AIN Business Aviation
Fleet Analysis 2016

Fleet composition, replenishment plans and the impact on the preowned market

AIN's Business Aviation Fleet Analysis surveys the fleets of the world's major fractional ownership programs and owned and operated charter providers, their replenishment plans, and the impacts of fleet refreshments on the preowned market.

The fractional fleets (Part 91K) contain 734 jets and 78 turboprops, according to JetNet, while owned and operated (O&O) charter fleets (Part 135/380) have 212 jets and 66 turboprops. Their fleet replenishment plans can't be identified with the same precision. The two major fractional providers (Flexjet and NetJets) have announced firm orders and options in recent years for more than $20 billion worth of airplanes, but how many of such orders turn into deliveries isn't clear.

"Everyone rushes to the microphone to announce the orders, but we don't know the details of those deals," said aviation consultant Rolland Vincent of Rolland Vincent Associates, noting, "The big order announcements don't always turn into deliveries."

"We all know those are just numbers," added aviation attorney James Butler, CEO of Shaircraft Solutions, a specialist in fractional ownership issues, talking about well publicized fleet orders. "Even if fleet operators wanted to tell you, I'm not sure that year-to-year they are committed to taking major blocks of airplanes, without knowing what's selling and what's the trend. They need to be flexible."

Nonetheless, we asked most of these providers and the major OEMs about their replenishment and delivery plans. A number declined to provide answers (all the OEMs referred inquiries to their customers), but others were candid in discussing both plans and strategies. We also talked to these providers as well as aircraft brokers and consultants, and pored over transaction data, in trying to assess what happens in the preowned market when these fleet aircraft, singly or en masse, are retired from their fleets. This fleet analysis highlights some of what we learned.

The Fractional Fleets

Predictions of the end of fractional ownership, made in the wake of the 2008 financial collapse, clearly have not come to pass. Aviation attorney Amanda Applegate of Aerlex, and former associate general counsel at NetJets, maintains that the sprint for the program exits seen at that time wasn't borne of a need to downsize, but because repurchase provisions were the only place shareowners could get quick cash.

"At that point they couldn't sell a house or art, but there was a buyer who had to come and buy their aircraft share," said Applegate. "That's why you saw shares returned at a higher rate, and why people came back. They got out before the share prices collapsed."

In the years since, Flexjet and NetJets alone have placed firm orders and options for new jets valued at $23 billion, as other fractional programs have grown to replace CitationShare, Avantair and other shuttered providers.

Fractional activity in the U.S., at just under 200,000 flight hours, was up 0.5 percent the first half of this year over the same period in 2015, according to Argus International.

While cratering residual values have created reverse sticker shock for many owners exiting programs, fractional ownership remains the choice for many seeking the highest level of safety and consistency of service. The tax benefits of ownership also loom large in the purchase decisions of many program members.

What are the fractional programs doing to keep their fleets relevant and fresh, and maximize the residual values of owners' aircraft when they leave the fleets? Here are some answers.

FLEXJET GLOBAL EXPRESS

Executive Airshare

Executive Airshare, founded in 2002, operates a Midwest-based fleet of 35 aircraft composed primarily of Phenom 100s and 300s, Citation CJ2+s, and King Air 350is. Shares are sold in access days, rather than hours, with the minimum one-sixteenth share providing 20 days of aircraft access per year.

The Lenexa, Kan. company purchases new—and occasionally under-warranty preowned—aircraft for its fleet. "They cost less to operate, they

EXECUTIVE AIRSHARE PHENOM 100 AND 300

have fewer maintenance events and are more reliable, so we can get more out of the aircraft," said Keith Plumb, president and CEO. "Before we ordered Embraers, we looked at operating a preowned fleet, but it just didn't make sense. We'd need more maintenance personnel and more crew. There are reasons why most successful airlines invest in new equipment."

Executive Airshare takes "a systematic approach" to fleet refreshment. Aircraft are operated until accumulating 4,000 to 5,000 hours (seven to eight years old). "That's our sweet spot," said Plumb. "If we have five or six owners in one Phenom 100, we set up the agreements so all the owners have contracts maturing within the same six-month window. That gives us lead time to work with brokerage firms" to sell the aircraft.

The oldest Phenom 100 in the fleet is a 2009 model, and Executive Airshare is preparing to sell "a handful." Shareowners "are keyed in" to residual values, and Executive AirShares provides owners with a market summary for their aircraft as the maturity date nears.

