

# Asset Insight

## AI<sup>2</sup> Market Report

Business Jet & Turboprop Aircraft – Volume 3, July 2017



### Excellent Maintenance Quality and Record Low Ask Prices Continue to Offer Great Deals for Buyers Notably Smaller Pricing Decline Expected During Q3 2017

Welcome to the AI<sup>2</sup> Market Report from Asset Insight, LLC. This Quarterly Market Report analyzed values for every production year of every modern make/model Business Class aircraft, and our June 30, 2017 maintenance analytics covered 92 fixed-wing models and 1,881 aircraft listed for sale.

- **Overall demand remains unchanged, but record low prices are enticing value-focused buyers to act**  
Market demand has not changed since last quarter. On our scale of 1.00 (lowest) to 5.00 (highest), Large Jets registered 2.80, Medium Jets 2.89, Small Jets 2.93, and Turboprops 3.15.
- **For sale fleet Asset Quality remains “Excellent” while average Ask Price reaches yet another record low**  
Asset Quality for the inventory fleet ended Q2 just above the 12-month low figure, but still posted an “Excellent” rating. Average Ask Prices fell 4.9% during Q2, with quarterly decreases among all groups except Medium Jets. Prices have decreased 18.4% over the past 12 months, but foundational signs of stability are detectable.
- **Ask versus final Transaction value gap posted a marked improvement**  
The overall spread between Ask and final Transaction value improved for all four aircraft groups, possibly signaling that prices are beginning to stabilize. Small Jets posted the best/lowest differential at 8.0%, Turboprops followed at 9.2%, Large Jets were next at 12.2%, while Medium Jets improved to 14.7%.
- **90-Day Future Value rate of decrease is slowing**  
Our 90-day eTrend™ anticipates Q3 values to decrease *slower* than Q2 values. Specifically, Large Jets values are expected to fall 56% slower, Medium Jets 40%, Small Jets 44%, and Turboprops value loss is expected to slow by 35%.
- **Maintenance Exposure worsened a bit, primarily due to high quality assets trading**  
The inventory fleet’s accrued or embedded cost of future scheduled maintenance (Maintenance Exposure) increased/worsened by 1.9% over the past three months but remained better than the 12-month average. As higher quality assets are generally the first to trade, the 30% increase in transactions versus Q1 (of tracked assets) negatively impacted Maintenance Exposure.
- **Maintenance Exposure to Ask Price Ratio (“ETP Ratio”) worsened**  
The market’s ETP Ratio (Maintenance Exposure divided by Ask Price) increased 1.7 AI<sup>2</sup> basis points during the past quarter. We consider any ETP Ratio over 40% to represent excessive Exposure in relation to Ask Price and the Q2 2017 ETP Ratio was 54.8%. **Aircraft whose ETP Ratio exceeded 40% this past quarter were listed for sale 52% longer (on average) than aircraft whose Ratio was below 40% (211 versus 319 Days on Market).**

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## Large Jets

### Future Value Trend (“eTrend™”) and Current Market Demand

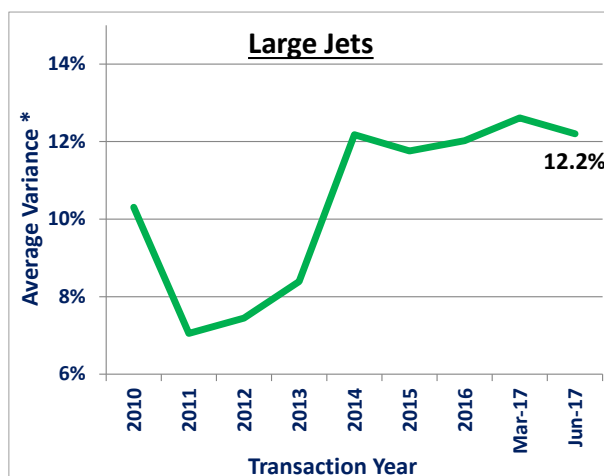
- eTrend™ information is designed to provide a general view of how aircraft prices are currently trending, and the **effect this is likely to have on average transaction values 90 days hence**.
- **Current Market Demand** for each Make/Model represents an objective view based on that Make/Model’s Average Days on Market and the percentage of that Model’s fleet listed for sale. During this past quarter, **demand remained steady at 2.80, on our scale ranging from 1.00 (weak demand) to 5.00 (strong demand)**.

Aircraft Make/Model	eTrend™	Current Market Demand*
	90-day Value Trend Average Gain/(Loss)	
<b>Bombardier</b>		
Challenger 600	(\$64,500)	★★★★☆
Challenger 601-1A	(\$157,500)	★★★☆☆
Challenger 601-3A	(\$284,000)	★★★☆☆
Challenger 601-3R	(\$205,500)	★★★★☆
Challenger 604	(\$294,500)	★★★★☆
Challenger 605	(\$293,000)	★★★★☆
Challenger 650	(\$524,000)	★★★★☆
Challenger 850	(\$243,500)	★★★☆☆
Global 5000	(\$559,000)	★★★★☆
Global 6000	(\$712,500)	★★★★☆
Global Express	(\$590,000)	★★★★☆
Global Express XRS	(\$355,000)	★★★★☆
<b>Dassault</b>		
Falcon 7X	(\$482,500)	★★★★☆
Falcon 900A	(\$372,000)	★★★★☆
Falcon 900B	(\$175,000)	★★★★☆
Falcon 900C	(\$298,500)	★★★★☆
Falcon 900DX	(\$140,000)	★★★★☆
Falcon 900EX	(\$230,000)	★★★☆☆
Falcon 900EXeasy	(\$299,500)	★★★★☆
Falcon 900LX	(\$605,000)	★★★★☆
Falcon 2000	(\$442,500)	★★★★☆

Aircraft Make/Model	eTrend™	Current Market Demand*
	90-day Value Trend Average Gain/(Loss)	
<b>Dassault</b>		
Falcon 2000DX	(\$137,500)	★★★★☆
Falcon 2000EXEasy	(\$142,500)	★★★★☆
Falcon 2000LX	(\$546,500)	★★★★☆
Falcon 2000S	(\$510,000)	★★★★☆
<b>Embraer</b>		
Embraer Legacy 600	(\$324,500)	★★★★☆
Embraer Legacy 650	(\$339,000)	★★★☆☆
Linneage 1000	(\$486,000)	★★★☆☆
<b>Gulfstream</b>		
Gulfstream G300	(\$201,500)	★★★★☆
Gulfstream G350	(\$142,000)	★★★★☆
Gulfstream G400	(\$166,500)	★★★★☆
Gulfstream G450	(\$325,500)	★★★★☆
Gulfstream G500	(\$724,500)	★★★★☆
Gulfstream G550	(\$625,000)	★★★★☆
Gulfstream G650	(\$1,168,500)	★★★★☆
Gulfstream G650ER	(\$198,000)	★★★★☆
Gulfstream G-III	(\$30,000)	★★★☆☆
Gulfstream G-IV	(\$252,500)	★★★★☆
Gulfstream G-IVSP	(\$352,500)	★★★★☆
Gulfstream G-V	(\$539,500)	★★★★☆

