



Pre-owned Market 2016

SPECIAL REPORT

USED JETS: Awash in aluminum

by Mark Huber

Even before the U.S. election results and subsequent stock market rally, the used business aircraft market was showing signs of emerging from its summer crypt, with some brokers reporting record “activity” going into the fourth quarter and 37 percent of end users reporting to a [survey](#) compiled by our sister publication, **Business Jet Traveler**, that they intend to make more use of private aviation. While the inventory for both used business jets and turboprops is well below the historical average of 13 percent, the prices asked for them are bargain basement, attributable to largely four factors: anemic global economic growth; deep discounting of new aircraft by the OEMs; too many late-model aircraft for sale and the continuous backfilling of the inventory of those aircraft; and the costs associated with performing mandated upgrades to older aircraft. There is still pronounced softness in both the light and large-cabin jet segments, but signs are emerging in various surveys that market pessimism amongst aircraft owners is waning and the bottom might be right around the corner. With the new jet market not expected to make a meaningful recovery until at least 2020, it might be a slow crawl out of the hole, but at least the worst of the carnage might be over.

The used jet market is still glum beneath an aluminum overcast.

Maybe this one thing is all you need to know about the current state of the business jet market. The largest display at this year’s NBAA show was not on the show floor; it was out at the static display at Orlando Executive airport and it was a collective consisting of members of the National Aircraft Resale Association (NARA). It was here under the small picnic tents and next to the used iron—not on the glitzy show floor—that the deals were getting done. This was basic, no-frills, hand-to-hand retailing.

And no wonder. According to JetNet data for the first half of the year, 11.7 percent of the global bizjet fleet—2,436 aircraft—was on the market, an uptick of 0.5 percent from the same period last year. The average aircraft lingered on the market for 307 days, and while that was 12 days less from the same period last year, asking prices were also down by a discouraging 11.2 percent. There’s no shortage of used metal out there and it’s going cheap. Even though prices are falling and speeding

transactions, the used jet inventory is still building in behind it. There’s just no way to perfume this. The elevator may not be in free fall, but it is nowhere near slowing to a comfortable pace.

In September, Embraer Executive Jets CEO Marco Tulio Pellegrini noted the state of the market and observed, “How do you go to a board and ask for a new \$50 million business jet flying 300 to 400 hours per year that will be worth only \$20 million in a few years? Today, there are 2,400 used jets on the market and only 600 to 650 new jets [are] selling [annually]. A ten-year-old bizjet is still a fairly new airplane and about 700 to 800 of those on the market fall into this category.”

Indeed, the late-model depreciation wall of shame is long and distinguished, dominated by recently out-of-production models from the late Hawker/Beechcraft (now Textron Aviation) and plenty of honorable mentions to go around. A cursory sampling of 2009 model data from Vref revealed the following since-new depreciation numbers: Hawker 4000, 79.13 percent; Learjet 60XR, 71.43 percent; Hawker 400XP, 70.27 percent; G200, -69.26 percent; Hawker 800XP, 68.81 percent; G150, 68.11 percent; Premier IA, 66.39 percent; and Citation X, 61.93 percent.

Granted, some of these members from the Class of 2009 have specific woes related to market appeal or sector problems. For

example, Gulfstream recently announced the end of production of both the **G150** and the **G450** and all models of Learjets are viewed with growing trepidation in the absence of new model development by parent Bombardier and swelling market skepticism about the continued viability of the brand. But resale values for popular models that remain in production and that come from stable-parent households are doing only marginally better, with depreciation values that average from the high 40s to high 50s at best. And, driven in part by new-aircraft price discounting, the depreciation rates are spooling up, according to Richard Emery, COO of Dallas's Mente Group, who noted average annual rates had jumped from 2 to 4 percent to 6.5 to 8.5 percent and in some cases 10 percent.

International Opportunity

There's simply too little gold chasing too much aluminum. While JetNet reports that during the first six months of this year the percentage of the U.S. bizjet fleet for sale jumped to 11.6 percent from 11.3, internationally it climbed by almost triple that rate, going to 11.7 percent from 10.9.

The Brazilian market is particularly distressed, according to Marcelo Abello of International Jet Traders, who describes the buyers' market as "basically dead." However, he said, there is no shortage of sellers. "They're selling everything," Abello brought several Brazilian-registered aircraft, including a G550, for sale to this year's NBAA Convention in search of buyers. Asia isn't far behind.

