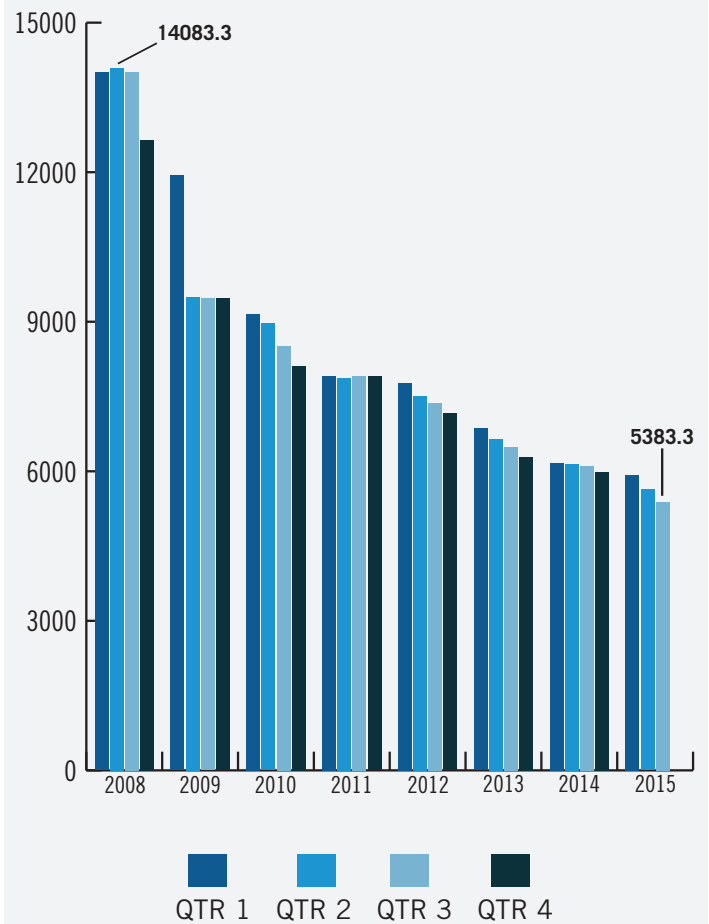
## LARGE JET



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	-7.8
2007 Bombardier Challenger 605	-4.0
2005 Dassault Falcon 900 EX Easy	0.0
2005 Dassault Falcon 200EX Easy	-5.1
2005 Gulfstream G550	-6.9
2005 Gulfstream G450	-6.3
2005 Embraer EMB135 Legacy	0.0

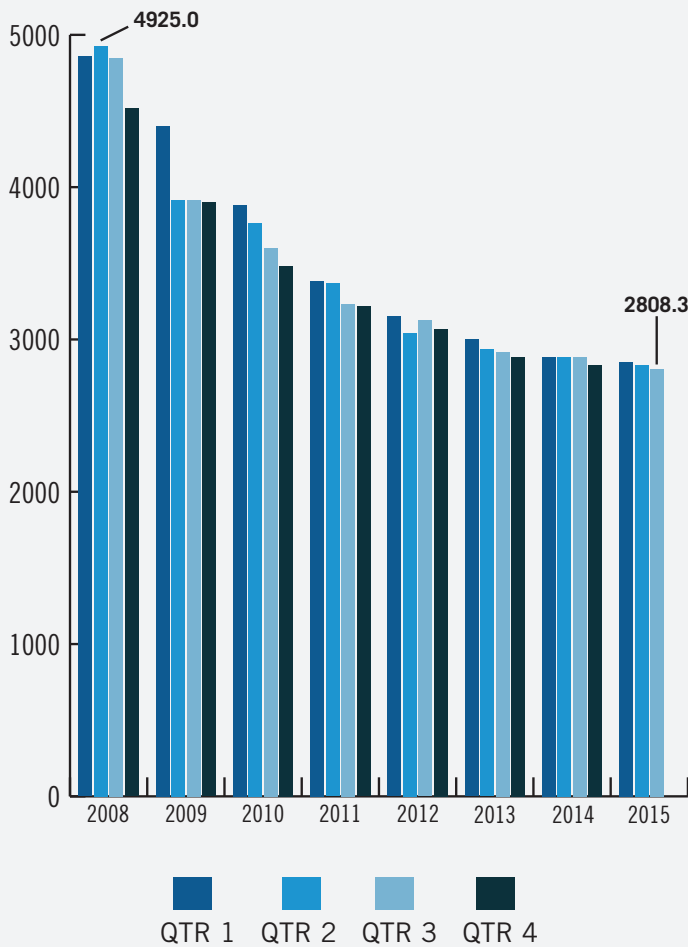
## MEDIUM JET



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	-4.8
2005 Bombardier Lear 45XR	-5.3
2005 Cessna Citation Sovereign	0.0
2005 Cessna Citation XLS	0.0
2006 Gulfstream G150	-12.7
2005 Hawker 800XP	-2.8