NETJETS GLOBAL

Before sale, retiring aircraft must pass an "extensive cosmetic checklist," with carpet and seat leather replaced as necessary and cabinetry repaired. "We don't dump them on the market; they still have a long useful economic life," Plumb said. "For an individual or company that flies only a few hundred hours per year, a 4,000-hour Phenom 100 brings a lot of happiness for 15 to 20 years."

Over the past 18 months Executive AirShare has purchased only new aircraft. "At least 65 percent of our customer base is businesses flying for business purposes, and they want to take advantage of bonus depreciation" and write off half the cost in the first year. "We will monitor that dynamic closely," he said. "Some leisure customers are looking for the lowest acquisition cost, but we're seeing our growth primarily in business owners flying to hard-to-get-to destinations." But for that cost-conscious group, the company might repurpose one of its older Phenom 300s "at the price for the leisure buyer."

In September investment firm Curran Group took majority ownership in EA, and announced plans to tap new markets. EA has two Phenoms on order and "about five" options, and will finalize acquisition plans before year-end. "We want to be ahead of game. We're looking at expansion opportunities, and part of that will be based on the delivery schedule."

Flexjet

Flexjet's fleet consists of 66 aircraft representing 11 mostly midsize models. Its LXi Cabin Collection offers the Learjet 75, Challenger 350, Legacy 450/500, Global Express and the G450, G500 and G650. Flexjet also operates the Phenom 300, Challenger 300 and Challenger 605. Almost half the fleet (29) are Challenger 300s, with an average age of 8.9 years. Another 11 are Learjet 40XR/45XRs, nine years old on average. Average age of most of the remainder of the fleet is less than two years.

In 2013, Cleveland's Directional Aviation Capital (DAC), parent company of the Flight Options fractional program, purchased Flexjet from Bombardier Aerospace.

At the time of its Flexjet purchase, DAC ordered up to 245 Bombardier business jets worth as much as $5.2 billion, with firm orders for 85 aircraft (25 Learjet 75s; 30 Learjet 85s; 20 Challenger 350s; and 10 Challenger 605s) and options for 160 more. Since Bombardier cancelled the Learjet 85 program, no alternative orders have been announced. Flexjet also has an order for up to 50 Gulfstreams (G450s, G500s and G650s), valued at up to $1 billion. Of these, Flexjet now has eight Challenger 350s, two G450s and three Learjet 75s.

In August Flexjet acquired UK-based aircraft management company FlairJet, expanding its footprint in Europe. Flexjet will base eight Nextant 400XTis in Europe, joining FlairJet's fleet of seven managed aircraft, and will be available to Flexjet owners for point-to-point travel within Europe and to the Middle East or Africa.

Meanwhile, DAC is winding down Flight Options (FO), which still has 344 shareowners and 58 aircraft, including a dozen Citation Xs that are an average of 17 years old, and five Beechjet 400As averaging 16 years. Some of FO's aircraft, like its 18 Phenom 300s, will be transferred to the Flexjet fleet. No other plans for the fleet disposition have been announced.


WHEELS UP CITATION XLS AND KING AIR 350i

NetJets

Fractional pioneer NetJets remains the industry's dominant force, its U.S. and European fleet of more than 500 jets and 2,700 shareholders. Richard Santulli launched the fractional concept after he purchased the company in 1984, and the following decade Warren Buffett's Berkshire Hathaway bought NetJets. That backing continues to inspire confidence in both the program and the access model among customers and within the industry.

In recent years NetJets has reduced the number of models it operates but still has 22 in its U.S. fleet.

In 2010 NetJets placed a $1 billion order with Embraer for 50 Phenom 300 "Platinum Edition" jets and options for 75 more, the first in a series of orders totaling up to 670 jet deliveries over 10 years valued at up to $17.6 billion at retail prices. In 2011 NetJets placed its first order with Bombardier Aerospace, for up to 120 Bombardier Globals, with 50 firm (30 Global Express XRSs and Global 5000s, and 20 Global 7000s and 8000s), a purchase worth $6.7 billion with all 70 options exercised.

In 2012 NetJets ordered up to another 275 Bombardier ($7.3 billion) and 150 Cessna jets ($2.3 billion), including a firm order for 75 Challenger 300s and options on 125 more; a firm order for 25 Challenger 605s, with options for another 50; and a firm order for 25 Cessna Citation Latitudes, and options for 125 more. (The CL300 and CL605 orders were later upgraded to CL350s and CL650s, respectively.)

All the new jets will be outfitted with NetJets' Signature Series interiors, which include in-flight entertainment systems, quieter cabins and customized seating and lighting and storage features.

