

Super-medium helicopters

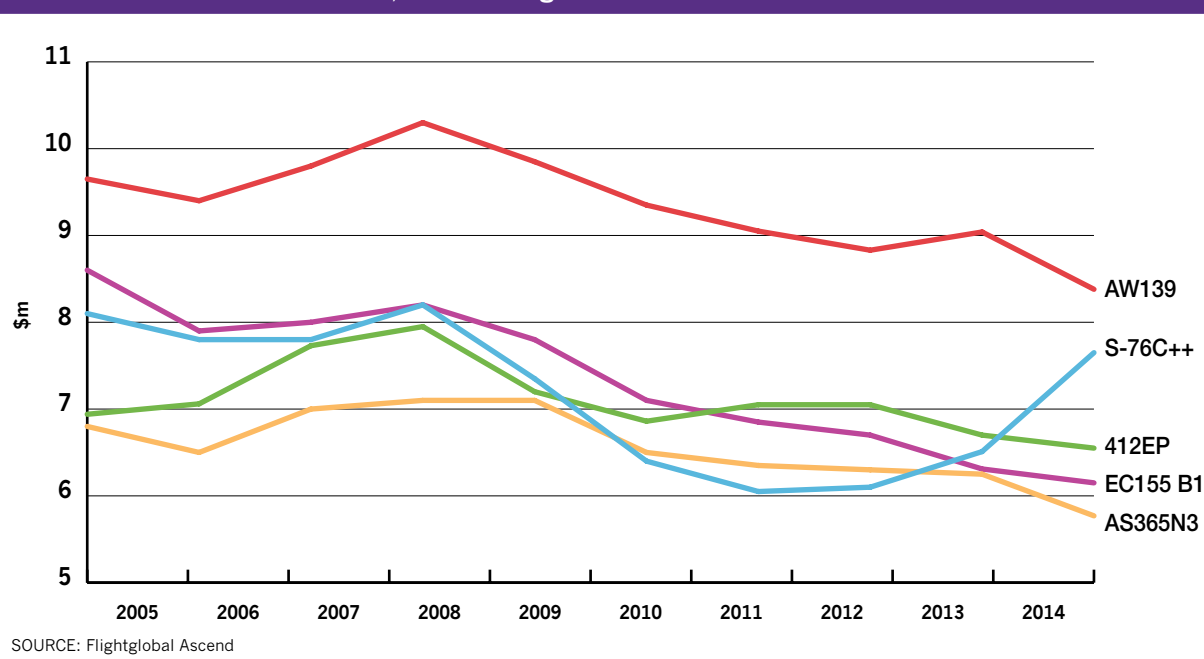
The super-medium helicopter segment is a brand-new weight class in which three of the big airframers are competing. Flightglobal's Ascend Consultancy examines the market's potential and the likely impact on residual values.

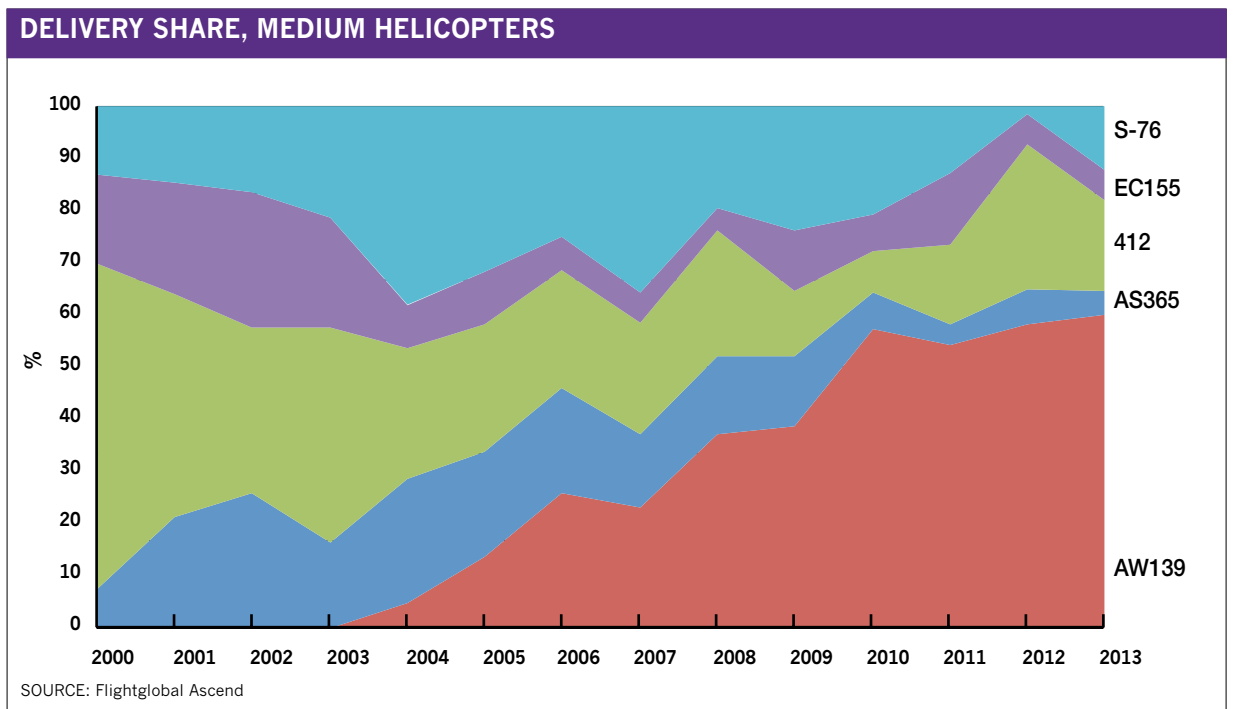
The market for offshore helicopter transportation services is booming. Oil and gas exploration companies are increasingly moving into deepwater and ultra-deepwater environments and new equipment is arriving to support this shift.