The distressed international markets present savvy buyers with opportunities for substantial savings, but are also fraught with pitfalls, warn several experts. While importing an aircraft, especially a large-cabin late-model aircraft, into the U.S. might at first glance seem like a bargain the associated transaction costs can easily be double those of a domestic deal, cautioned broker Josh Mesinger. He also pointed out that pre-buy inspections, logbook verifications, de-registrations, escrow and title clearances are all more complex.

Meanwhile, aviation attorney David Cooke advised that it is a good idea to obtain aviation counsel in both export and import countries when doing such a deal.

Some Signs of Activity

While on the aggregate, the U.S. market has been slow, there have been spurts of activity and around certain models throughout the year, specifically the beginning and in recent

Bombardier Challenger 604



MARK WAGNER

Gulfstream G150



MARK WAGNER

weeks. "We were really busy at the beginning of the year, then quiet over the summer, and now more active again in recent weeks," Lee Thomas, aircraft sales manager for Eagle Aviation in West Columbia, S.C., said in early November. Eagle specializes in the resale of Citations, particularly the CJ3. "Over the last month it's [buying] really picked up a lot as prices have fallen," he said. "The prices have really come down."

Thomas ascribes some of this also to the normal end-of-year surge associated with buyers looking to take advantage of accelerated depreciation provisions in the U.S. tax code. He said models that have readily available avionics and airframe upgrades, such as the CJ1 and the CJ3, seem to do better in the current market. However, he thinks the used market as a whole is undervalued and says valuation services may at least be partially to blame, maintaining that published valuations for certain aircraft models "make no sense," especially in light of the improving economy.

They are without question spurring sales activity. Nick Schneider of Boca Raton, Fla.-based Global Wings specializes in used Hawker/Beechcraft aircraft and has been bringing them to NBAA for 10 years in that capacity. In all that time he said he could ascribe one direct sale to exhibiting at the show, a sale he downplayed as incidental to it. But this year's activity resulted in several sales and two letters of intent. "It's been quite a positive show."

Schneider said the falling prices have opened up the private jet market to a new class of individual who previously could not afford them. "You've opened the

market to the guy who lives in a \$2.5 million house on the water in Boca. I live on a little island and I had two airplane owners on my island and now I have six—not because they have gotten rich but because what before cost \$8 or \$9 million they can now get for less than \$2 million. I'll split it with my buddy at the golf club and now we have an airplane. So [the falling prices] have expanded the volume of buyers; your customer base has grown hugely because the prices have come down."

That's a sentiment shared by Brad Hatt of Hatt & Associates, a Denver-based brokerage also with heavy Hawker experience. "Last year we did 30 transactions, 18 were Hawkers. Textron has done a nice job of supporting the aircraft," Hatt noted that about 10 percent of the late-model Hawker fleet is on the block, anywhere from 55 to 70 aircraft in recent months, but reminds that "it is a big fleet." He said the 400XP has stopped dropping and described the light jet market, decimated in recent years, as currently "stable."

Hatt concurred it was a dry summer but said the market began to look up in August. "We've been as busy as we have been in the last two years within the last 60 days and the majority of it is U.S.-based buyers. You'll always get more fourth-quarter activity, and that generally starts in the third quarter."

Hatt said some of his U.S. buyers are interested in foreign-based for-sale bargains, particularly European-registered aircraft where there "is no stigma" attached to them with regard to records or maintenance.

While Hatt sees some market tightening, he thinks it has limits. "I don't think

we'll ever see the market [as good as it was] pre-2008 again. While we are not having issues selling airplanes, it is still a buyers' market and a lot of people are buying used as opposed to new. The bargains are to be had pretty much on any of the airplanes around here. The people who buy these airplanes still aren't going to be jumping on the airlines. But they will spend \$4 million now for an airplane that sold new for \$14 million seven years ago and will still be worth \$2 million five years from now because after depreciation they are probably even." Hatt said this encourages more first-time buyers in the market and more of his customers fall into this category. He has also had some success in selling aircraft to former jet card users and fractional owners.

Clint Holly, vice president of Jack Pre-witt & Associates in Colleyville, Texas, shares his peer group's opinion that sales activity is picking up toward year-end. "We all feel like the bottom has come and prices should mellow out and maybe even start to rise in a couple of these markets. While there are still a lot of aircraft on the market, we see a slowing down of price decreases."