Thus far NetJets has taken delivery of 57 Phenom 300s; 30 Challenger 350s; 12 Challenger 650s; nine Global 5000s; 16 Global 6000s; and five Citation Latitudes.

During this period Embraer subsidiary ECC Leasing purchased 25 NetJets Citation Ultras, presumed to be in trade for the Phenom order, and retired all but one of its 34 Hawker 400XPs, and its G200s, the Gulfstreams taken in trade by Bombardier.

NetJets declined to discuss fleet replenishment plans, but some models seem ripe for retirement. The 37 Citation Excels are almost 14 years old on average, and the collective shares outstanding own fewer than 10 aircraft. It has 30 Falcon 2000s more than 15 years old on average, with total ownership shares owning about 10 aircraft. Its 44 Citation Sovereigns average almost 10 years in service, and their mission can be performed more efficiently by the Challenger 350 or Citation Latitude.

PlaneSense

PlaneSense operates some three dozen Pilatus PC-12/-12NG turboprops, the core of its fleet, and has taken delivery of two of five Nextant 400XTi small cabin jets it has ordered to replace retiring Hawker 400XPs. PlaneSense has ordered six Pilatus PC-24s—the largest order for the new twinjets—and is scheduled to take delivery of SN101, the first production model, in the second half of next year. The company will announce its fractional program for the PC-24 shortly, said PlaneSense president and CEO George Antoniadis.

Since launching in 1996, Portsmouth, N.H. -based Plane-Sense has taken delivery of 56 PC-12s. One more is scheduled for this year. Antoniadis declined to disclose future delivery plans beyond "more."

As for retirements, "Our current strategy is to dispose of aircraft at the 10-year mark, and we went to that [age] after we became comfortable with the maintainability and dispatch reliability of the aircraft."

PC-12s currently enjoy the highest resale value of any business aircraft. "We see that 10-year-old aircraft exiting our fleet have retained a little over 50 percent of original value."

As for residual value, "When we calculate [shareowner] exit valuation, it's not in some dark room with an arbitrary formula of our own; we use a third party, and it's market driven."

In addition,"We are constantly driving the age of our fleet down. By the middle of next year we expect the average age to be just over five years, by the end of 2019, closer to 4.5 years on average," as new aircraft replace the oldest in the fleet.

Owned and Operated Fleets

Owned and operated fleets provide lift for the ad hoc charter market, jet card programs and supplemental needs of fractional fleets. Dwarfed by the managed Part 135 fleets, the major global O&Os possess some 279 airplanes. Unlike fractional operators, and the charter management companies they compete with, O&Os must fly to survive; they get no monthly management fees and have to pay for their airplanes.

That's why some charter industry professionals have said, since the first O&Os debuted last decade, that owning a charter fleet was an unsustainable business model, especially after XOJet introduced in 2009 all-inclusive point-to-point rates well below traditional charter pricing, rattling the industry in the process. Yet O&Os have survived, and in their need to generate revenue they continue to set the charter rates managed charter fleets have to match.

"Every day a light or midsize jet sits, it costs us $3,000 to $5,000, and we can't afford that," said Scott Wise, president of The Travel Management Company (TMC Jets). "We're better off at times to lower yield to get more hours" of charter bookings.

Given the financial imperatives and the lack of individual owners who might otherwise object, O&Os tend to run their aircraft harder and longer than fractional operators.

Top 20 Aircraft Operated by Frax and O&O by Percentage

Aircraft	Model	Total in Fleets	Total in Service	Percentage in Fleets
Challenger	650	12	24	50.00%
Hawker	800XPI	24	51	47.06%
Challenger	350	58	137	42.34%
Embraer	Legacy 450	2	6	33.33%
Citation	XLS	89	328	27.13%
Global	6000	44	200	22.00%
Embraer	Phenom 300	72	349	20.63%
Citation	Encore+	13	65	20.00%
Citation	X	58	309	18.77%
Hawker	750	8	48	16.67%
Falcon	2000EX Easy	15	104	14.42%
Citation	Latitude	5	37	13.51%
Falcon	2000	30	230	13.04%
King Air	350i	38	296	12.84%
Citation	Sovereign	44	348	12.64%
Citation	Excel	43	369	11.65%
Challenger	300	45	454	9.91%
Citation	Encore	15	164	9.15%
Global	5000	19	212	8.96%
Embraer	Legacy 500	3	34	8.82%