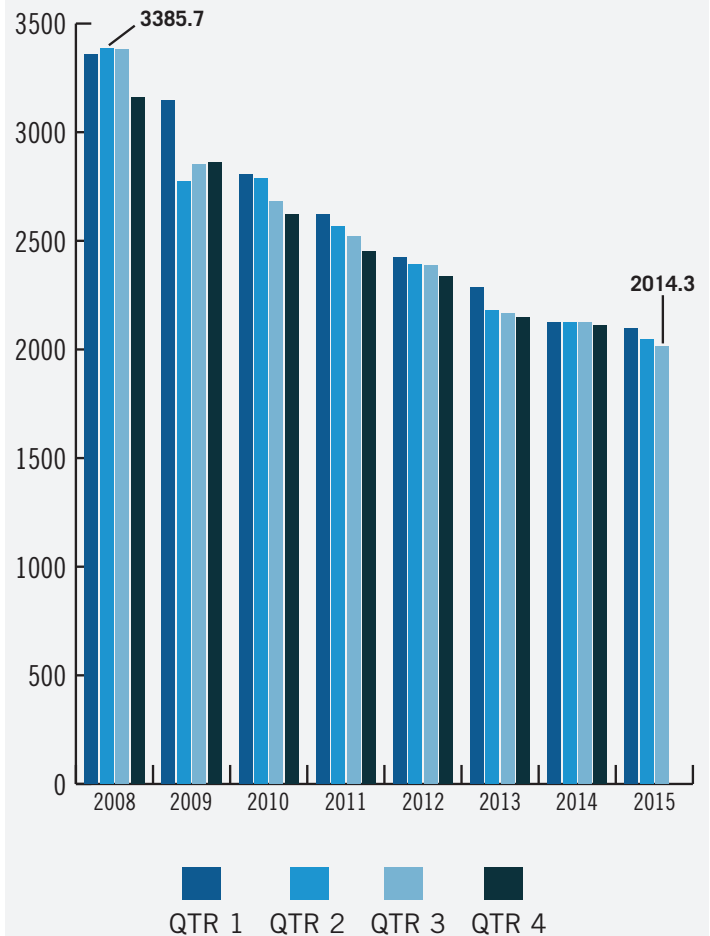
## SMALL JET



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+	-3.0
2006 Cessna 510 Mustang	0.0
2008 Embraer Phenom 100	0.0
2009 Embraer Phenom 300	0.0
2005 Hawker 400XP	-2.9