*Excludes new production aircraft entering service during 2016 & 2017*

### Used Aircraft Ask Price vs. Transaction Price Spread – Large Jets



### Market Overview Large Jets

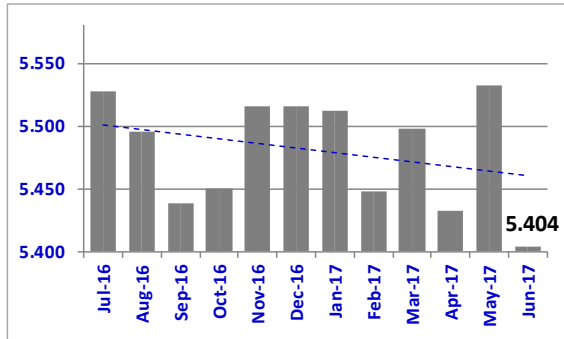
- Ask Price and final Transaction Value differential decreased/improved by 0.4%. Still, at 12.2%, the figure represents the second-worst differential this group has posted this decade.
- Current Market Demand remains below average at 2.80, on our scale of 1.0 to 5.0
- The Quarter over Quarter average 90-Day Value eTrend™ forecasts prices will fall 56% slower during Q2, compared to Q1 2017

\* Average Variance based on a Sample Set considering the Ask Price against the Transactional Price

## Large Jets

### Asset Quality Rating

Scale -2.500 to 10.000

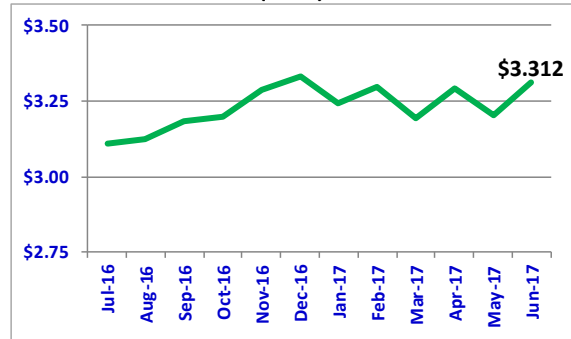


#### Asset Quality Rating Key

Outstanding	Excellent	Very Good	Good	Average	Below Average
5.500 or Greater	5.250 to 5.499	5.000 to 5.249	4.750 to 4.999	4.500 to 4.749	Less than 4.500

### Maintenance Exposure\*

(\$ Mil)



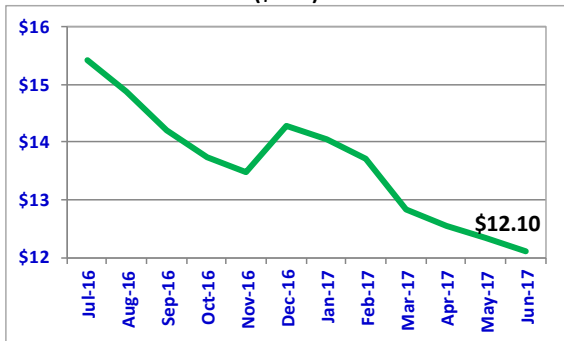
#### Maintenance Exposure – Reference Points

12-month Figures \$ Millions			Historical Figures \$ Millions	
Worst	Average	Best	Worst	Best
\$3.333	\$3.231	\$3.110	\$3.763	\$2.575

\* The accrued cost of future scheduled maintenance

### Average Ask Price

(\$ Mil)

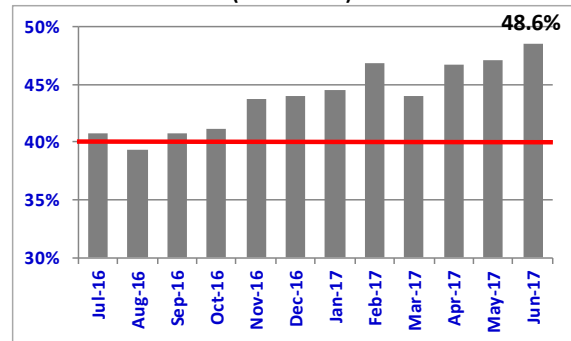


#### Average Ask Price – Reference Points

12-month Figures \$ Millions			Historical Figures \$ Millions	
Highest	Average	Lowest	Highest	Lowest
\$15.41	\$13.63	\$12.10	\$16.61	\$12.10

### Maintenance Exposure to Ask Price Ratio

("ETP Ratio")



#### Importance of the ETP Ratio

- As the ETP Ratio decreases, the aircraft's "value" increases (in relation to its Ask Price)
- Aircraft whose ETP Ratio is above 40% are burdened, on average, with excessive Maintenance Exposure

### Maintenance Exposure to Ask Price Ratio ("ETP Ratio") & Days on Market

Model	ETP Ratio	Days on Market	Model	ETP Ratio	Days on Market	Model	ETP Ratio	Days on Market
<b>Boeing</b>			<b>Bombardier</b>			<b>Embraer</b>		
Boeing BBJ	6.1%	267	CL-601-1A	207.5%	109	Embraer Legacy 600	38.2%	345
<b>Bombardier</b>			<b>Dassault</b>			<b>Gulfstream</b>		
CL-605	19.8%	294	F900LX	7.0%	284	G650	3.1%	155
Global 5000	31.4%	219	F2000LX	10.6%	203	G 450	18.2%	95
Global XRS	33.2%	291	F900EX EASy	16.0%	269	G550	20.1%	229
CL-604	37.9%	169	Falcon2000EX Easy	18.2%	366	GV	51.0%	165
Global Express	56.3%	414	F900B	28.1%	147	GIV-SP	83.0%	174
CL-601-3A	135.2%	219	F900EX	32.1%	327	GIV-SP (MSG3)	95.9%	200
CL-601-3R	138.2%	124	Falcon 2000	49.4%	150	GIV	107.8%	197

Ask Price & Days on Market Source: AMSTAT (www.amstatcorp.com)