Source: JetNet

Charter Fleet Composition

Aircraft	No. Aircraft	Average Age (Years)
JetSuite		
Citation CJ3	8	11
Embraer Phenom 100	14	6.785
Embraer ERJ-135	8	16
GlobeAir		
Citation Mustang	14	8
Qatar Executive		
Challenger 604	1	14
Challenger 605	3	6.333
Global 5000	4	4
Global Express XRS	1	7
Global 6000	1	2
Gulfstream G650ER	2	1
SurfAir		
Hawker 800XP	1	13
Pilatus PC-12/45	2	12
Pilatus PC-12 NG	12	1
TMC		
Beechjet 400	1	28
Challenger 604	2	17.5
Hawker 800XP	24	15
Hawker 400XP	36	8
Hawker 800XPi	1	10
Hawker 850XP	2	9
VistaJet		
Challenger 850	5	8
Challenger 605	10	2
Challenger 350	15	1.25
Global 5000	6	2.75
Global Express XRS	1	6
Global 6000	26	3
Wheels Up aka Gama Aviation		
Citation Excel	6	13.5
Citation XLS	9	10.38
Falcon 2000	1	15
King Air 350i	52	2
XOJet		
Challenger 300	17	8
Citation X	24	14
Zetta Jet		
GIII	1	36
GV	1	14
Global Express	1	14
Global 5000	1	1
Global 6000	3	1

Source: JetNet

Among the 25 largest U.S. charter operators, the three with the highest aircraft utilization rates through Q2 this year—and in 2015—were all O&Os: TMC Jets' fleet is on track to generate an average of 662 hours of charter revenue each; JetSuite's some 750 hours; and XOJet, which leads the Part 135 pack in utilization, was flying at a pro-rated annual rate of more than 1,060 revenue hours per aircraft. At charter management companies, generating 200 hours of charter per year for an owner is considered high. As for residual values, for most O&Os, that's beyond secondary; they're concerned about generating profits in a low-margin business. Here's how some of them do it.

JetSuite

JetSuite operates a dozen Phenom 100s and eight Citation CJ3s, and has yet to retire an aircraft since its 2006 launch. "We like airplanes that last 10 years or longer," said CEO Alex Wilcox. "Market disposable airplanes you get rid of in three, four, five years; that's not us. We're operating more like an airline. We have no intention of sending them in any time early." In the interim, JetSuite invests in maintenance and interior refreshment. Cleveland-based Constant Aviation this year redesigned and commenced refurbishment on the Phenoms' interiors.

JetSuite added a new model to its fleet this year: luxury configured, 30-seat Embraer E135s, for JetSuiteX, its Part 380 per-seat scheduled service linking several major West Coast markets.

Eying significant expansion, JetSuite is "currently looking at acquiring Phenom 300s," either new or "three or four years old, with probably fewer than 1,000 hours," Wilcox said, and will buy "at least ten in the next year."

Though low-time preowned aircraft can represent a significant value, he acknowledged "buying new, you get the warranty and lock in costs, and Embraer can sweeten the deal and provide training and maintenance credits and reliability guarantees." Moreover, with OEMs competing against their own recently made jets, and their sales down, there's room to bargain on price, which is a key to profitability, O&Os say.

"At the right price and right utilization, the money is there. We own the airplanes, and we have to fly a certain amount to pay the note. We fly 200 hours a month on the E135s, 100 hours on the Phenom 100s, and we're amortizing the cost of the aircraft over many more hours. The economics work. JetSuite has been profitable for the past five years and I don't expect that to change."

TMC Jets

TMC Jets operates 60 jets, primarily Hawker 400XPs (36) and Hawker 800XPs (24), all purchased preowned. Among the first O&Os, Elkhart, Ind.-based TMC Jets launched service with 24 new Nextant 400XTs—remanufactured Beechjet 400s—but soon found operating new aircraft uneconomical, and switched to a preowned fleet. "We're perfectly happy operating five- to 15-year-old airplanes," said Wise. This September investment firm TPG Growth, parent company of XOJet, bought TMC Jets; while negotiations were under way, TMC's typical fleet replenishment activity went on hold.

"We're one of those companies constantly buying airplanes, and for the past year-and-a-half we just sat still," said Wise. The company also "fell behind on pricing as fuel prices dropped," failing to lower rates accordingly, affecting its bottom line. Now, besides regaining its focus, TMC has adopted the dynamic pricing XOJet employs, adjusting rates to market demand, and "it has helped tremendously."

TMC buys five- to seven-year-old aircraft. "We make sure we're doing all the right things in maintenance, and the return to service is swift, and we're negotiating the best deal with all the vendors," said Wise. "Fuel has taken care of itself."