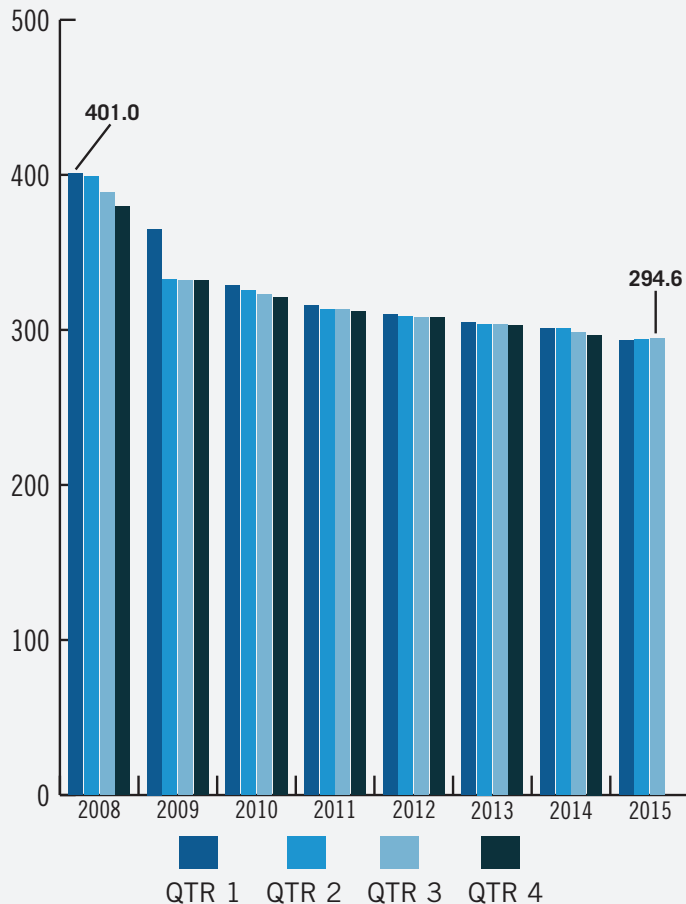
## TURBOPROP



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 Air350	0.0
2005 Beech King AirB200	0.0
2005 Beech King AirC-90B	0.0
2005 Cessna 208 Grand Caravan	0.0
2005 Piaggio AvantiP180	-10.6
2005 Pilatus PC12/45	0.0
2005 Socata TBM700C2	0.0

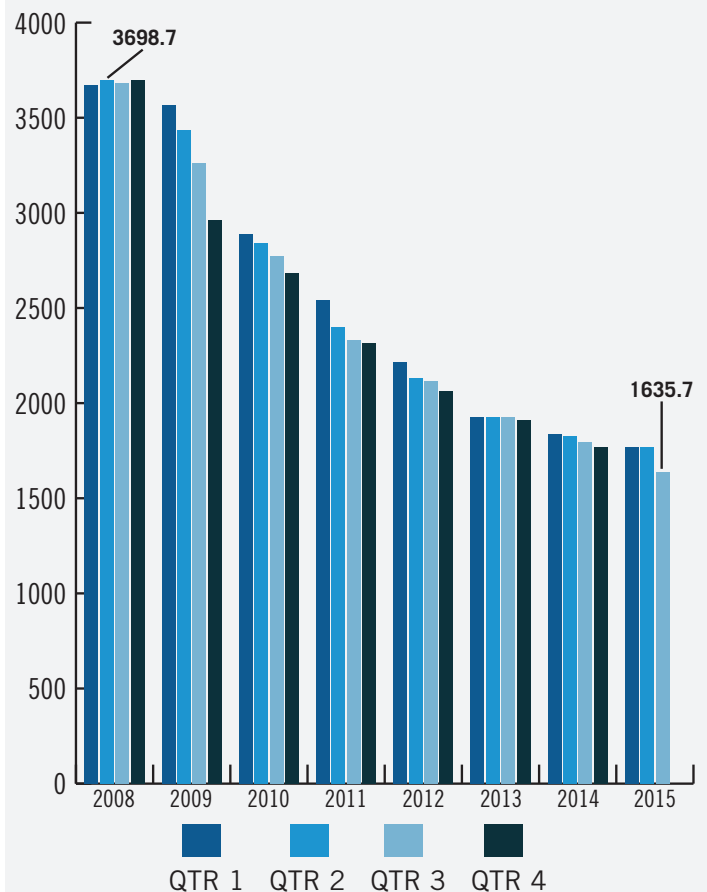
## SINGLE/MULTI PISTON



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	0.0
2005 Cessna 182T Skylane	2.8
2005 Cessna T206H Turbo Stationair	0.0
2005 Cessna 172S Skyhawk SP	3.7
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