## Medium Jets

### Future Value Trend (“eTrend™”) and Current Market Demand

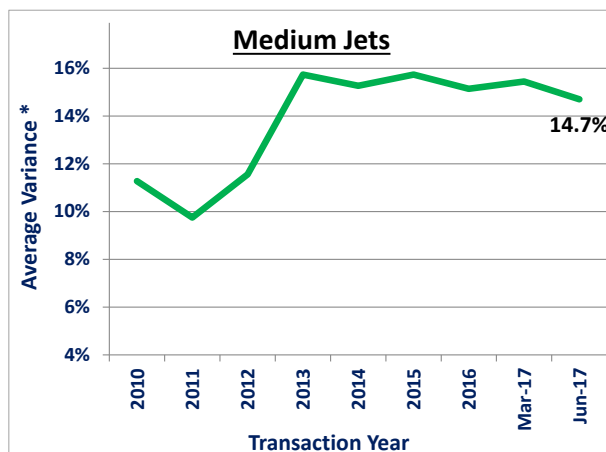
- **eTrend™** information is designed to provide a general view of how aircraft prices are currently trending, and the ***effect this is likely to have on average transaction values 90 days hence***.
- **Current Market Demand** for each Make/Model represents an objective view based on that Make/Model’s Average Days on Market and the percentage of that Model’s fleet listed for sale. During this past quarter, ***demand remained steady at 2.89, on our scale ranging from 1.00 (weak demand) to 5.00 (strong demand)***.

Aircraft Make/Model	eTrend™	Current Market Demand*
	90-day Value Trend Average Gain/(Loss)	
<b>Bombardier</b>		
Challenger 300	(\$334,500)	★★★★☆
Challenger 350	(\$314,500)	★★★★☆
Lear 40	(\$199,500)	★★★★☆
Lear 40XR	(\$180,000)	★★★★☆
Lear 45	(\$103,000)	★★★★☆
Lear 45XR	(\$222,000)	★★★★☆
Lear 55	(\$64,000)	★★★★☆
Lear 60	(\$184,500)	★★★★☆
Lear 60SE	(\$217,000)	★★★★☆
Lear 60XR	(\$353,500)	★★★★☆
Lear 70	(\$362,500)	★★★★☆
Lear 75	(\$420,000)	★★★★☆
<b>Cessna</b>		
Citation Excel	(\$59,000)	★★★★☆
Citation Sovereign	(\$236,500)	★★★★☆
Citation Sovereign +	(\$332,000)	★★★★☆
Citation X	(\$183,000)	★★★★☆
Citation X+	(\$670,500)	★★★★☆
Citation XLS+	(\$128,500)	★★★★☆
Citation XLS	(\$170,000)	★★★★☆

Aircraft Make/Model	eTrend™	Current Market Demand*
	90-day Value Trend Average Gain/(Loss)	
<b>Embraer</b>		
Embraer 500	(\$309,000)	★★★★☆
<b>Dassault</b>		
Falcon 50	(\$44,500)	★☆☆☆☆
Falcon 50EX	(\$324,500)	★★★★☆
<b>Gulfstream</b>		
Gulfstream G100	(\$34,000)	★★★★☆
Gulfstream G150	(\$243,500)	★★★★☆
Gulfstream G200	(\$294,500)	★★★★☆
Gulfstream G280	(\$380,500)	★★★★☆
<b>Hawker Beechcraft</b>		
Hawker 700A	(\$33,000)	★☆☆☆☆
Hawker 750	(\$190,500)	★★★★☆
Hawker 800A	(\$43,500)	★★★★☆
Hawker 800XP	(\$255,500)	★★★★☆
Hawker 800XPi	(\$178,000)	★★★★☆
Hawker 850XP	(\$177,500)	★★★★☆
Hawker 900XP	(\$169,000)	★★★★☆
Hawker 1000	(\$219,500)	★★★★☆
Hawker 4000	(\$149,000)	★★★★☆

*Excludes new production aircraft entering service during 2016 & 2017*

### Used Aircraft Ask Price vs. Transaction Price Spread – Medium Jets



### Market Overview Medium Jets

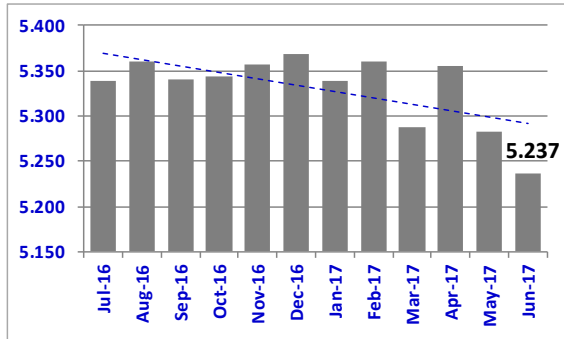
- **At 14.7%**, the differential between Ask Price and final Transaction Value is still the worst / highest among the four groups. The figure did improve by 0.7% during Q2 and is the lowest since 2012.
- **Current Market Demand** remains below average at 2.89, on our scale of 1.0 to 5.0
- **The Quarter over Quarter average 90-Day Value eTrend™ forecasts prices will fall 40% slower during Q2, compared to Q1 2017**

\* Average Variance based on a Sample Set considering the Ask Price against the Transactional Price

## Medium Jets

### Asset Quality Rating

Scale -2.500 to 10.000

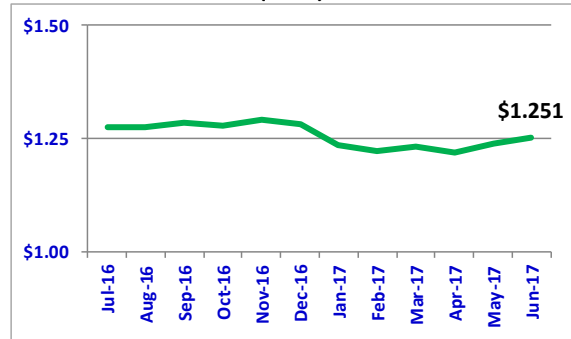


#### Asset Quality Rating Key

Outstanding	Excellent	Very Good	Good	Average	Below Average
5.500 or Greater	5.250 to 5.499	5.000 to 5.249	4.750 to 4.999	4.500 to 4.749	Less than 4.500

### Maintenance Exposure\*

(\$ Mil)



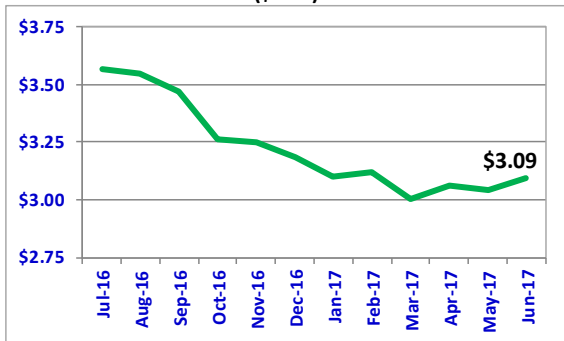
#### Maintenance Exposure – Reference Points