2014 has seen the entry into service of a new class of seven-tonne-plus helicopters – so-called super-mediums – designed specifically to meet these new requirements. There are three programmes in the segment, but two questions stand out. First, is the market big enough for each to be successful? And second how will existing types be impacted? To answer these we need to understand exactly what the new rotorcraft are, their impact on the existing market and the market forecast.

- The super-medium segment is a clearly defined weight category, and although heavier than medium-class types, they are still closer to these than heavies
- However, their usage profile matches more closely that of the heavies
- We will likely see some impact to the residual values of existing medium types, but not until a critical mass is achieved for the new helicopters, which is not unexpected
- Ascend is forecasting a significant in-service fleet for the category over the next 10 years

OFFSHORE MEDIUM HELICOPTER MARKET
 Half-life current market values, 2005 vintage





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- Even if the new rotorcraft can deliver in terms of their capabilities, whether the market can support the volume of the category as well as three separate types remains to be seen
- In the litter of new super-mediums there is the chance for the three helicopters to compete happily; however each has the potential to become a star or an orphan:
 - The AgustaWestland AW189 could lead the way as first to market with any risks likely to come through in-service issues
 - Airbus Helicopters's EC175 could prove the most desirable through its capabilities in key sectors but could be leap-frogged by newer technology
 - Equally, the Bell Helicopter 525 could gain an edge with its advanced equipment, but entry in to service delays pose a risk
- It will not be until the end of the decade before we have tangible answers. However, Ascend is forecasting that the market is there for the category and all the types have the potential for success – with the known order backlog looking good already, that is not an unreasonable outlook.

What are the super-mediums?

Previously when faced with this growth environment, operators would have had little choice about the aircraft they employed. The market was split between heavy helicopters – 11t maximum take-off weight (MTOW) and upwards (typically the Airbus Helicopters EC225 and Sikorsky S-92) – and medium-class rotorcraft such as the 6.4t AgustaWestland AW139 or the lighter 5.3t MTOW Sikorsky S-76.

However, to address the gap between the two segments comes an entirely new category of super-medium helicopters. Airbus Helicopters was the first to commit to the weight class with the 7.5t EC175 which it launched in 2008, followed by AgustaWestland in 2011 with the 8.3t AW189. In 2012 Bell Helicopter became the third of the big four to commit – Sikorsky remaining unconvinced by the segment – with its 8.75t 525 Relentless.

At present – and with an absence of a detailed orderbook from Bell – AgustaWestland has a modest lead in the sector, with its 75 orders for the AW189 representing a 59% share of the market, against 52 – or 41% – for the EC175.

Both of the European-built helicopters have been designed expressly for the offshore sector and are designed to carry 16 passengers out to rigs 140nm offshore, or 12 passengers up to 200nm.

The offshore bias is borne out by examination of their intended usage detailed in the order data which shows a much closer relationship to that of heavy-class rotorcraft rather than those in the medium segment. Indeed, of the 140 AW139s on order, only around 25% are destined for offshore operations, with a similar percentage of S-76Ds also earmarked for oil and gas work.

What is the impact on the market?

Deliveries of super-medium types began earlier this year, with the AW189 the first to be handed over to operator Bristow Group. As yet, Airbus Helicopters has yet to deliver its first EC175, although that milestone is imminent.