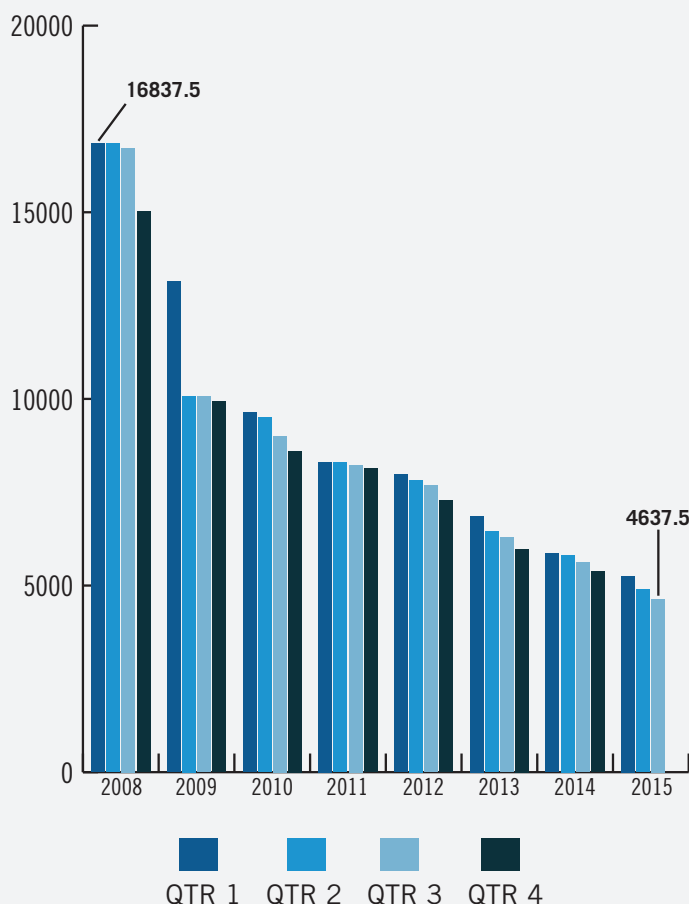
## HELICOPTER



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	-8.5
2005 Bell 430	-4.5
2005 Eurocopter EC130B4	-10.7
2005 Eurocopter AS350B-3 Ecureuil	-3.1
2004 Enstrom 280FX	0.0
2005 Robinson R44 Raven	-7.5
2005 Sikorsky S-76C+	-9.3

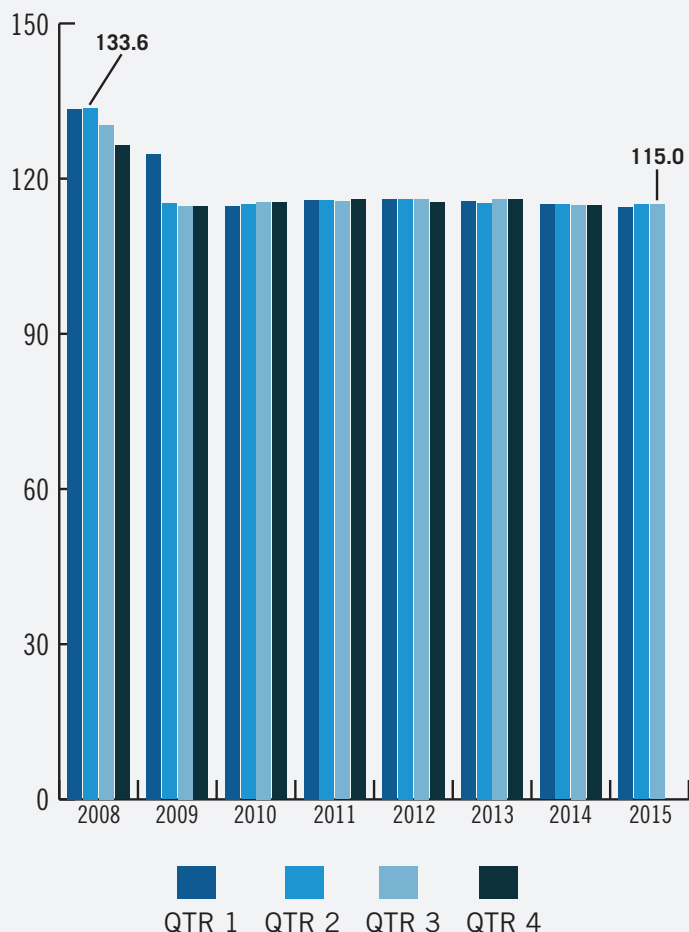
## LEGACY JET



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	-5.3
1996 Bombardier Lear 31A	0.0
1996 Cessna Citation Ultra	0.0
1996 Dassault Falcon 900B	-7.7
1997 Dassault Falcon 50EX	0.0
1996 Gulfstream GV	-6.0
1996 Gulfstream GIVSP	-7.9
1996 Hawker800XP	0.0