Holly said individual model preferences continue to be cyclical, pointing to the preference timing demands between late-model Challenger 604s and GIV-SPs as an example. "When the GIV is selling hot, the 604 market slows down. Once all the good GIVs are gone, then the 604 market heats up. Right now, the market is more skewed to 604s. Both offer a lot of value for the price."

Indeed. Using our 2009 baseline model year, a G450 has lost 58.06 percent of its market value, typically trading in the \$15 million to \$13 million range, while the same-year Challenger 605 was moving at



Hawker 400XP

DAVID MINTOSH

between \$11 and \$9 million, a 60.82 percent drop from its original \$28 million list price.

Potential for Market Distortion

Mesinger cautioned that an oversupply of a particular make and model on the market can create a propensity for soft deals for that aircraft—that is, when the buyer has the option to accept or reject the aircraft at the conclusion of the pre-buy inspection. Hard deals prevail in conditions of scarcity, when there is a rising market with short demand, and buyers are locked into deals earlier in the buy cycle with non-refundable deposits or terms that give sellers opportunities to cure.

The dynamics of the current resale market have made the need for reliance on a specialized transaction team even more critical, Mesinger said, citing aging aircraft issues, the large number of used aircraft on the market, and the recent trend to import aircraft into the U.S. In any market condition, a skillful aviation attorney who knows how to craft a detailed aviation-specific pre-buy

agreement is valuable as that agreement then becomes a vehicle to "create a level of confidence and a level of trust," he said.

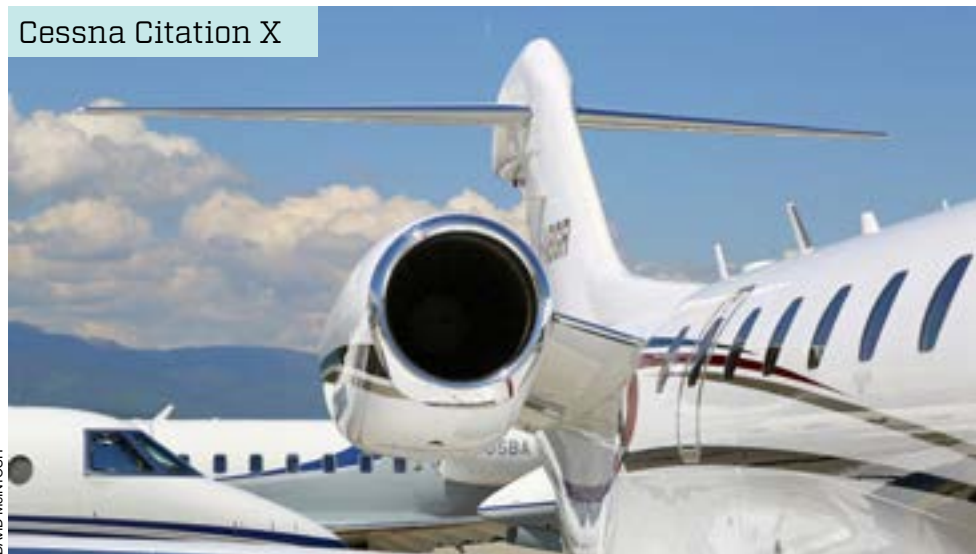
However, even if the current aircraft oversupply remains constant, there are two potential factors that could bring further distortions in terms of aircraft and buyer scarcity.

If the FAA does not extend the ADS-B OUT 2020 compliance deadline, an unknown number of aircraft will be removed—at least temporarily—from the market. At this year's NBAA Convention, Duncan Aviation president Aaron Hilkemann pointed out the potential scope of the problem, noting that only one-sixth of the U.S. general aviation fleet is currently ADS-B equipped and, given the current conversion rates of an average of 65 per month, it is highly unlikely that the fleet will be in compliance at the deadline. Hilkemann estimated the conversion rate would need to more than double and said that the industry simply doesn't have the capacity to handle all the needed avionics upgrades in time. He predicted that "2018 and 2019 are going to be very difficult."