Looking ahead, Wise said the company has too many midsize jets, the result of a glut of super-midsize aircraft in the charter fleet; their operators sometimes drop rates to match the prices of midsize jets, putting a squeeze on demand for the smaller airframes. "We'll probably [sell] six to eight Hawker 800s," over the next few months, winnowing the count "down to 20 airplanes, about where we need to be in midsize," Wise said.

TMC Jets has an order on hold with Nextant to convert its Hawker 400XPs to Nextant 400XTis, and is now "looking hard" at proceeding with the remanufacture.

The company also has two Challenger 604s. "If I could own six more, it would be so much more efficient," Wise said. "In a year, if that heavy market is good, we might invest in a few of those." Meanwhile, "we'll continue to invest in the light jet fleet, for sure," he said.

XOJet

XOJet owns and operates 41 super-midsize Challenger 300s (17) and Citation Xs (24), and "We do not anticipate expanding the super-mid fleet in the future," said Bradley Stewart, president and CEO. "Forty-one is enough." None of XOJet's aircraft has been retired since service launch in 2006, though a couple of Citation Xs on lease went back to the lessor. XOJet previously had "a couple" of Challenger 605s, and sold its fleet of Hawkers to now sister company, and longtime charter network partner, TMC Jets. "Our business model is built around aircraft seven to 17 years old," said Stewart. "Over a three- to five-year timeline, we'll see some older aircraft exit, and some new come into the fleet."

Residual values aren't a concern. "We buy and lease airplanes to operate them," he said. "We don't think a lot about what the airplane is worth; we think in terms of cash-flow generation."

The company has no plans to replace any aircraft in the fleet within the next year. "Our fleet's in good shape. We continue to invest in them," Stewart said. XOJet completed an interior refurbishment program on the Citation Xs, the CL300s have been outfitted with Quiet Cabin upgrades, and the company's fleet was among the first to be all Wi-Fi equipped.


XOJET CHALLENGER 300

In 2009 XOJet introduced all-inclusive one-way transcontinental fares aboard its Citation Xs, priced in the low $20,000 range, bringing point-to-point pricing to the charter market and drawing predictions of the company's failure.

"Most people in our industry don't truly understand the economics of how to make money in the owner-operated business," said Stewart. "There are principles you need to understand intimately and need to put into practice." He cited six rules: "The airplane cannot be new—it's got to be more than 50 percent depreciated; second, you need to have a scaled operation…Third, you need to operate the airplane in a closed loop, you can't extend beyond that; fourth, you have to maximize utilization; fifth, you've got to believe in dynamic pricing; and sixth, think long and hard about whether you're going to be wholesale or retail distribution."

Though its fleet remains static, XOJet is expanding its charter brokerage, which is up 16 percent this year, all the growth coming through large-cabin partners, Stewart said.

SurfAir

California-based SurfAir introduced the "all you can fly" members' airline model with the 2013 launch of its Part 380 scheduled charter service. The company operates a fleet of 14 Pilatus PC-12/-12NGs primarily flying between the Los Angeles and San Francisco Bay areas. Surf-Air started operations with a preowned fleet, refurbished in 2014, the same year the company placed a firm order for 15 PC-12NGs and options for an additional 50, a deal worth up to $312 million at list prices. This year SurfAir took possession of two PC-12NGs, with five-blade props,

Using Data for Fleet Planning

With the dollars at stake, tracking operating expenses and fleet values has become a focus for operators, financing institutions and consultants. "We're being asked to get into costs deeper and deeper by customers," said David Wyndham, president of Conklin & de Decker. "Either customers are getting smarter, or the people they're buying from are getting smarter."

Publications like the quarterly Business Jet Update from UBS, which parses preowned market values and trends, are now required reading for market participants. Many of these players subscribe to data service from appraisal firm Asset Insight (AI). "We routinely run internal analytics that examine values for aircraft coming out of the fractional fleets, and the effect they have on aircraft around them," said AI president Tony Kioussis.

Adapt, a new AI product, tracks and quantifies "maintenance equity" of enrolled aircraft. This equity is at its highest point the day the aircraft comes off the assembly line, and is expended as an aircraft flies, creating a "maintenance exposure"; when maintenance is performed, some maintenance equity is restored. Among other applications, this data allows fleet operators to fine tune decisions on maintenance and fleet sales, as well as guiding purchasing in the preowned market. "The key is not buying the cheapest airplane, or buying at the peak of its maintenance status, but where you can optimize the total economics of your transaction," said Kioussis, adding, "None of this is linear. —*J.W.*

replacing the last of its legacy aircraft. SurfAir members pay a $1,000 sign-up fee, and a $1,950 monthly fee for basic service.

