A Civil Business Returns

Profits have yet to return to 2008 levels, but makers of civil rotorcraft are no longer singing the blues about their business.

By Robert W. Moorman
Saturday, February 1, 2014

The resurgence of the civil rotorcraft market could be described as follows: the party has yet to begin, but the invitations have been mailed. The rotorcraft industry is showing improvement in several segments of the market, with the development of a new rotorcraft for the single-engine turbine category and the creation of new super mid-size class.

Rotor & Wing spoke to several industry analysts and all agree that the civil rotorcraft market is better now than it has been since the downturn began in 2009. Production began rising in 2011 through 2013. A few industry boosters say 2014 will be a breakout year for civil helicopter production and sales, but most analysts contend that the growth will modest, but steady.
“Our forecast expects production of civil helicopters to continue to rise through 2020,” said Ray Jaworowski, senior aerospace analyst at Forecast International. “We expect the increase to be fairly measured when compared to 2008.”

Others agree. “We see momentum in deliveries of rotorcraft for the next three to five years,” said Brian Foley. Twenty-five thousand civil and military rotorcraft valued at $260 billion will be sold worldwide between 2014 and 2023, according to an internal forecast by Brian Foley Associates, an aviation consultancy. The numbers include 12,500 civil turbine-powered helicopters, 6,300 pistons and 6,300 military turbines.

In 2008, before the economic downturn, just over 2,000 civil piston and turbine-powered civil helicopters were built. Forecast doesn’t foresee that number of sales being reached until 2019. The improvement in sales has been “particularly strong” in the piston-powered helicopter segment, due almost entirely to Robinson, which has nearly 90 percent of that market. Seventy percent of Robinson’s helicopters are flown outside of the U.S. One potential problem to the continued health of the piston rotorcraft market could be the lack of available leaded aviation gasoline (AvGas), particularly in remote areas. There are also environmental concerns that could one day eliminate the availability of AvGas in most regions, thereby adversely affecting the sales of piston-powered fixed and rotary wing aircraft.

Rotorcraft makers continue to study the viability of diesel-powered helicopters. Robinson looked at developing a diesel-powered rotorcraft before launching the R66 turbine-powered helicopter. Robinson declined to offer a diesel helicopter because it could not find the right power-to-weight ratio, according to a company spokesperson. Industry analysts see measured improvement in other sectors. The oil and gas business continues to be a top customer of rotorcraft. They are buying many extended range-capable helicopters that can carry crews and equipment to offshore platforms in the Gulf of Mexico and elsewhere. “The oil and gas is the strongest segment [worldwide] and is expected to grow at a CAGR [Compound Annual Growth Rate] of 2.5 percent during the 2012 to 2022 period, with total platform procurements representing $18.52 billion,” said Alix Leboulanger, an aerospace and defense research analyst with Frost & Sullivan. The governmental sector worldwide, which includes police, emergency medical services (EMS) and rotorcraft used for firefighting, is rising at a CAGR of 3.7 percent, said Leboulanger.
The EMS sector is strong in North America particularly, noted Forecast, while the corporate executive transport market is showing "signs of life."

The light single/twin engine helicopters have been selling relatively well for some time. The models include the Airbus Helicopters (formerly Eurocopter) EC135/145, AgustaWestland GrandNew, Bell 206L4 and 407 GTX. The order for 20 Bell 206L4s in January 2014 by Air Medical Group Holdings, one of the largest independent providers of air ambulance service, shows the strength of this market.

"We are reaching a new phase where demand for intermediate and medium platforms is steadily growing, not just because of the modernization of western oil and gas helicopter fleets, but because demand for business aviation, EMS and VIP services from emerging markets is booming," stated Frost & Sullivan.

But some analysts believe sales of corporate rotorcraft will remain static for the foreseeable future. One reason is the relatively new parsimonious nature of corporations worldwide. Corporate revenues have improved significantly over the past two years, but the companies are holding back on investing in new fixed and rotary wing aircraft because of concerns about the economy, according to several analysts. Sales of police helicopters "is probably the weakest," said Jaworowski, but other analysts believe this market will rise as the tax revenues of various municipalities improves, particularly in North America, which remains the largest single civil market. But higher rates of growth will occur in Southeast Asia, Central Asia and Latin America, analysts said.

"Helicopter taxi services in Brazilian city hubs are a good illustration and prelude of what will happen soon in Southeast Asia," said Leboulanger. "Africa is also expected to become a very promising market within the next 10 years, not only for the oil & gas industry, but also aviation services to improve regions' interconnectivity and biodiversity missions."