12-month Figures \$ Millions			Historical Figures \$ Millions	
Worst	Average	Best	Worst	Best
\$1.291	\$1.257	\$1.219	\$1.702	\$0.854

\* The accrued cost of future scheduled maintenance

### Average Ask Price

(\$ Mil)

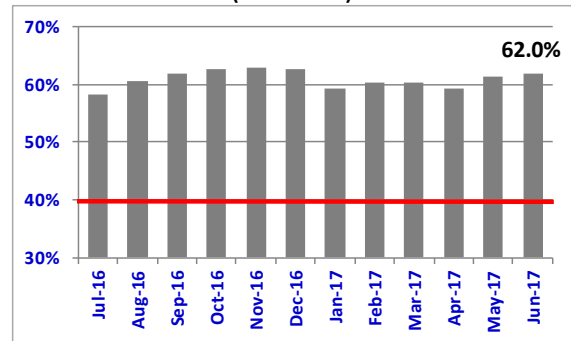


#### Average Ask Price – Reference Points

12-month Figures \$ Millions			Historical Figures \$ Millions	
Highest	Average	Lowest	Highest	Lowest
\$3.57	\$3.22	\$3.00	\$4.80	\$3.00

### Maintenance Exposure to Ask Price Ratio

("ETP Ratio")



#### Importance of the ETP Ratio

- As the ETP Ratio decreases, the aircraft's "value" increases (in relation to its Ask Price)
- Aircraft whose ETP Ratio is above 40% are burdened, on average, with excessive Maintenance Exposure

### Maintenance Exposure to Ask Price Ratio ("ETP Ratio") & Days on Market

Model	ETP Ratio	Days on Market	Model	ETP Ratio	Days on Market	Model	ETP Ratio	Days on Market
<b>Bombardier</b>			<b>Cessna</b>			<b>Gulfstream</b>		
Challenger 300	23.7%	173	Citation Sovereign 680	15.2%	92	G-150	13.5%	198
Learjet 60XR	24.6%	274	Citation XLS (MSG3)	35.8%	158	<b>G-200</b>	<b>42.7%</b>	<b>141</b>
Learjet 45XR	26.5%	369	Citation Excel 560XL	44.3%	178	<b>Hawker</b>		
Learjet 45	38.1%	537	Citation X (MSG3)	49.3%	125	Hawker 900XP	23.6%	152
Learjet 45 w/APU	51.4%	545	Citation VI	84.4%	622	Hawker 850XP	33.4%	151
Learjet 60	104.9%	269	<b>Dassault</b>			Hawker 400XP	36.7%	100
Learjet 55C	129.5%	680	Falcon 50EX	29.7%	236	Hawker 800XP	53.5%	240
Learjet 55	205.3%	530	Falcon 50	67.2%	281	Hawker Beechjet 400A	61.7%	127
<b>Cessna</b>			Falcon 20-5	192.6%	485	Hawker Beechjet 400	87.7%	183
Citation Sovereign 680	15.2%	92				Hawker 1000A	91.8%	392
Citation XLS	25.1%	163				Hawker 800A	124.6%	237

Ask Price & Days on Market Source: AMSTAT (www.amstatcorp.com)

## Small Jets

### Future Value Trend (“eTrend™”) and Current Market Demand

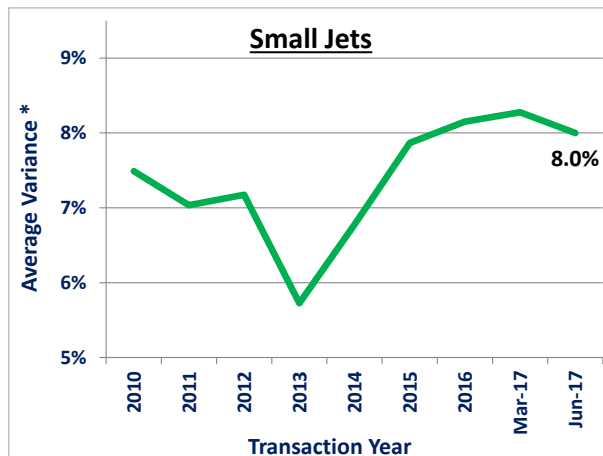
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Aircraft Make/Model	eTrend™	Current Market Demand*
	90-day Value Trend Average Gain/(Loss)	
<b>Beechcraft</b>		
Premier 1A	(\$95,000)	★★★★☆
Premier I	(\$68,500)	★★★★☆
<b>Bombardier</b>		
Lear 31A	(\$69,000)	★★★★☆
Lear 35	(\$6,000)	★★★★☆
Lear 35A	(\$9,500)	★★★★☆
Lear 36	(\$1,500)	★★★★☆
Lear 36A	(\$4,500)	★★★★☆
<b>Cessna</b>		
Citation Bravo	(\$93,000)	★★★★☆
Citation CJ1	(\$97,000)	★★★★☆
Citation CJ1+	(\$65,000)	★★★★☆
Citation CJ2	(\$33,500)	★★★★☆
Citation CJ2+	(\$95,500)	★★★★☆
Citation CJ3	(\$97,500)	★★★★☆
Citation CJ3+	(\$99,500)	★★★★☆

Aircraft Make/Model	eTrend™	Current Market Demand*
	90-day Value Trend Average Gain/(Loss)	
<b>Cessna</b>		
Citation CJ4	(\$95,500)	★★★★☆
Citation Encore +	(\$57,000)	★★★★☆
Citation Encore	(\$46,500)	★★★★☆
Citation M2	(\$66,500)	★★★★☆
Citation Mustang	(\$85,500)	★★★★☆
Citation Ultra	(\$70,500)	★★★★☆
Citation II	(\$38,500)	★★★★☆
Citation III 650	(\$93,500)	★★★★☆
Citation V	(\$93,000)	★★★★☆
Citation VII	(\$77,500)	★★★★☆
<b>Eclipse</b>		
Eclipse 500	(\$11,500)	★★★★☆
<b>Embraer</b>		
Embraer Phenom 100	(\$42,500)	★★★★☆
Embraer Phenom 100E	(\$76,500)	★★★★☆
Embraer Phenom 300	(\$69,000)	★★★★☆