VistaJet

Malta-based VistaJet operates an all-Bombardier fleet of five dozen large-cabin and super-midsize jets. Just under half the fleet are Globals (26 Global 6000s; six Global 5000s; and one Express XRS), the remainder Challenger 350s, 605s and 850s, registered in the U.S. and Malta, save for one B-registered CL850 based in Hong Kong. Over the past year the company expanded its U.S. headquarters in New York, established a foothold in L.A., and enhanced its presence in Beijing and Shanghai.

"The decision everybody's making is, 'I can't afford or justify owning an aircraft,'" said Ian Moore, chief commercial officer. But they will pay for a quality product, he said. VistaJet emphasizes bespoke customer service, catering menus from renowned restaurants and partnerships with luxury brands featured on board. VistaJet customers buy blocks of hours, and the company reported that the second quarter was its best quarter ever, with the average number of contractual flight hours sold to new customers up to 120. Flight activity was up 23 percent and passenger count up 20 percent in the same period.

VistaJet owner Thomas Flohr has delivery positions for the in-development Global 7000, Moore said, declining to discuss further plans for the fleet. None of its aircraft are near retirement; the five Challenger 850s have on average eight years of service, its single XRS is six years old, and the rest of its aircraft average three years or younger.

Zetta Jet

Singapore-based Zetta Jet operates an N-registered, all-Bombardier Global floating fleet, tailored to the trans-Pacific market. Zetta Jet has FAA approval for flight through areas of magnetic unreliability—that is, the polar regions—which enables it to offer the shortest route for many flights between the U.S. and Asia, said Geoffery Cassidy, co-founder and managing director. Zetta expects its fleet, now numbering seven, to have 16 by the end of next year, and is in discussion with Bombardier about Global 7000 purchases, Cassidy said. Unlike the "cookie cutter" fleets of competitors, every Zetta Global has a unique interior, Cassidy said.

Wheels Up

Wheels Up offers two membership programs providing access to a growing fleet of 50 King Air 350is and 15 Citation Excel/XLSs. Gama Aviation operates the Wheels Up-owned aircraft.

This year Wheels Up introduced shuttle

AFTERMARKET REFURBISHMENT

Aftermarket upgrade programs are one path fleet operators—and OEMs—take to protect residual, and enhance resale, values of retiring aircraft. The Nextant 400XT/XTi, introduced in 2007 by Nextant Aerospace, resulted from sister company Flight Options' efforts to squeeze more value out of its aging Beechjet 400A fleet. The Beechjet's airframe is stripped, re-engined, outfitted with modernized interior and avionics, and was offered at half the price of the contemporaneous Hawker's Beechjet derivative, the 400XP. Nextant 400XT/XTis are now in the fleets of Plane Sense, among other operators.

Not all programs are so successful, and retired fleet aircraft face aftermarket bias, despite impeccable maintenance histories. "There's an aversion to old airplanes in our industry," said Tony Kioussis of aircraft appraiser Asset Insight. "People shy away from aircraft with a lot of hours."

Textron Aviation's Citation X Elite program, created to recycle 10-year-old, 10,000-plus hour Citation Xs retiring from the NetJets fleet, illustrates additional challenges. The X Elite upgrade includes stripping the airframe, completing all maintenance and inspection requirements through the mandatory 15,000-hour interval, enhancing the flight control systems and adding optional winglets. The refurbished cabin features custom interior and new seats, new CMS, touchscreen cabin controls, USB ports and Internet access via Gogo Business Aviation Wi-Fi. Cockpit upgrades include BFGoodrich seats and Honeywell's Primus Elite flight deck with LCD panels. Price: $6.5 million, versus $23.5 million for a factory-new X+. Kioussis recalls stumbling aboard an X Elite. "I thought it was a brand-new airplane," he said.

The first X Elite upgrade was completed in 2013 and the program was launched in 2014, but sales have been weak. One reason: competition from younger Citation Xs. "Even though there's a business case for a 12,000-hour airplane, you have a pick of 4,000- and 5,000-hour [Citation] Xs," said David Wyndham, president of Conklin & de Decker. "Buyers get to be fussy."

Said Dennis Rousseau, founder and president of the valuation service AircraftPost, "They did not factor in competing aircraft coming on the market. Now I can buy a Challenger 300 with 6,000 or 7,000 hours on an engine program, with a six-foot cabin and nice cruise speed, versus a five-foot eight-inch cabin with a trough floor."

Added Kioussis, "The problem is not so much the airplane; it's the choices of airplanes. In the last 15 years, the number of aircraft choices has gone up 75 percent; there are almost twice as many models out there."