While Europe remains the second largest market for civil rotorcraft, growth is sluggish and is expected to remain so, in part over economic uncertainty, analysts agreed.
A sure sign of an improving rotorcraft market is when OEMs launch new equipment. Bell Helicopter launched the SLS (short light single) in 2012 at the Paris Air Show to succeed the no-longer-produced Jet Ranger, and better compete with the Robinson R66 turbine. Bell plans to announce a name for the SLS during Heli-Expo 2014.

“There is definitely room in the light single entry level segment for more than one player,” said Jaworowski. “The difficulty in this segment is that customers tend to be very price sensitive.”

A factor Robinson took into account when it launched the R66, which sells for around $830,000. Bell has yet to announce a specific price for the SLS, but implied that the rotorcraft will cost more than the R66, but below the Airbus Helicopters EC120, which is estimated to sell for around $1.9 million. Forecast predicts the SLS will sell for between $1.2 million and $1.3 million, while other analysts said Bell needs to offer the helicopter for under $1 million.

Another interesting development is the rise of the so-called “Super Medium Class” civil helicopter segment, which is larger than the Sikorsky S-76 and EC155, but below the S-92 and EC225. At present, there are three models in the emerging class: the AgustaWestland AW189, Bell 525 Relentless and Airbus Helicopters EC175. Sikorsky has talked about offering a rotorcraft in this class, but has yet to commit to a formal program, according to analysts.

The SLS will fill the gap on the low end for Bell, while the 16-passenger 525 launched two years at Heli-Expo will occupy the slot between the size of a Sikorsky S-76 and the very large S-92. Bell declined to provide how many firm orders, options or letters of intent (LOI) it has received for the SLS and 525. The SLS is understandable as a project. “The 206 was a good program for Bell, and losing that market was a key reason why Bell fell to third place for civil producers,” observed Richard Aboulafia, vice president of analysis for the Teal Group. “But the big question is whether or not Bell can get its overhead costs down to the point where it can sell a sub-million dollar helicopter.”

Aboulafia believes the big story this year is the continued rise of Agusta Westland. “It seems to get product definition exactly right,” he said. “The AW169 bears close watching.” Customers like AgustaWestland’s family concept, with the common systems architecture of the AW139, AW169 and AW189, noted Frost &
Sullivan. Engine manufacturers too are adhering to customers’ demands for greener, less noise powerplants, such as Turbomeca’s Ardiden 3G.

The Super Medium Class civil helicopter market shows considerable promise, analysts agreed. Operators will get more range and performance than the traditional intermediate helicopters, without the huge expense of acquiring and operating larger types. Yet growth of the segment, which has several new models, “raises the specter of overcapacity, and there is also the risk of declining oil prices,” said Aboulafia.

A recent trend worth noting: For the last several years, the military divisions of rotorcraft manufacturers propped up the civil side of the house, which remained weak due to a lagging worldwide economy. That is particularly true in the U.S. Large government contracts for rotorcraft nearly ensured positive earnings for those companies until sequestration, automatic-spending cuts to various U.S. federal government programs, went into effect on Jan. 1, 2013.

Helicopter manufacturers with once-strong military divisions are now forced to look for growth in foreign military and civil sales. While the U.S. President’s Export Control Reform initiative seeks to ease restrictions on International Traffic in Arms Regulations (ITAR), the benefits of that reform might not be realized for several years.

Consequently, helicopter manufactures with a large military business, like Bell and Sikorsky, seek to increase their presence in the civil market. “Most of this effort is concentrated on recapitalizing a fleet of civil helicopters whose average age is around 26 years old and competing for business in the rapidly expanding gas and oil producing/exploration business,” said Mike Blades, senior industry analyst for aerospace and defense with Frost & Sullivan. The Bell 525 Relentless will be one of those rotorcraft succeeding older models.

Replacing older equipment is only part of the OEM’s strategy. “While helicopter makers are becoming more focused on the civil market, the real growth will be their ability to sell civil helicopters globally, where there is additional and increasing competition,” said Blades. Blades expected to see more teaming efforts on civil rotorcraft projects to enhance business, like the ones formed by defense contractors to bid on military programs. Another trend worth noting is the growing interest by leasing companies in mid-size to large turbine powered civil helicopter market. A number of helicopter-leaning leasing companies have evolved in
recent years, offering sweet deals on operating leases to cash-strapped helicopter businesses on mid to large turbine-powered rotorcraft.