The second wild card is interest rates. The era of near-free commercial loan money may be coming to an end. As early as this month the Federal Reserve could begin a long-term policy of ramping up interest rates. On November 11, Federal Reserve vice chairman Stanley Fischer told an international banking conference that the Fed is preparing for "a gradual removal of accommodation" and that the case for tightening monetary policy is "quite strong."

How much interest rates need to move up to chase new buyers out of the market remains to be seen, but a combination of higher prices and higher interest rates could end any market climb, no matter how short or subtle, and ensure that the inventory of used aluminum overcast remains a stationary front. □

Cessna Citation X



DAVID MINTOSH

USED TURBOPROPS:

Slower descent

by Mark Huber

The used turboprop market might not be as distressed as its business jet cousin, but there is hardly cause to pop the champagne corks, either. Through the first six months of this year, inventory continued to backfill, ticking up to 8.3 percent of the fleet on the market from 8 percent from the year-ago period, according to JetNet. At the same time prices continued to fall, dropping 2.3 percent for the period. There were some hopeful signs, as supply outside the U.S. marginally tightened to 7 percent from 7.1 of the fleet on the market and the average time on the market dropped to 299 days, an acceleration of 15 days. But U.S. supply surged to 9.4 percent of the fleet from 8.7 percent. At mid-year there were 1,230 business turboprops on the market.

Using 2009 as the model year baseline for depreciation values from Vref, it is clear that singles continue to hold their values best: Cessna 208B Grand Caravan 12.77 percent; Pilatus PC-12/47E, 20.65 percent; Daher TBM 850, 31.88 percent; and Piper Meridian, 35.41 percent. King Airs from the Class of 2009 (all models) depreciated across a range from 41.46 percent to 41.73 percent. As a class, turboprops continue to offer superior depreciation protection compared to business jets: a 1980 Twin Commander 840 that originally listed for \$1.018 million can still fetch \$970,000 on today's used market, a depreciation (unadjusted for inflation) of 11.59 percent.

A wide view of recent aircraft listings found all makes and models trading in predictable, mostly narrow ranges. Among the singles, Cessna 208Bs from 1997 to 2013 were between \$1.29 and \$1.699 million; a 2009 Quest Kodiak was trading at \$1.25 million; Piper Meridians built between 2003 and 2014 were priced at between \$569,000 and \$1.55 million; TBM 700s from 1992 to 2005 were from \$880,000 to \$1.39 million; and Pilatus PC-12s from 1998 to 2011 were between \$875,000 (but with 19,600 hours total time) to \$3.645 million.

For twins, Cessna Conquest Is traded from 1982 to 1983 from \$479,000 to \$1.145 million; Conquest IIs from 1978 to 1980 from \$499,000 to \$895,000; 1978 Twin Commander 690Bs from \$695,000 to \$795,000;

and vintage twins such as a 1975 MU-2M with relatively low time (4,563 hours TT) for \$259,000 and a 1976 Piper Cheyenne II for \$400,000. Other Piper twins ranged from 1984-1985 Cheyenne 400LSs from \$1.195 million to \$1.595 million; 1984 Cheyenne IIAs from \$635,000 to \$1.095 million; 1981-82 Cheyenne IIIs from \$495,000 to \$795,000; 1981-83 Cheyenne IIXLs from \$775,000 to \$975,000; 1978-81 Cheyenne Is from \$275,000 to \$395,000, and 1984 Cheyenne IAs from \$399,000. Fairchild Merlin IIIs continue to trade in a fairly narrow range driven by engine times; 1973-1986 models trading from \$249,000 to \$900,000. High-time—20,000 hours and up—BAe Jetstream 31s can be had for as little as \$450,000. Beechcraft King Airs continue to dominate listed turboprops for sale, with 90-series examples the most plentiful: a 1977 C90 for \$299,000 to a 2009 C90GTi for \$1.899 million; the 200 series ranged from \$1.295 million for a 1988 model with 14,000 hours to \$2.795 million; and a 1998 Model 350 was listed for \$1.995 million. Reflective of their unique capabilities for operating in harsh environments, de Havilland Canada Twin Otters continue to command prices that can be charitably characterized as insane: a 1968 DHC-6-200 was recently listed \$1.9 million while a new-production 2011 DHC-6-400 from Viking Aircraft on floats commanded an ask of \$5.6 million. Piaggio Avantis continued to take a beating; a relatively low-time (2,200 hours TT) Avanti II was listed for \$2.5 million, about \$400,000 below retail and a 60-percent drop from its original \$7.2 million purchase price.