*Excludes new production aircraft entering service during 2016 & 2017*

### Used Aircraft Ask Price vs. Transaction Price Spread – Small Jets



### Market Overview Small Jets

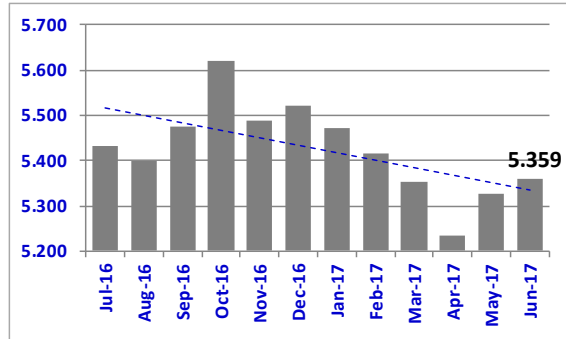
- At 8.0%, Ask Price and final Transaction Value differential for Small Jets continues to be the best/lowest among the four groups.
- Current Market Demand remains slightly below average at 2.93, on our scale of 1.0 to 5.0
- The Quarter over Quarter average 90-Day Value eTrend™ forecasts prices will fall 44% ***slower*** during Q2, compared to Q1 2017

\* Average Variance based on a Sample Set considering the Ask Price against the Transactional Price

## Small Jets

### Asset Quality Rating

Scale -2.500 to 10.000

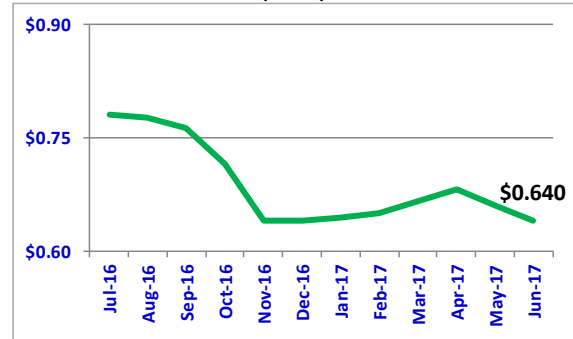


#### Asset Quality Rating Key

Outstanding	Excellent	Very Good	Good	Average	Below Average
5.500 or Greater	5.250 to 5.499	5.000 to 5.249	4.750 to 4.999	4.500 to 4.749	Less than 4.500

### Maintenance Exposure\*

(\$ Mil)



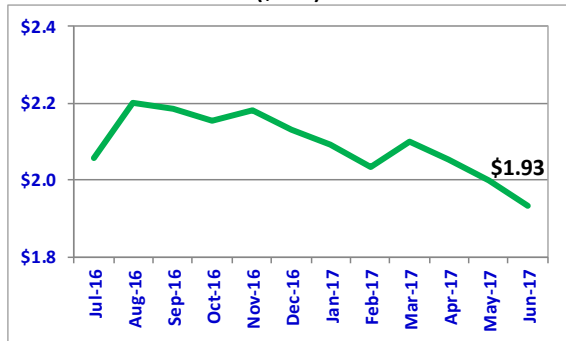
#### Maintenance Exposure – Reference Points

12-month Figures \$ Millions			Historical Figures \$ Millions	
Worst	Average	Best	Worst	Best
\$0.781	\$0.689	\$0.640	\$1.069	\$0.573

\* The accrued cost of future scheduled maintenance

### Average Ask Price

(\$ Mil)

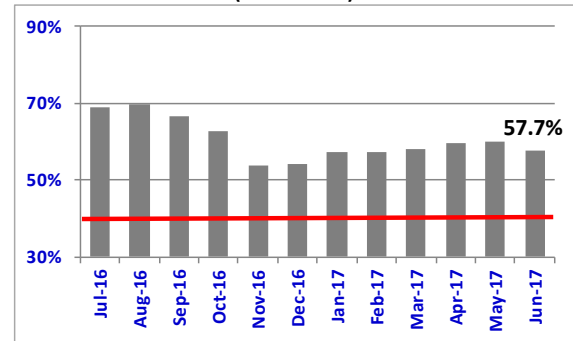


#### Average Ask Price – Reference Points

12-month Figures \$ Millions			Historical Figures \$ Millions	
Highest	Average	Lowest	Highest	Lowest
\$2.20	\$2.09	\$1.93	\$2.21	\$1.70

### Maintenance Exposure to Ask Price Ratio

("ETP Ratio")



#### Importance of the ETP Ratio

- As the ETP Ratio decreases, the aircraft's "value" increases (in relation to its Ask Price)
- Aircraft whose ETP Ratio is above 40% are burdened, on average, with excessive Maintenance Exposure

### Maintenance Exposure to Ask Price Ratio ("ETP Ratio") & Days on Market

Model	ETP Ratio	Days on Market	Model	ETP Ratio	Days on Market	Model	ETP Ratio	Days on Market
<b>Beechcraft</b>			<b>Cessna</b>			<b>Cessna</b>		
Premier 1A	38.0%	311	Citation CJ2+ 525A	14.1%	95	Citation V 560	54.7%	159
Premier 1	65.7%	103	Citation Encore	21.9%	122	Citation II	104.7%	261
<b>Bombardier</b>			Citation Mustang 510	26.1%	211	Citation ISP	104.7%	322
Learjet 31	114.0%	1129	Citation CJ1+	28.5%	123	<b>Dassault</b>		
Learjet 35A	125.5%	537	Citation CJ2	29.8%	165	Falcon 20-5		
<b>Cessna</b>			Citation Bravo	35.5%	298	<b>Embraer</b>		
Citation CJ4 525C	6.7%	175	Citation V Ultra	46.2%	267	Phenom 300	8.6%	204
Citation CJ3	13.5%	109				Phenom 100	27.6%	183

Ask Price & Days on Market Source: AMSTAT (www.amstatcorp.com)

## Turboprops

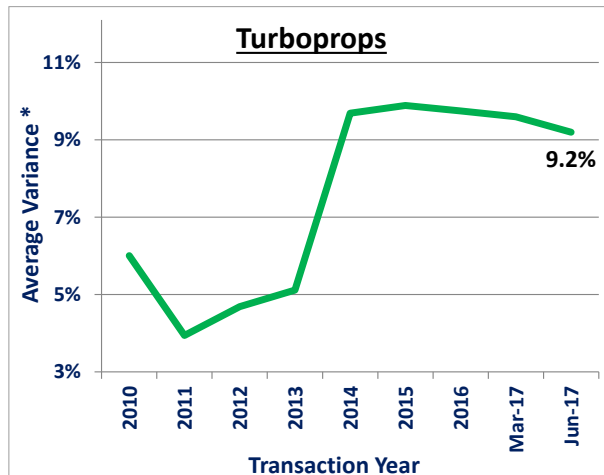
### Future Value Trend (“eTrend™”) and Current Market Demand

- **eTrend™** information is designed to provide a general view of how aircraft prices are currently trending, and the ***effect this is likely to have on average transaction values 90 days hence***.
- **Current Market Demand** for each Make/Model represents an objective view based on that Make/Model’s Average Days on Market and the percentage of that Model’s fleet listed for sale. During this past quarter, ***demand remained steady at 3.15, on our scale ranging from 1.00 (weak demand) to 5.00 (strong demand)***.

