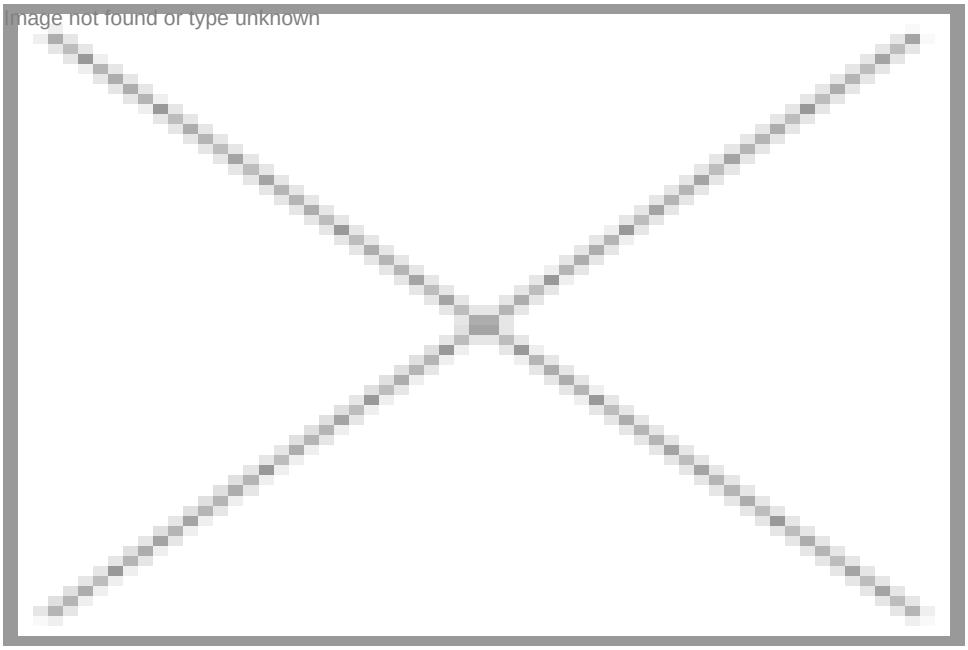
PURCHASE PLANNING HANDBOOK: 2016 BUSINESS AIRPLANES

News / Business aviation

The new business aircraft market continued to fly into troubled skies in 2015, with piston engine aircraft deliveries dropping 6.5%, turboprops down 7.6% and turbofan aircraft shipments flat at 1.6% growth, compared to 2014, according to the General Aviation Manufacturers Association (GAMA). However, billings were up 2.4%. Notably, business aircraft operators are not parking their older equipment. Thus, the size of the turbine aircraft fleet slightly increased.

Sales and deliveries of new aircraft closely track global economic activity. In its “Aerospace Forecast Report Fiscal Years 2016 to 2036,” the FAA says “There are a number of headwinds that are buffeting the global economy — the fall in oil prices, recession in Russia and Brazil, and inconsistent performance in other emerging economies, a “hard landing” in China, and lack of further stimulus in the advanced economies.” Indeed, a dozen European states, along with Japan, have adopted negative central bank negative interest rates in efforts to stimulate their economies. And while the U.S. has avoided sinking into the morass that has recently entrapped many other nations’ economies, “a prolonged period of faster economic growth (*e.g.* >3%) may not be forthcoming.”



China has been especially hard hit, aircraft manufacturers say. Many business jets that were purchased by high net worth individuals now have been sold or transferred out of the country. The remaining aircraft, though, are being used actively to support the air transportation needs of the business community.

In the U.S., business aircraft operators face other challenges, including legislative initiatives to institute airspace and airport user fees and attempts to move FAA air traffic control functions to a private corporation with a board of directors dominated by the airlines.

In light of those challenges, the FAA expects the general aviation fleet to grow at a paltry 0.2% per year for the next two decades, with new turbine aircraft deliveries offsetting a projected contraction of the piston aircraft fleet. GAMA also notes that the general aviation pilot population slowly is shrinking, although there was a slight uptick in student starts in 2015. While the GA fleet growth is lackluster, the FAA estimates that turbine aircraft traffic will increase from 2016 to 2036.