Product Support Matters

The Piaggio is an instructive case study of what happens to aircraft valuations when the brand is sullied by sporadic new aircraft production—the fleet numbered 219 at summer's end after 26 years of production—and sketchy product support over a long period of time. In July Piaggio Aerospace published a new industrial plan as part of its corporate restructuring that called for the company to drop its engine support and overhaul business and to be transformed into a defense and special-mission supplier. In August, CEO Carlo Logli said the company remained committed to the Avanti program and supporting it, but just days later he was replaced.

Meanwhile, numerous operators began to voice frustration about spares availability, some going as far as to plan to acquire “parts planes” to keep flying. Before he left as CEO, Logli acknowledged that the

substandard product support for the aircraft was linked in part to the “restructuring process.” When this process will be concluded and to what end remains to be seen. But Piaggio historically has been slow responding to customers and updating the Avanti line. In 2011 the company announced that it was working on the propellers and a variety of other improvements for the aircraft, including anti-skid brakes, a better environmental control system and a digital cabin-management system and that they would be standard on new aircraft and available for retrofit on legacy models. Those changes took nearly five years to implement into the production line and are now available on the Avanti Evo.

Contrast this with support for various models long out of production, such as the line of Twin Commanders. Approximately 700 turboprop Twin Commanders remain in service worldwide. Today, Twin Commander Aircraft of Creedmoor, N.C., holds the type certificate and supports the airplane with parts that it makes from 58,000 pieces of original production tooling. It also has 17 authorized service centers that support the aircraft. Company president Matt Isley notes, “Ninety-five percent of our parts requests are out the door the same day. We stock a lot of inventory. When you compare the support that we provide with the support of in-production aircraft, we're on par with some of the best OEMs to make sure our owners have mission-capable aircraft.” Twin Commander also has a variety of upgrades available for owners such as Hartzell Q-tip propellers and the Garmin G950 integrated glass panel flight deck, a new environmental control system, acoustic sound blankets, and interior and exterior LED lighting.

Mitsubishi (in the form of Mitsubishi Heavy Industries America) and contractor Turbine Aircraft Services (TAS) also have done a laudable job continuously supporting the MU-2, both in terms of aftermarket equipment and training for these high-performance twins, approximately 270 of which are still flying worldwide. The MU-2 again ranked first among all turboprops in AIN's annual Product Support Survey. New for the aircraft this year is a relatively inexpensive (\$5,000 to \$6,000) angle-of-attack system from Alpha Systems that provides visual and aural warnings and a new online icing video and quiz that fulfills FAA-mandated training requirements. Working with the FAA, Mitsubishi recently updated the training and operating rules governing

MU-2s, replacing [Special FAR 108 \(SFAR 108\)](#) with [Part 91, Subpart N](#), moving the training program from the Code of Federal Regulations to an Advisory Circular to allow it to be more easily updated. Owners are upgrading MU-2 panels with a variety of avionics such as Garmin G600 displays and GTN 650/750 touchscreen navigators. Available upgrades, parts and robust training and a continued attractive price have combined to drive growing sales activity in the MU-2 to strong levels this year, according to TAS.

Upgrades Breathe New Life

Under Textron's stewardship, King Air production and support have remained robust and there is no shortage of available engine, prop, avionics and interior upgrades for the thousands of legacy aircraft in service from third-party providers. However, price discounting of new aircraft has negatively affected used aircraft sales of all King Airs, particularly late model years. However, inventory levels have remained relatively stable, with only B200 and B200GTs bumping up against the bellwether 10-percent red line. Innova Aerospace has developed an STC for installation of the \$350,000 BendixKing AeroVue flight deck in 90-series King Airs and can also re-engine them with the GE H80 under the Power 90 program, generating significantly more power and lower fuel burn.

BendixKing is developing its own STC for installation of the AeroVue in King Air B200s. Earlier this year Rockwell Collins added three Pro Line 21 NextGen upgrade packages for King Airs for ADS-B OUT, synthetic vision, updated flight management system with localizer performance and approach procedures with vertical guidance (LPV/APV) and radius-to-fix (RF) legs, and the latest version of the integrated flight information

system. All the packages satisfy NextGen requirements and provide synthetic vision, and one introduces electronic charts, enhanced maps and SiriusXM and Arinc weather capability. Rockwell Collins is also offering Pro Line Fusion 14-inch touchscreens as an option with the upgrades.