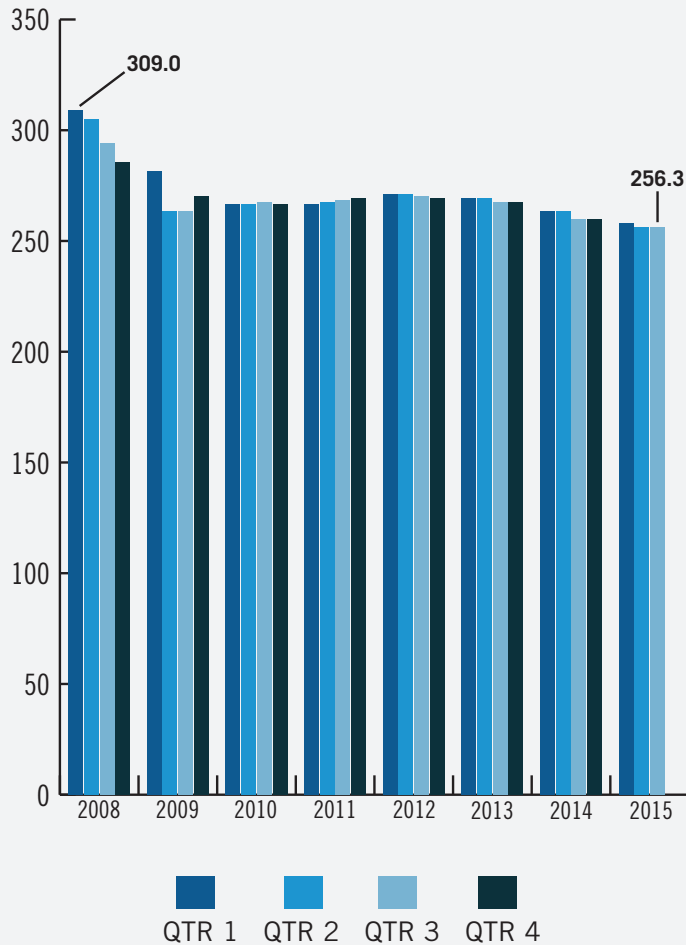
## LEGACY PISTON



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	0.0
1985 Cessna 152 Commuter II	0.0
1990 Mooney 252 TSE	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

## LEGACY MULTI ENGINE PISTON

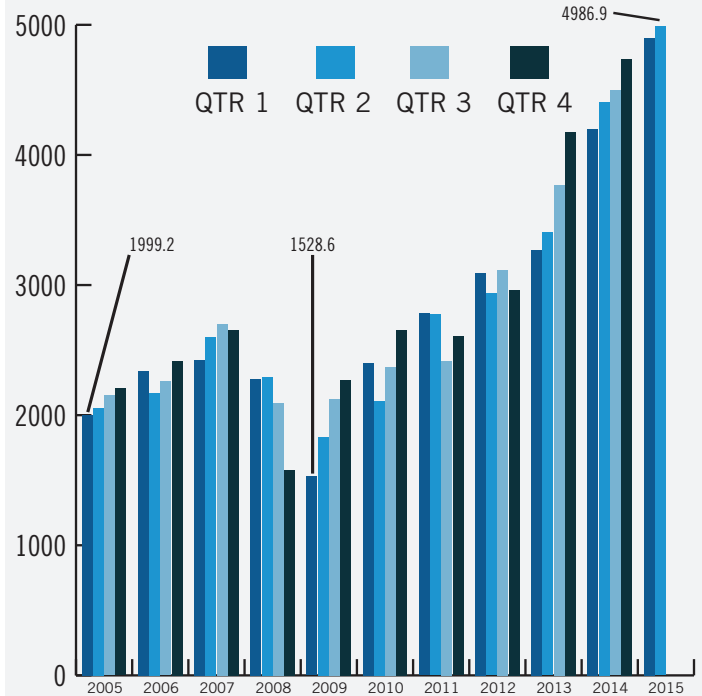


The Legacy Multi Engine Piston chart depicts the average price (in thousands) of the six aircraft listed. Each model's year will precede the name of the aircraft. Legacy Aircraft are those produced prior to the year 2000.

YEAR/MODEL	%CHANGE
1986 Beech 58P Pressurized Baron	0.0
1990 Beech 58 Baron	3.8
1985 Cessna 421 Eagle III	-2.4
1981 Cessna 310R II	0.0
1982 Piper PA-310C Navajo	0.0
1990 Piper PA-34-220T Seneca III	0.0

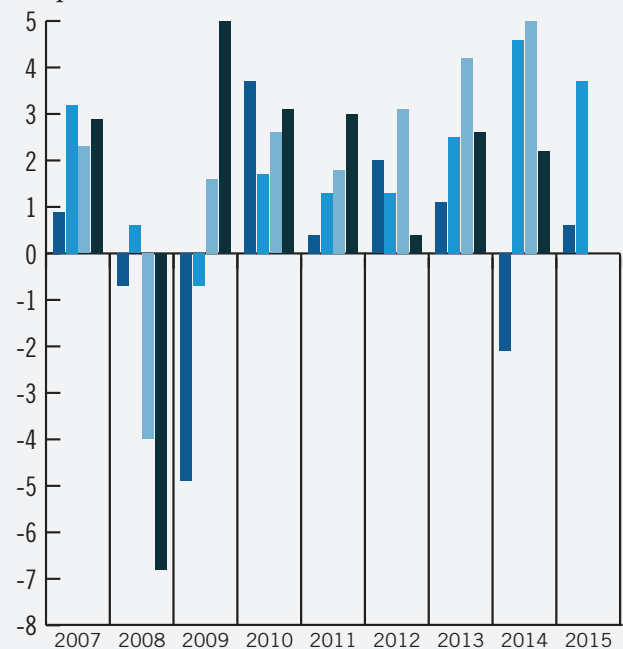
## NASDAQ

Consider these graphs as crosschecks. The general aviation and business aircraft market does not operate in a vacuum but is a part of the bigger picture.