Aircraft Make/Model	eTrend™	Current Market Demand*
	90-day Value Trend Average Gain/(Loss)	
<b>Cessna</b>		
208 Caravan (2001+)	(\$48,000)	★★★☆☆
208 Caravan (2008+)	(\$65,500)	★★★☆☆
208B Grand Caravan (2001+)	(\$38,000)	★★★☆☆
208B Grand Caravan (2008+)	(\$95,000)	★★★☆☆
<b>Beech</b>		
King Air 350 (1990-2009)	(\$47,500)	★★★☆☆
King Air 350i	(\$99,000)	★★★★☆
<b>Piaggio</b>		
Piaggio Avanti P180 II	(\$91,000)	★★☆☆☆
<b>Pilatus</b>		
Pilatus PC-12 41 and 45	(\$42,500)	★★★☆☆
Pilatus PC-12 47	(\$14,500)	★★★★☆
Pilatus PC-12-47E NG	(\$69,000)	★★★★☆
<b>Socata</b>		
Socata 700A TBM	(\$34,500)	★★★☆☆
Socata 700B TBM	(\$34,500)	★★★☆☆
Socata Pack TBM 850	(\$58,500)	★★★☆☆

*Excludes new production aircraft entering service during 2016 & 2017*

### Used Aircraft Ask Price vs. Transaction Price Spread



### Market Overview Turboprops

- Ask Price and final Transaction Value differential improved to 9.2%, the best figure generated by Turboprop since 2013
- Current Market Demand remains above average at 3.15 on our scale of 1.0 to 5.0
- The Quarter over Quarter average 90-Day Value eTrend™ forecasts prices will fall 35% ***slower*** during Q2, compared to Q1 2017

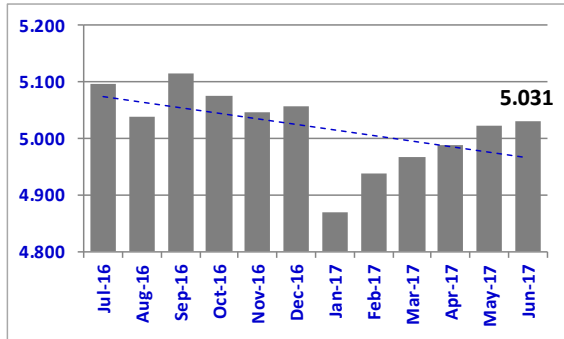
\* Average Variance based on a Sample Set considering the Ask Price against the Transactional Price



## Turboprops

### Asset Quality Rating

Scale -2.500 to 10.000

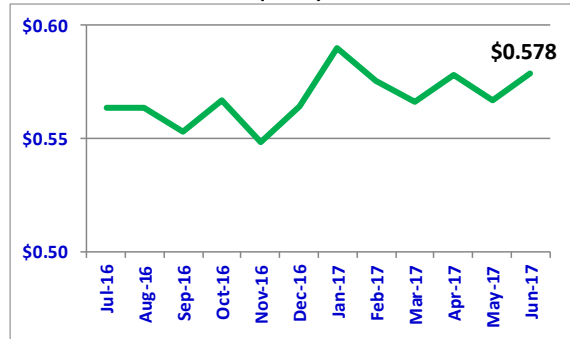


#### Asset Quality Rating Key

Outstanding	Excellent	Very Good	Good	Average	Below Average
5.500 or Greater	5.250 to 5.499	5.000 to 5.249	4.750 to 4.999	4.500 to 4.749	Less than 4.500

### Maintenance Exposure\*

(\$ Mil)



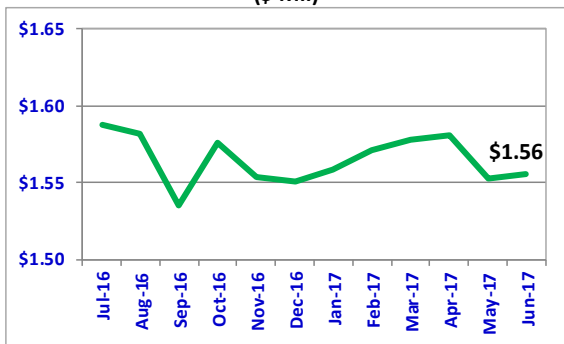
#### Maintenance Exposure – Reference Points

12-month Figures \$ Millions			Historical Figures \$ Millions	
Worst	Average	Best	Worst	Best
\$0.590	\$0.568	\$0.548	\$0.697	\$0.436

\* The accrued cost of future scheduled maintenance

### Average Ask Price

(\$ Mil)

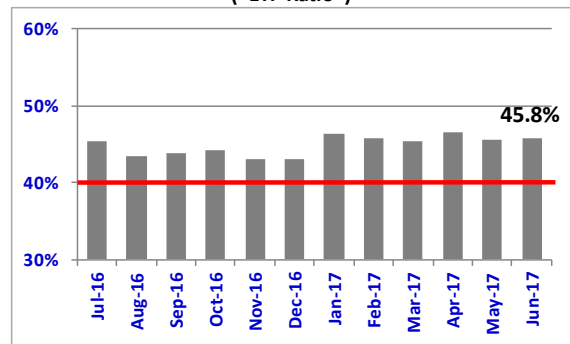


#### Average Ask Price – Reference Points

12-month Figures \$ Millions			Historical Figures \$ Millions	
Highest	Average	Lowest	Highest	Lowest
\$1.59	\$1.57	\$1.53	\$1.97	\$1.46

### Maintenance Exposure to Ask Price Ratio

("ETP Ratio")



#### Importance of the ETP Ratio

- As the ETP Ratio decreases, the aircraft's "value" increases (in relation to its Ask Price)
- Aircraft whose ETP Ratio is above 40% are burdened, on average, with excessive Maintenance Exposure