BLR has developed a new "Whisper Prop" for King Air 90s and 200s with carbon fiber blades and composite cores that provide noise and vibration dampening, making some King Air 90s up to 50 percent quieter. Added to the company's composite winglets, the new props can improve

runway performance by up to 33 percent. The winglets alone provide an increase in mtow of 400 pounds and 210 pounds of landing weight.

Meanwhile, Advent Aircraft Systems has received FAA STC approval for its eABS GPS/digital anti-skid braking system for the King Air 300 series equipped with Rockwell Collins Pro Line GPS 4000S or Garmin G1000 avionics. Advent is working on the system for the King Air B200 and the Pilatus PC-12/PC-12 NG. On the King Air 300 series, the Advent system reduces landing distances by 5 percent and

takeoff length by 10 percent.

Blackhawk Modifications recently announced its King Air 350 XP67A engine upgrade, which replaces the stock Pratt & Whitney Canada PT6A-60As with more powerful 1,200-shp PT6A-67As and new MT propellers; the new engine/prop combination is expected to cut sea level to FL350 climb time to 18 minutes in hot conditions and boost maximum cruise speed 37 knots, to 340 knots. Blackhawk expects to receive STC approval for the program next May. Blackhawk provides new engine installations for all King Air 90s and 200s; the Cessna

Attractive Upgrades

The Beechjet/Hawker 400A/XP is just one of the used markets to benefit from comprehensive and cost-effective upgrade programs being offered by third-party providers. Typical is the [400E program from Elliott Aviation](#). For the customer aircraft and approximately \$700,000, customers receive an upgraded 400A/XP with new Garmin G5000 avionics, interior and paint that trims an estimated 360 pounds. The redesigned interior includes a newly designed shell kit with a recessed headliner for more headroom. The new interior has USB charging ports, redesigned cabinetry and variable-color LED upwash and downwash cabin lighting, all controlled through a mobile app. It also features a redesigned arm ledge with LED accent lighting in the drink holders, window reveals, lower sidewalls and electric window shades as well

as Gogo WiFi with Gogo Vision (on-demand movies).

Nextant Aerospace continues to offer its pricier rebuilding program for the aircraft, which includes new avionics and re-engining it with a new pair of Williams International FJ44-3APs.

Similarly, the Citation CJ3 market is benefitting from a touchscreen avionics upgrade to Rockwell Collins Pro Line Fusion [developed in cooperation with Duncan Aviation](#). The touchscreens eliminate the need for traditional FMS control display units mounted in the pedestal. STC certification of the CJ3 Pro Line Fusion upgrade is expected by year-end. Installations will be available from Duncan Aviation and Textron Aviation service centers. Last year, Rockwell Collins estimated the fly-away cost for the upgrade would be in the region of \$320,000.

—M.H.

Elliott 400E



Duncan CJ3





Pilatus PC-12

Conquest; the Piper Cheyenne I, II and IIXL; and the Cessna Caravan 208A and 208B.

Commuter Air Technology (Cat) is expanding its King Air B300 gross weight increase to include the Rockwell Collins Pro Line 21 avionics panel and Cleveland wheels and brakes, increasing maximum ramp weight to 16,600 pounds, mtow to 16,500 pounds, and MLW to 15,675 pounds. The STC supports the weight of the Cat 350ME fuel tanks, which provide an additional 280 gallons of fuel, giving the aircraft a potential endurance of 12 hours and a maximum range of 2,760 nm. And Raisbeck Engineering continues to offer its popular line of King Air performance enhancing options, everything from wing lockers to aft body strakes to swept-blade propellers now flying on 1,300 King Airs.

Similarly, a variety of upgrades are available for pressurized singles: the TBM 700 through 900, Pilatus PC-12 and Piper Meridian. Daher began to offer the Garmin G1000 integrated glass-panel-avionics retrofit package for all TBMs in 2010. While the retrofit costs about \$300,000, it

weighs substantially less than the original avionics and raises the 700B's full-fuel payload by 112 pounds.