## U.S. REAL GDP

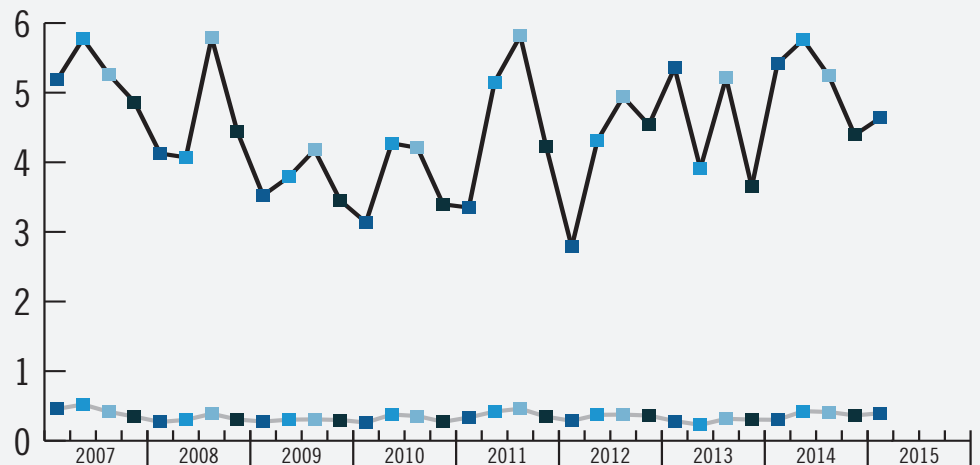
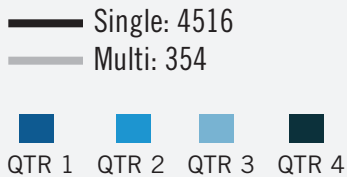
Each data point represents the BEA's final figure or latest estimate of the quarter-to-quarter seasonally adjusted annual rates of change in real GDP "based on chained 2005 dollars." The study begins with the first quarter in 2006.





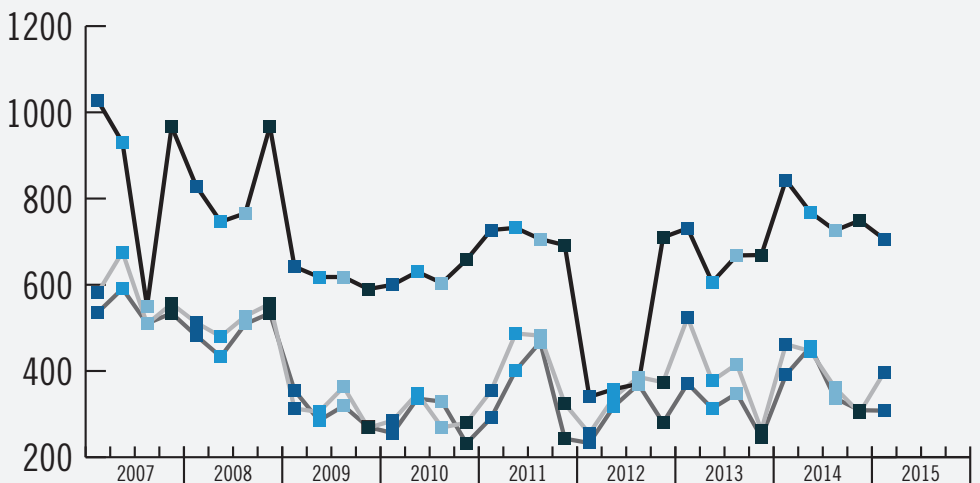
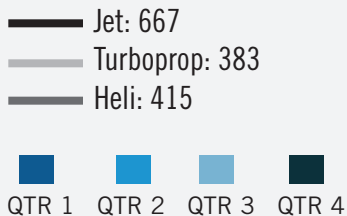
## CHANGE OF STATUS: SINGLE/MULTI

The black line in the chart depicts change-of-status data for singles. The light gray line represents multi.