Textron isn't stepping away from the refurb market. It offers X Elite for individual owners and has developed a similar program for Citation Excels. More dramatically, in September subsidiary Beechcraft received final FAA approval for the 400XPR program, a remanufactured, re-engined offering for the Beechjet 400A/Hawker 400XP, a direct competitor to Nextant's 400XTi. The first factory completed 400XPR is currently undergoing conversion and is expected to enter service by year-end. ■

Fractional Fleet Composition

Aircraft	No. Aircraft	Average Age (Years)	No. Shareholders	No. Aircraft in Use
Executive AirShare				
Beechjet 400A	1	13.0	2	1.00
Citation CJ2+	4	7.0	25	2.13
King Air 350	2	15.0	1	0.09
King Air 350i	3	2.7	6	0.50
Learjet 45	1	7.0	1	0.06
Learjet 45XR	1	6.0	4	0.75
Phenom 100	13	6.2	76	7.34
Phenom 300	10	3.4	54	5.84
Total	35	5.9	169	17.72
Total unique shareholders			164	
Flexjet				
Challenger 300	29	8.9	252	19.84
Challenger 350	8	1.4	84	7.78
Challenger 604	1	14.0	10	0.59
Challenger 605	2	6.5	24	1.63
G450	2	2.0	14	0.84
Learjet 40XR	5	9.2	37	2.72
Learjet 45XR	6	9.0	47	3.59
Learjet 75	3	1.3	31	2.47
Legacy 450	2	1.0	13	1.00
Legacy 500	3	1.0	42	2.94
Phenom 300	5	1.8	60	4.69
Total	66	6.3	614	48.09
Total unique shareholders			542	
NetJets				
Challenger 350	30	1.1	256	26.88
Challenger 650	12	0.9	92	9.28
Citation Encore	15	12.8	65	3.94
Citation Encore+	13	9.0	75	5.59
Citation Excel	37	13.7	112	9.78
Citation Latitude	5	0.2	46	4.00
Citation Sovereign	44	9.6	415	35.28
Citation X	40	14.0	152	15.47
Citation XLS	58	10.3	408	38.25
Falcon 2000	29	15.0	117	10.22
Falcon 2000EX EASy	5	10.8	27	3.16
G400	1	12.0	8	0.75
G450	14	9.9	98	8.69
G550	6	10.0	15	1.66
GIV-SP	10	15.7	23	2.34
GV	3	15.3	1	0.06
Global 5000	9	2.3	78	8.38
Global 6000	10	2.9	66	9.00
Hawker 800XP	13	12.5	35	3.09
Hawker 800XPi	9	10.4	39	3.38
Hawker 900XP	9	8.4	73	6.19
Phenom 300	47	2.3	466	41.63
Total	419	9.1	2,667	247.00
Total unique shareholders			2,264	
NetJets Europe				
Challenger 350	4	1.0	27	1.88
Citation XLS	22	9.1	194	12.13
Falcon 2000	1	16.0	3	0.16
Falcon 2000EX EASy	10	10.1	75	6.31
Falcon 7X	1	4.0	0	0.00
G550	8	9.6	26	2.53
Global 6000	6	3.3	32	4.16
Hawker 400XP	1	10.0	8	0.44
Hawker 750	8	7.9	38	2.47
Hawker 800XP	1	11.0	3	0.25
Hawker 800XPi	15	9.7	108	7.81
Phenom 300	10	1.3	0	0.00
Total	87	7.6	514	38.13
Total unique shareholders			439	
PlaneSense				
Hawker 400XP	1	11.0	0	0.00
Nextant 400XTi	2	18.0	0	0.00
PC-12 NG	19	3.8	220	17.38
PC-12/45	1	11.0	0	0.00
PC-12/47	15	9.7	120	11.06
Total	38	7.3	340	28.44
Total unique shareholders			329	

Source: JetNet

XOJET CHALLENGER 300

flights to and from popular events and destinations, and a Hot Flights feature on its app, with daily postings of "empty leg" flights. Also new, an introductory level membership program, "8760," which founder and CEO Kenny Dichter calls "a channel to bring in young people, and to get them excited about using and experiencing private aviation."

Dichter said growth plans for its full-price Wheels Up memberships are on target, and the company expects to have 3,000 members and annual revenue of $200 million by year-end.

Meanwhile, the company launched Flight Deck, an in-house charter brokerage for members, using lift from a network of vetted operators. "We believe it will be nine figure business—a $100 million-plus business—and we think we can get there in 24 months," Dichter said.