Numerous Options

Lower-cost avionics upgrades are also available. For slightly more than a third of the cost of a full upgrade to a G1000 system, owners of legacy TBMs can upgrade to the G600, which comes with the right-hand RVSM G600, the L3 Trilog standby unit, dual Garmin GTN 750s, Flight Stream 210 remote audio panel GMA 35 and dual remote Garmin transponders, one of which meets ADS-B OUT requirements. The availability of a cost-effective avionics upgrade could be key to moving older TBM 700s, which have a tendency to linger on the market for an average of 17 months and command prices in the low \$1 million range. Over the summer, Daher said it plans to make its new “Elite Privacy” removable rear lavatory option available for retrofit into older TBMs. This should make the aircraft more appealing to charter operators, particularly in Europe, where single-engine restrictions on charter aircraft have recently been eased.

Frequent product refreshing and no shortage of available upgrades combined with the aircraft's unique capabilities has kept the used market tight for Pilatus PC-12s of all vintages over the last two decades, with volume consistently in the low single digits. Older PC-12/45s and PC-12/47s for sale are up around 5 percent of the fleet, while less than 4 percent of newer PC-12/47E (NGs) are for sale.

Finnoff Aviation Products has developed upgrades for the PC-12, among them an STC for installation of the PT6A-67P on pre-NG models that yields up to 20 knots more cruise speed; a new engine instrument system; and installation of a new 300-amp generator with an enlarged NACA scoop for cooling. Finnoff also distributes an MT five-blade composite propeller for the PC-12 that cuts cabin noise by 6 to 7 dB and shrinks takeoff distance by up to 15 percent. Earlier this year Hartzell received FAA STC approval for installation of a new five-blade swept-fan composite propeller for pre-NG aircraft with the Finnoff -67P engine upgrade. The new propeller is standard on all 2016 PC-12 NGs. Innovative

Solutions & Support's Future Generation flat-panel-display system and integrated auto-throttle for retrofit in the PC-12 was close to receiving FAA STC approval last month. IS&S president Shahram Askarpour said that the company's Future Generation (FG) flight deck in the PC-12 would be “capable of complying with all known upcoming mandates over the next 10 years.” The IS&S auto-throttle for the PC-12 is the first ever developed for a business turboprop. IS&S said at this year's NBAA convention that it plans to offer the autothrottle as a stand-alone option at a price that could be as low as in the \$40,000 range.

The FG flight deck features primary (PFD) and multifunction (MFD) displays, integrated standby unit (ISU), integrated flight management (IFMS) and electronic flight bag (EFB) system. The integrated EFB features include airport diagrams and approaches; moving maps with overlay of flight plan; airspace; airways (both high and low); runway depictions; navigation aids and intersections; satellite weather; electronic checklists; and display and control of the enhanced vision system.

The relatively low price of used Piper Meridians—\$700,000 for first-generation aircraft with Meggitt avionics, \$900,000 for second generation with Avidyne panels and \$1.1 million and up for the latest with the Garmin G1000—limits what buyers are willing to invest, but there are options such as a Garmin G950 three-screen retrofit that lets owners keep the existing autopilot. On first-generation aircraft, much of the same capability you get from the G950 can be achieved at a much lower cost by installing two G500s and two G750s.

Most business turboprops, even those that have been out of production since the 1970s, remain well supported and have clear paths for upgrades for one simple reason: they hold their value. □

Analysts to sellers: move aircraft fast

by Curt Epstein

With business jet values declining at an accelerated pace and the pre-owned inventory creeping back up, the time is right for aircraft buyers to step in and claim the models that they want. According to industry data provider JetNet, the average number of days on the market for business jets that found buyers has steadily declined over the past four years, to 300 days from 381 in 2013. “It’s my firm belief that we’re going to look back five years from now and say this was the best time in a generation to be buying the types of quality airplanes that are available in the market at these values,” said David Labrozzi, COO of Global Jet Capital.

Yet that shorter time on the market has not applied across the board. “The markets say there are X number of airplanes for sale and that they’ve been sitting there for 250 to 300 days on average, but the airplanes that sold in the last six months have averaged less than 180 days,” said Donald Dwyer, managing partner of aircraft broker Guardian Jet, speaking at the recent NBAA regional forum at New York Westchester County Airport. “Clearly, the best prepared airplanes are selling.”