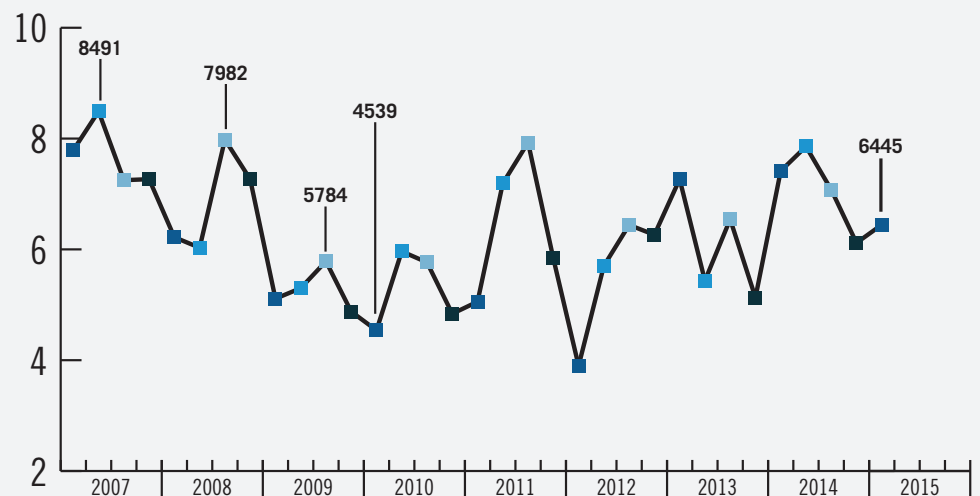
## CHANGE OF STATUS: JET/TURBO/HELI

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



## CHANGE OF STATUS: 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.



# INTO THE BLUE

## Aircraft Bluebook At-a-Glance

### Embraer Phenom 300

By Chris Reynolds, ASA | Aircraft Bluebook

Aircraft Bluebook At-a-Glance has reviewed the current market status of the Embraer Phenom 300 business jet. Research for this study was obtained in part from Aircraft Bluebook, Aircraft Bluebook's Historical Value Reference, the FAA's registry website and various trade services.

### Demand

The Phenom 300 fleet is approximately 280 aircraft. At the time of this writing, approximately 11 Phenom 300s, representing approximately 4 percent of the fleet, were reported for sale. During the last year, approximately 10 to 15 sales appear to have occurred. Presently, average time on market is approximately 180 to 200 days.

### Pricing

Current offerings for the Phenom 300 model years range from mid-\$4 million to \$9 million. Airframe time varies from several hundred hours to greater than 3,500 hours, depending on the year-model. Equipment, time/condition and engine maintenance programs can significantly affect time on market and marketable value (Aircraft Bluebook

prices the Phenom 300 enrolled on Pratt & Whitney's engine maintenance plan). For the fall 2015 Aircraft Bluebook, a 2010 Embraer Phenom 300 had a reported average retail value of \$6.8 million, which was unchanged from the previous quarter's average retail value.