There is another factor why helicopter leasing is on the rise. The larger, twin-engine helicopters have become expensive, between $15 and $30 million per copy. The leasing companies provide operators with a way to operate the new equipment without having to buy it, which helps OEMs and their vendors significantly. The $400-million platform acquisition deal between the Lease Corp. International (LCI), the Libra Group’s commercial aircraft and rotorcraft leasing arm, and AgustaWestland in 2012 illustrates the point. Other leasing firms have benefited. Since its launch three years ago, Milestone Aviation Group has placed future firm helicopter orders and secured options valued at more than $2.2 billion.

With the recovery of the industry here, established rotorcraft manufacturers might turn their attention to other challenges — namely new competitors.

Turkish Aerospace Industries (TAI) is developing an indigenous helicopter, while Korean Aerospace Industries could soon offer a civil version of its KUH-1 Surion military utility helicopter. Hindustan Aeronautics Ltd. is marketing its $7-million single-engine Dhruv utility helicopter for civil and military use. Russian Helicopters, which produces numerous military helicopters, including the Mi-18 series multi-purpose transports, wants to expand their presence in the civil market with the launch of new models. The Ka-62 and Mi-38 are designed expressly for the civil market.

“You are seeing the rise of these regional powers that are hoping to gain a share of the global civil helicopter market,” said Forecast’s Jaworowski. “New manufacturers, such as Guimbal, Marenco Swiss helicopter and Enstrom, now Chinese-owned, are expected to gain significant market exposure against well-established manufacturers,” said Leboulanger of Frost & Sullivan.

AVIC Helicopter Co. (Avicoper), a joint venture between the Aviation Industry Corporation of China (AVIC) and the Tianjin Municipal Government, is developing rotorcraft on its own and in partnership with a number of western manufacturers, including Airbus Helicopters, AgustaWestland, Bell, Enstrom, Guimbal, Marenco, Robinson, Russian Helicopters and Sikorsky. The partnerships include building systems and rotorcraft airframes of the western OEMs. China also builds derivatives of Russian helicopters.
Michigan-based Enstrom, owned by Chongqing Helicopter Investment Company (CWHIC), is going after the light helicopter market in China. Plans are to one day have final assembly of Enstrom helicopters in China. Endstrom produces two piston-powered rotorcraft, the F28F and the 280FX and the turbine-powered 480B. Endstrom has a number of orders for its equipment from China-based buyers. While it will be years before China becomes a competitive threat on its own, CQHIC’s ownership of Enstrom and the numerous partnerships with known rotorcraft manufacturers makes China a player already.

The area proceeding slowly is the full-scale development of high-speed civil rotorcraft. OEMs continue to work on prototypes. But, there is little indication when full-scale production will begin. Airbus Helicopters is working on its X4, which is slated as a replacement for the AS365 Dauphin and EC155. The manufacturer also has the X3 (X-cubed) technology demonstrator. The X3 will likely not become a production helicopter, but technology derived from the test vehicle could become part of new production models, industry observers said. Sikorsky has its high-speed X2 program, which began in 2005 and led to the S-97 Raider military variant.

“The lack of news is the news,” Aboulafia said. “The Eurocopter [Airbus Helicopters] X3 technology doesn’t look any closer to commercialization than it did a year ago.”

The same can be said about civil tiltrotor applications. “We’re still several years away from bringing the [AgustaWestland] 609,” said Aboulafia. “The price premium for a tiltrotor is very high and that makes it a tough sell.” The principal issue concerning high-speed civil helicopters is the unit cost and direct operating costs. Can operators afford to operate these next generation helicopters? And what role would these new rotorcraft fill? These questions have yet to be answered. But operators and rotorcraft lessors indicate privately that the acquisition and operating costs could limit the appeal of these speedsters of tomorrow. For now, customers wait on the OEMs to launch these programs. And OEMs ponder when will the time be right to move to the next tier of development.

Regardless of the long-term potential of high-speed civil rotorcraft, there is plenty of good news to tell on civil helicopters now in production and new vehicles that are being developed. And that is a brighter story from previous forecasts of continued bad weather.
S-92 on display at Sikorsky’s booth during Heli-Expo 2013. Photo by Barry Schwartz

Bell 525 sim at Heli-Expo 2013. Ernie Stephens photo