In a buyers’ market rich in choices for each aircraft type, customers can apply even more scrutiny before settling on the best deal, and for sellers the goal, more crucial now than ever, is to make their particular aircraft stand out in the herd. With depreciation now inflicting real pain, sellers face a new variable in the equation: how much they stand to lose when their aircraft lingers on the market. “You’ll sell for more if you sell your airplane more quickly,” explained Dwyer. “Especially in these seriously declining markets, but even

in a market that goes down five or six percent, being out there for a year when you don’t have to can cost you money.”

Dwyer believes that sugar coating the dilemma is not the proper tactic. “The best thing we can do for our customers is to just tell them how ugly it is and get them to buy into the pricing discussion,” he said. “The best service we can give them is to let them know what the next 90 days look like, and it hasn’t been easy. It’s not an easy way to get customers either, but it’s the right thing to do.”

Get Models off the Market

Where to set the price is crucial, of course. “You’ve got to price for the next 90 days, not the last,” noted Dwyer. For brokers, that means carefully examining both the asking and sales price trends for not only that particular model but also for comparable models from other manufacturers. There is no registry for actual selling prices of private aircraft, so brokers develop their own picture by talking amongst themselves. “A lot of what we see now is a guy saying he has an off-market aircraft or ‘make offer’; we don’t have much luck with that.”

Other factors at play are keeping up with the physical condition of the aircraft. In a crowded market, a maintenance program can decide whether an aircraft makes the first cut. “Maintenance is value, game over,” said Barbara Spoor, executive vice president with aircraft appraisal firm Asset Insight. She added that customization of a particular aircraft can also be a detractor. “I think the configuration is a big deal: what was done to make that special configuration and what’s needed to bring it back to normal configuration,” she said. “If it’s going to be a

BARREY AMBROSE



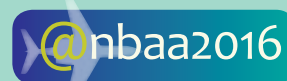
big restructure problem, there’s going to be a value difference.”

With regulatory mandates such as the FAA’s 2020 ADS-B equipage looming, Dwyer advises his clients to make sure their aircraft (except those approaching obsolescence) comply when they hit the market. “You’ll get your money back, and if you don’t get it back in the purchase price, imagine not selling your airplane for another six months in a market that is going down at 20 percent. Be prepared to sell.”

Last, cosmetic appearance shouldn’t be underestimated. “Paint and interior are huge,” Spoor emphasized. “You might not actually raise the value of

the aircraft but it’s more marketable, that’s for sure.” Dwyer advises his clients to refresh their aircraft inside and out every seven years to make sure it is always presentable.

With a portfolio of many aircraft, Global Jet Capital plots a sure course when dealing with jets coming off lease: “We need to make that airplane the next best airplane on the market amongst its competitors,” said Labrozzi. “That doesn’t necessarily mean we are going to recoup dollar for dollar on investment, but if we’re the next airplane to sell, or release in this market, we have saved perhaps six months of asset value depreciation.” □



ANOTHER PERSPECTIVE AMSTAT DATA CONFIRMS MARKET MALAISE

Data released last month by industry analyst Amstat confirms the malaise in the pre-owned business jet market this year. The turboprop market appears only marginally better, with relatively flat transactions. According to Amstat, the percentage of business jets that have turned over declined to 7.1 percent of the fleet in the first three quarters of this year from 7.4 percent in the same period last year. Heavy jet transactions were up to 5.9 percent this year from 5.5 percent in the first three quarters of 2015. Medium jet transactions, however, dropped to 7.1 percent this year from 8.2 percent in the first nine months of last year. Similar to turboprop transactions, retail activity for small jets was relatively flat during the period.

Inventory for all business jet segments climbed in the first nine months, with more of the available aircraft representing newer jets. According to the Amstat report, 10.8 percent of the heavy jet fleet is available for sale, compared with 10.4 percent at the beginning of the year. Over the past 24 months, the available inventory of newer heavy jets has climbed to 10 percent from 8 percent. Available inventory for medium jets is also up, by 0.4 percent since the beginning of the year, with more newer models available. At 11.8 percent, the light jet inventory too is up from the beginning of this year, but the same as at this time last year.

Average asking price, meanwhile, is down by 6.6 percent for heavy jets, to \$13.9 million, and by 7.8 percent for medium jets, to \$3.4 million. Light jet asking prices, however, have climbed 6.7 percent, to an average of \$1.7 million.

—K.L.