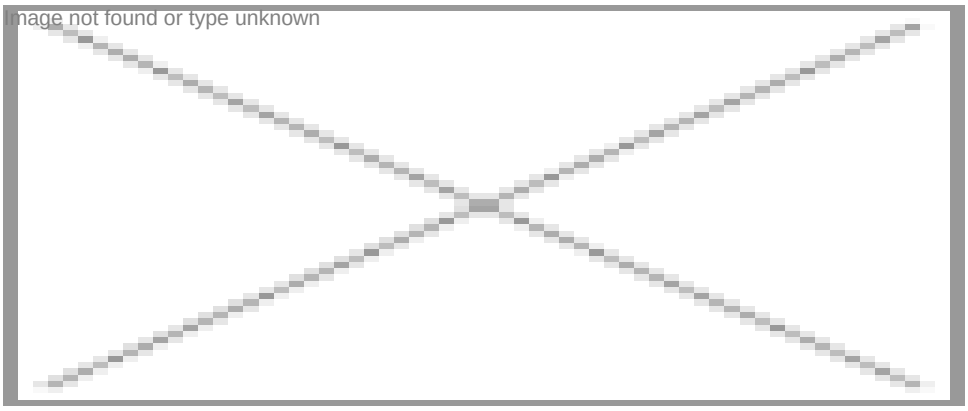
On the bright side, fuel prices were lower in 2015 and they're forecast to be stable in 2016. But, the flat economy is having an impact on aircraft pricing. Look closely at the airplane tables in this year's *Handbook* and you'll find that several manufacturers have put the lid on price increases, or even decreased them. Piper, for instance, shaved nearly $5,000 off the four-seat Arrow's retail price, $23,000 off the M350 (nee Malibu Mirage) and a whopping $115,000 off the price of the Matrix, plus $67,000 off the Seneca V and $277,000 off the M500 (nee Meridian).

Textron reduced the price of the Corvalis TTX by $110,000, held the price on the CessnaT206 Turbo Stationair and all but one of the Beech King Airs. The firm actually reduced the price of King Air 350iER by $18,000 and also shaved the price of the Beech G58 Baron by $7,000. Most impressively, Textron held the price on all its Cessna Citations.

Similarly, Embraer held the price on virtually all of its business jets. It ticked up the price of Phenom 100E by a scant $600. Bombardier capped all prices at 2015 levels. Dassault held price increases to a maximum of the U.S. economic inflation rate. Similarly, Embraer held the price on virtually all of its business jets. It ticked up the price of Phenom 100E by a scant $600.

This year, several new aircraft are making their debut in the *Handbook.* Among the single engine piston aircraft, Mooney is introducing the normally aspirated Ovation Ultra and turbocharged

Acclaim Ultra. These new models have modified moly steel tube fuselage structures, composite fuselage skins and left and right side doors, both of which are 4-in. wider than the single right door of older models for easier access. They also get upgraded interiors including cup holders and USB outlets.