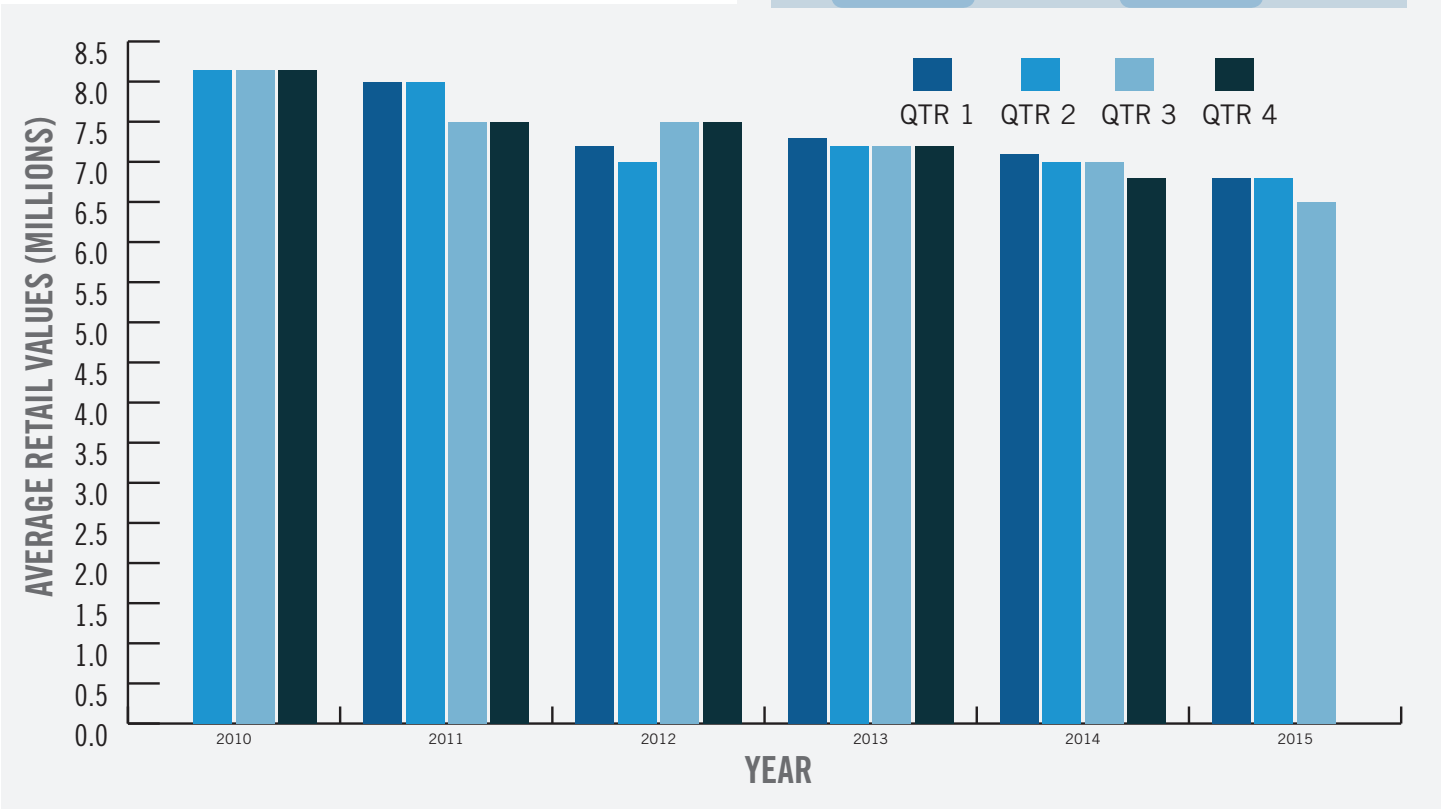
### Residual Values

A 2010 Embraer, whose market values have been tracked since the second quarter of 2010 was reported new with an average equipped price of \$8.14 million. Aircraft Bluebook's Historical Value Reference has demonstrated the Embraer Phenom 300 market value (performance by quarter) in the graph for this 2010 model.

Other historical values can be obtained at Aircraft Bluebook's website, [www.aircraftbluebook.com](http://www.aircraftbluebook.com).

## AVERAGE RETAIL VALUES

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2010		\$8,140,000	\$8,140,000	\$8,140,000
2011	\$8,000,000	\$8,000,000	\$7,500,000	\$7,500,000
2012	\$7,200,000	\$7,000,000	\$7,500,000	\$7,500,000
2013	\$7,300,000	\$7,200,000	\$7,200,000	\$7,200,000
2014	\$7,100,000	\$7,000,000	\$7,000,000	\$6,800,000
2015	\$6,800,000	\$6,800,000	\$6,800,000	



## WHAT'S NEW IN ABB

- Updated Maintenance Programs
- Updated 2015 Models

### AIRCRAFT BLUEBOOK AROUND THE GLOBE

#### National Business Aviation Association (NBAA) Annual Meeting, Orlando, Fla.; Nov. 17 – 19, 2015

Founded in 1947 and based in Washington D.C., the National Business Aviation Association (NBAA) is the leading organization for companies that rely on general aviation aircraft to help make their businesses more efficient, productive and successful.

### ASK AIRCRAFT BLUEBOOK

If you have any questions about the Aircraft Bluebook, please feel free to give the editorial staff a call at 1-800-654-6776 or email us, [info@aircraftbluebook.com](mailto:info@aircraftbluebook.com).

### WHERE CAN I REPORT MY AIRCRAFT SALES INFORMATION?

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## AircraftBluebook<sup>7</sup> JETAPPRAISALS

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**Carl Janssens**

Accredited Senior Appraiser



**Chris Reynolds**

Accredited Senior Appraiser

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- > Aircraft Collateral Verification & Audit
- > Portfolio Audits
- > Diminution of Value

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