### Maintenance Exposure to Ask Price Ratio ("ETP Ratio") & Days on Market

Model	ETP Ratio	Days on Market	Model	ETP Ratio	Days on Market	Model	ETP Ratio	Days on Market
<b>Beechcraft</b>			<b>Beechcraft</b>			<b>Pilatus</b>		
KingAir B-200 - Post-2000	25.8%	203	Beech B-1900C	91.3%	437	Pilatus PC-12	18.7%	101
KingAir 350 - Post-2000	26.3%	164	KingAir C90	101.0%	646	<b>Piper</b>		
KingAir 350 - Pre-2001	30.2%	247	<b>Piaggio</b>			Piper Meridian	23.9%	158
KingAir B-200 - Pre-2001	41.5%	233	Piaggio P-180 II	37.3%	134			
KingAir 300	41.9%	167	Piaggio P-180	75.7%	173			

Ask Price & Days on Market Source: AMSTAT (www.amstatcorp.com)

## Aircraft analyzed – maintenance analytics

Following is a list of the aircraft models researched to produce this Market Report’s maintenance analytics:

Large Jets	Medium Jets	Small Jets	Turboprops
<b>Beechcraft-Hawker:</b>			
	• Beechjet 400	• Premier 1	• King Air C90
	• Beechjet 400A	• Premier 1A	• King Air B-200
	• Hawker 400XP		• King Air 300
	• Hawker 800A; 800XP		• King Air 350
	• Hawker 850XP		• B-1900C
	• Hawker 900XP		
	• Hawker 1000A		
<b>Boeing:</b>			
	• BBJ		
<b>Bombardier:</b>			
• CL-601-1A; 3A; -3R; -SE	• Challenger 300	• Learjet 31	
• CL-604	• Learjet 45; 45 w/APU	• Learjet 35A	
• CL-605	• Learjet 45XR		
• Global 5000	• Learjet 55-55A		
• Global Express	• Learjet 55C		
• Global XRS	• Learjet 60		
	• Learjet 60XR		
<b>Cessna:</b>			
	• Citation Excel	• Citation CJ1+	
	• Citation Sovereign	• Citation CJ2	
	• Citation VI	• Citation CJ3	
	• Citation X (MSG3)	• Citation CJ4	
	• Citation XLS; XLS (MSG3)	• Citation Bravo	
	• Citation XLS+ (MSG3)	• Citation Encore	
		• Citation I-SP	
		• Citation II	
		• Citation Mustang	
		• Citation V; Citation V Ultra	
<b>Dassault Falcon Jet:</b>			
• F2000	• Falcon 20-5		
• F2000EX; F2000EX Easy	• Falcon 50		
• F2000DX; F2000LX	• Falcon 50EX		
• F900; F900B; F900C			
• F900EX; F900EX Easy			
• F900DX; F900LX			
<b>Embraer:</b>			
• Legacy 600		• Phenom 100	
		• Phenom 300	
<b>Gulfstream:</b>			
• G-IV	• G-100		
• GIV-SP & GIV-SP (MSG3)	• G-150		
• GV	• G-200		
• G350			
• G450			
• G550			
<b>Piaggio:</b>			
			• P-180; P180 II
<b>Pilatus:</b>			
			• PC-12
<b>Piper:</b>			
			• Malibu Meridian

## Analysis Methodology – Maintenance Analytics

Asset Insight, LLC has developed a proprietary **Asset Grading System Process**™ (AGSP) that objectively evaluates assets relative to their Optimal Maintenance Condition and provides an easy-to-understand, uniform, yet robust, set of data that can be acted upon, on a timely basis, to protect and/or enhance an asset's financial performance.

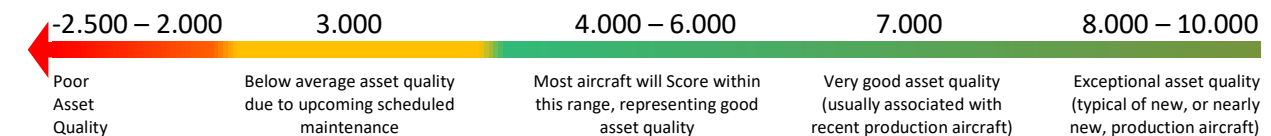
The AGSP is based on patented algorithms analyzing current age, the hours and cycles on an aircraft's Major Sectors – airframe, engine(s), propeller(s), APU, paint, and interior – as well as the cost to repair or replace parts with no defined life. The AGSP derives an index (the "**Asset Insight Index**") providing an objective measure of an aircraft's current maintenance status and its related Financial Exposure going forward – that is, the financial liability accrued with respect to future scheduled maintenance events.

The Asset Insight Index is comprised of three factors that evaluate two aspects of an aircraft's maintenance, its **Asset Quality Rating** and its **Maintenance Exposure Value**. The Asset Quality Rating is computed by averaging the aircraft's **Maintenance Rating** and **Financial Rating**, while the Maintenance Exposure Value measures an aircraft's accrued / consumed financial liability with respect to future scheduled maintenance events, presenting such information in financial terms.

## Asset Quality Rating and the Factors Comprising the "Asset Insight Index"

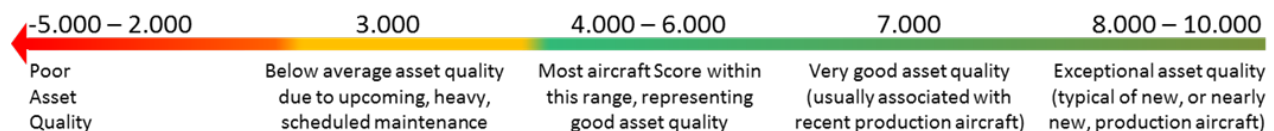
### 1 Asset Quality Rating

The Asset Quality Rating allows any aircraft's maintenance status to be directly compared to any other aircraft's maintenance status, by virtue of the Asset Insight standardized scale. The Asset Quality Rating is computed by averaging the aircraft's Maintenance Rating ("ATC Score") and Financial Rating ("ATFC Score") – explained in the following two sections – and is based on a scale ranging from -2.500 to 10.000, the latter reflecting a newly produced aircraft (see scale below).



### Maintenance Rating – Asset Technical Condition Score ("ATC Score")

The "Asset Technical Condition Score" ("ATC Score") utilizes the Asset Grading System Process (Patent Pending) developed by Asset Insight, Inc. to objectively evaluate and grade an aircraft's maintenance status, on a standardized scale, relative to its Optimal Maintenance Condition (achieved on the day it came off the production line), utilizing the aircraft's (standard/typical) Scheduled Maintenance Program. The ATC Score is based on a scale ranging from -5.000 to 10.000, the latter reflecting a newly produced aircraft (see scale below).