Qatar Executive

Qatar Executive is the charter arm of Doha, Qatar-based airline, Qatar Airways. Its fleet of a dozen aircraft includes half a dozen Globals and four 600-series Challengers. Qatar Airways has placed orders for up to 30 Gulfstreams—a mix of G500, G600, and G650/650ERs. Two G650ERs have been delivered. Other than a 14-year-old Challenger 604, the average age of Qatar Executive's aircraft is under four years.

VISTAJET BOMBARDIER GLOBAL

Globe Air

On the small cabin side of the business, Austria's GlobeAir has found success in Europe with its O&O fleet of 14 Citation Mustangs, and anticipates seeing revenue climb 24 percent this year over 2015 (from $20.75 to $25.66 million in revenue). In May, GlobeAir and JetSuite announced partnering to offer each other's transatlantic customers "last mile" service.

Aftermarket Fleet Sales: Preowned Market Impact

What impact do fleet retirements have on the preowned market?

Aircraft in the fractional and O&O fleets represent a relatively small portion of these models currently in operation. The 44 business jet and five turboprop types they operate, according to JetNet, account for just 8.11 percent and 3.72 percent, respectively, of the total number of these models in the bizav fleet. And compared to overall preowned market transactions, fleet sales show an even lower level of comparative activity.

From 2005 through 2015, a total of 542 aircraft were sold from the fractional and O&O charter fleets, compared to some 21,000 total sales (roughly 2.5 percent of the transactions) for the period, according to JetNet. Annually, that works out to about 54 fleet sales out of some 2,100 retail transactions. These are usually sold one at a time as they age and are replaced by a new or newer model. That volume can't sway overall markets.

But when operators dispose of an entire product line to make way for a new model, impact on residual values can be dramatic. That has been most apparent when OEMs have taken aircraft in trade as part of a fleet sale. Examples of such deals include Embraer's accepting, through its EEC subsidiary, 20 Citation Ultras from NetJets as part of its purchase of 50 Phenom 300s, and Bombardier's taking the fractional company's 25 Gulfstream G200s, which were being replaced by Challenger 350s, as part of a fleet order.

Said Jay Mesinger, president and CEO of Mesinger Jet Sales, which handles fleet sales, "Unfortunately, the idea that the lower-time airplanes will be positively valued against the higher time doesn't always play out in difficult and supply-rich markets. The higher-time pulls the lower-time down, instead of creating a greater differential."

"We can make a statement that fractional aircraft are selling at about a 35-percent discount from 'mainstream' aircraft," said Dennis Rousseau, founder and president of valuation specialist AircraftPost, noting a few models likely to encounter value gyrations similar to the G200s: "There are a lot of Falcon 2000s with 10- to 12,000 hours," Rousseau said. "VistaJet turns over its fleet every five years. What does that do to the Global 6000 market?"

Today, though, fleet aircraft are less likely to come to the aftermarket via OEMs, as trade-ins have fallen out of favor; manufacturers are reluctant to act as sales agents given today's sluggish aftermarket and ever sinking values, and fleet operators can cut better deals if trade-ins aren't included. Some fleets handle the sales themselves, but more commonly they work through brokers.

"Everybody wants to maximize value," said Chad Anderson, president of Raleigh-Durham based brokerage Jetcraft. "Some sellers care more about the dollars than how long it takes to sell; others want to sell quickly. But no one wants to be irresponsible" in accepting a lowball price. About 20 to 25 percent of Jetcraft's transactions, which totaled $1.7 billion last year, represent fleet-owned aircraft. "How you position aircraft in the market is important," Anderson said. Sellers need to "price right and make sure the aircraft are attractive from a mechanical perspective, and all regulatory issues are addressed."

The disposal process has gotten smoother over time. "Now you have not only experienced fleet operators, but experienced fleet exchangers," said Anderson. "They've been through the exchange and learned what works and what doesn't."

Given the age and vintage of some fleet inventory, "we might be selling to the last owner-operator of the aircraft," Anderson said. But many fleet aircraft are far from run out. Some operators dispose of aircraft at relatively young ages as a matter of policy, others may be reshaping their fleets and reducing or eliminating an aircraft model to meet changing demands or business strategy.

As a group, fractional operators are more concerned about residual values than are O&Os, which don't have individual shareowners to whom they answer. But fractional shareowners themselves need to recognize premium-priced branded fleet interiors and cabin systems that boost share prices in some programs "don't have a long shelf life" in retaining value, said David Wyndham, president of Conklin & de Decker. When it's time to surrender a share in such models, that lost value can add to "a significant depreciation of the aircraft." ❑