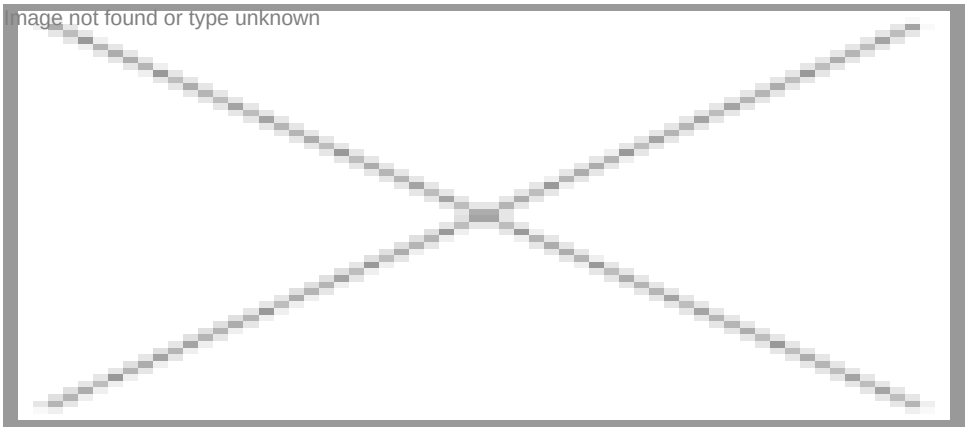


There are plenty of changes in the single-engine turboprop section. The production conforming Epic Aircraft E1000 single engine turboprop is on track for certification later this year, so it's making its debut in this year's *Handbook.* It sports a carbon fiber airframe, 1,200-shp PWC PT-6A-67A turboprop engine, 325 KTAS maximum cruise speed and 1,650 nm maximum range at long-range cruise. Piper's M600 single-engine turboprop also appears for the first time. It's a derivative of the M500 (nee Meridian) fitted with a new and larger wing that carries 700+ lb. more fuel, an uprated -42 engine with 600 shp and G3000 avionics. DAHER's new TBM930, a derivative of TBM900, is being positioned as a second model, offering G3000 avionics, a plusher interior and a 5-yr. systems warranty. Elsewhere in this issue, you'll find a review of the improvements made to the 2016 Pilatus PC-12NG.

Pilatus PC-24 and Gulfstream G500 are appearing in the turbofan section for the first time. PC-24 is the first turbofan aircraft to be developed by the Swiss utility aircraft maker. Similar to PC-12, it will feature a large rear, left side cargo door, unimproved runway capabilities and rugged construction. It's powered by twin 3,400 lf thrust Williams International FJ44 turbofans and it will have a top cruise speed of 425 KTAS.

The Gulfstream G500, the Savannah manufacturer's second fly-by-wire model, will replace the G450 derivative of the 1980's vintage G-IV in the product lineup. It flies faster, higher and farther on less fuel than the G450, plus it has a larger cabin, considerably lower cabin altitude and better runway performance. Notably, Gulfstream is pricing the G500 only $1.5 million above the G450.

Boeing Business Jet's third-generation Max8 (B737-8) and Max9 (B737-9) are replacing the BBJ2 (B737-800) and BBJ3 (B737-900) in its product line. The new models sport CFMI Leap-1B engines in place of the CFM-56-7 turbofans of the previous models and they have improved winglets, plus myriad small drag reduction improvements. Max8 and Max9 carry slightly less fuel than their predecessors, but they're so much more fuel efficient that they actually have more range than the original and smaller BBJ (B737-700IGW). Because of the performance improvement, they are upgraded to the Ultra Long Range business aircraft category.



While new aircraft deliveries remain stubbornly sluggish, several developments are buoying spirits in the business aircraft industry. In November 2015, EASA regulators issued a draft regulation that would permit commercial single-engine turbine aircraft operations in instrument meteorological conditions. Notably, Europe is the last large business aircraft market that, with few exceptions, does not permit commercial single engine operations in IMC.

After six years, this year ICAO is on track to finish development of uniform CO2 emission standards for aircraft. Such standardization will facilitate creation of market-based measures to move toward carbon-neutral growth of aircraft operations by 2020. Reduction in CO2 will be made possible by more efficient air traffic management, use of sustainable alternative fuels, replanting rain forests and developing more fuel efficient aircraft.

The FAA also is moving to Phase II of its Piston Aviation Fuels Initiative by developing a drop-in replacement unleaded avgas by 2018. Shell Oil and Swift Fuels have been selected to partner with the FAA to develop ASTM standards for unleaded avgas that will have the least technical and financial impact on general aviation aircraft operators and establish a fuel distribution infrastructure. However, it’s still not clear how much the price of unleaded avgas will change from the cost per gallon of 100 low lead fuel.

To promote sales of new aircraft, the general and commercial aviation communities joined forces to persuade the U.S. Congress to reauthorize funding for the U.S. Export-Import Bank in December 2015. The Ex-Im Bank provides incentive financing for a number of U.S. manufacturers, including aircraft companies, to spur sales of US made products, such as business aircraft, to overseas customers.

The U.S. Congress also moved to extend permanently the research and tax credit, providing $7.5 billion worth of credits for “qualified research” across a broad range of industries. And it extended bonus depreciation for aircraft purchased and put into service between 2015 and 2020.

The ongoing development of new, faster and longer range, more comfortable, more capable and more economical aircraft positions the business aircraft industry for recovery in coming years. Couple that with moving toward a modernized air traffic management system that balances the interests of all stakeholders, cost-effective environmental protection measures and assured tax incentives for both manufacturers and buyers, and long-term prospects for business aviation look brighter.

29 MAY 2016

SOURCE: AVIATIONWEEK
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