## ② **Financial Rating – Asset Technical Financial Condition Score (“ATFC Score”)**

The “Asset Technical Financial Condition Score” (“ATFC Score”) evaluates and grades the Aircraft’s financial rating relative to its Optimal Maintenance Condition based on the Aircraft’s ATC Score (see Maintenance Rating above). The ATFC Score is based on a scale from 0.000 to 10.000, the latter reflecting a newly produced aircraft (see scale below).

0.000	3.000	4.000 – 6.000	7.000	8.000 – 10.000
All scheduled maintenance events due	Aircraft with upcoming, high cost, scheduled maintenance events	Most aircraft will Score within this maintenance status cost range	Aircraft facing only relatively low-cost maintenance events	New or recently manufactured aircraft

To score each aircraft make/model, the average cost for completing each maintenance event comprising the ATC Maintenance Program is determined. Having compiled the aircraft’s maintenance history, the time (calendar, flight hours or cycles) accumulated toward each individual scheduled/anticipated maintenance event is used to determine the aircraft’s ATFC Score.

The Financial Rating (ATFC Score) differs from the Maintenance Rating (ATC Score). While the ATC Score evaluates and grades an aircraft’s maintenance status relative to its Optimal Maintenance Condition, the ATFC Score grades an aircraft’s financial condition relative to its Optimal Maintenance Condition, meaning the ATFC Score is weighted by the estimated cost to complete each maintenance event. Accordingly, the Maintenance Rating is likely to differ from the Financial Rating.

For example, if an aircraft had only two maintenance components, and if one component was three-quarters of the way toward its overhaul while the second was one-quarter of the way toward its overhaul, their combined ATC Score would be 5.000, based on the following calculation: (75% + 25%) / 2 X Perfect Score (10.000) = 5.000.

However, if the first of these components has an overhaul cost of \$1,000, while the second has an overhaul cost of \$10,000, their combined ATFC Score would be 2.955 (see below).

	<u>Remaining Useful Life</u>	<u>Overhaul Cost</u>	<u>Remaining Financial Value</u>
Component #1	75%	\$1,000	\$750
Component #2	25%	<u>\$10,000</u>	<u>\$2,500</u>
		<u>\$11,000</u>	<u>\$3,250</u>

### **ATFC Score Calculation Methodology**

$$\text{Aircraft's Financial Ratio } (\$3,250 / \$11,000) \times \text{Perfect Score } (10.000) = 2.955$$

## **Maintenance Exposure – Asset Technical Financial Exposure Value (“ATFE Value”)**

The “Asset Technical Financial Exposure Value” (“ATFE Value”) measures the aircraft’s financial exposure based on its maintenance condition – the liability accrued / consumed with respect to future scheduled maintenance events – and presents this information in financial terms, as follows:

Max \$ Exposure for Make/Model	\$0 Maintenance Exposure
Maintenance financial exposure equal to cost of one complete maintenance cycle	Typical aircraft maintenance cost exposure range
	Newly manufactured aircraft

To derive an aircraft's ATFE Value, the estimated cost for completing each event comprising the ATC Maintenance Program has been established. Having compiled an aircraft's maintenance history, the time (flight hours, landings/cycles, and/or calendar period) accumulated toward each individual scheduled/anticipated maintenance event is used to compute the dollar liability accrued toward that event, with the ATFE Value representing the total accrued liability toward future maintenance events.

## Used Aircraft Ask Price vs. Transactional Price Spread

Detailed analytics are used to determine the ask price of an aircraft and its bid/ask spreads, including, but not limited to, items such as market supply, demand, saturation, aircraft age, competition, utility, damage, economics, financing, trade, exclusivity, compulsion to sell, buyer / seller market strength, etc.

## Future Value Trend (“eTrend™”) and Current Market Demand

eTrend™ information is displayed by Make/Model and is intended to provide a general view of how aircraft prices are currently trending and the effect this is likely to have on average transaction values 90 days hence. Current Market Demand for each Make/Model is an objective view based on that Make/Model's Average Days on Market and the percentage of that Model's fleet listed for sale. All figures **EXCLUDE** new production aircraft entering service during 2016 and 2017.

## Ask Price vs. Asset Exposure to Ask Price Ratio (“ETP Ratio”) Graph

The graph displays the relationship between each aircraft group's “Asset Exposure to Ask Price” Ratio (the ATFE Value divided by the Average Ask Price) and the Average Ask Price. In general, as aircraft Ask Prices rise, the Ratio should decrease – all other factors being equal. However, the Ratio's relationship to Ask Price is not an absolute inverse correlation. Aircraft with a greater or lesser maintenance-related Financial Exposure, but with the same Ask Price, may replace aircraft listed “for sale” during any given month. Accordingly, it is possible for both the Ratio and the Ask Price lines to move in the same direction.

## Asset Exposure to Ask Price Ratio (“ETP Ratio”)

The Asset Exposure to Ask Price Ratio (“ETP Ratio”) is calculated by dividing the aircraft's ATFE Value (the financial liability accrued with respect to future scheduled maintenance events) by its Ask Price. Accordingly, as the ETP Ratio decreases, the aircraft's “value” increases (in relation to its Ask Price). Aircraft whose ETP Ratio is 40% or greater are believed to have accrued an excessive level of maintenance Asset Exposure (ATFE Value) in relation to their Ask Price. ETP Ratios are only available in cases where a statistically significant sample of aircraft Ask Price and maintenance status can be derived for a specific Make / Model.

## General Information

Asset Insight, LLC ([www.assetinsight.com](http://www.assetinsight.com)) provides asset evaluation and financial optimization services. The company's "Asset Grading System Standard" (Patent Pending), and related analyses, provides the ability to translate the asset's technical condition into easy-to-understand, actionable financial information. Asset Insight is independent of any manufacturer, appraisal firm, financial services firm, or technical services facility, enabling it to provide an unbiased view of an asset's condition with respect to its technical status and related financial exposure. The company is managed by business, technical and financial professionals with significant experience in aviation asset management.

This Analysis is not intended to represent a technical evaluation of any Aircraft. Further, the reader, or any party using information contained in this Report, should recognize that this Report is limited in scope, and that discrepant conditions may exist in the analyzed aircraft that were not known by Asset Insight, LLC.

The Asset Insight Index and its ATC Score, ATFC Score, and ATFE Value components are based upon the aircraft maintenance condition information reviewed by Asset Insight, LLC as of a certain date. Running an analysis on any aircraft utilizing a different date, revised maintenance data and/or utilization figures will likely generate different results.

**Asset Insight, LLC makes no representation concerning the value or condition of any aircraft. Additionally, Asset Insight, LLC does not warrant the accuracy of the information obtained by Asset Insight, LLC that has been used to produce this Report.**

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