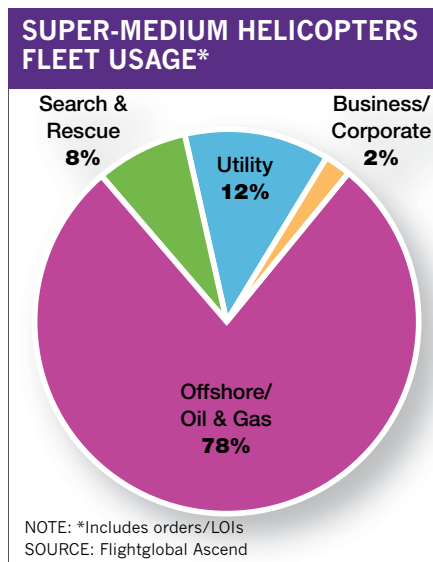
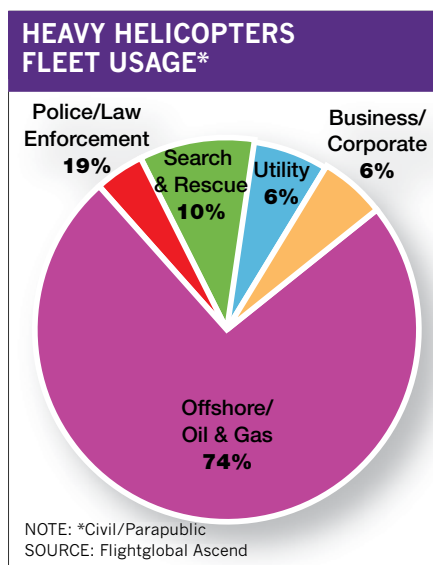
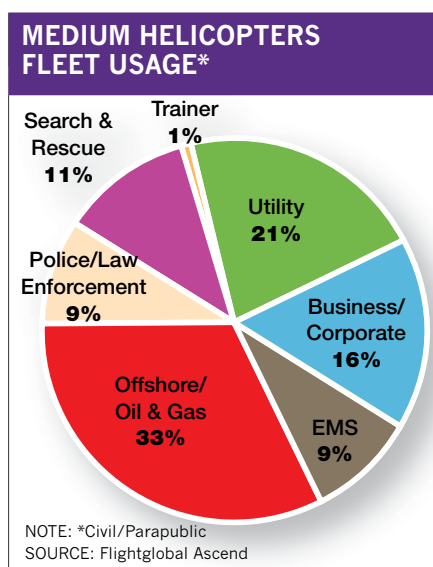
The impact of the two new types on the market is hard to gauge so far, although it is likely there will be some effect. From a historical perspective, the introduction of the AW139 in the medium segment in 2003 proved to be a disruptive one. As a heavier, more capable aircraft, boasting higher payload-range figures than its rivals, it quickly ate away at the market share previously enjoyed by the Airbus Helicopters AS365 Dauphin and Sikorsky S-76. Although harder to predict in the super-medium space, the impact of the new arrivals is most likely to be felt by the AW139, simply due to its proximity in size and payload to the newcomers. However, mitigating against this is the fact the offshore-configured AW139 fleet is still relatively young, with only a handful over 10 years old.

From a values perspective, Ascend believes that in the offshore market there will be a small impact on residual values for the in-service medium fleet as their presence in the segment is diluted by the increasing presence of the super-mediums. However, this assumes that the new arrivals perform as their manufacturers have promised.

Historically, as the AW139 has seen its share of the offshore fleet accelerate, its residual value has also exhibited a steady but measured decline indicating a plentiful supply in the market. Production of Bell 412s and Airbus Helicopters Dauphins (both the AS365 and EC155), meanwhile, continues enough to maintain market share, however it is obvious that by 2011 they are established as niche products with more limited remarketability and this is reflected in their values.

What is the forecast?

Looking at the historical trends enables us to draw parallels in order to answer the question of how the super-mediums will perform in the long term. Essentially it boils down to their prospective marketability. They are upsized – for which read more capable – medium rotorcraft, but whether or not they are in a league of their own, as is the case with



the heavies (which boast unambiguous and unsatisfied demand across all major operators, aiding value retention) remains to be seen and will only be proved as they enter operation.

The size of the super-medium backlog and the fact that the majority of orders are for oil and gas-configured models, indicate a market more comparable to the heavy than medium segment developing. We can therefore expect that, provided production of all three new types does not accelerate to outstrip supply, value retention should be good. Even if the advanced technology Bell 525 proves to be the preferred option in the long run, it is unlikely it will dilute the market fast enough to impact values given its later delivery date.

Three new helicopters entering the segment at the same time does increase the risk that the market will become diluted with too many options and value retention could decline, similar to what has been observed in the fixed-wing market where multiple engine options are offered for some types.

In the heavy segment, the EC225 and S-92 were introduced close together and have a fairly even market share. The smaller medium helicopters have historically had three competitors (Dauphin, 412 and S-76) with offshore deliveries split 30:30:40 until a fourth (the AW139) entered the market a decade ago. The AW139 has since taken the 40% share, the S-76 reduced to 30% and the other two split the remainder. So having three rivals is not unprecedented, but can any one of them become dominant?

Ascend's Global Helicopter Forecast predicts that deliveries in the super-medium class will climb to around 170 per year by 2023, a total of 1,200 units over the period, although the smaller mediums will still see demand for some 1,330.

Despite this healthy market, all the types will have to fight for market share and with Bell the furthest from market entry – currently this milestone is scheduled for 2016 – it will be key to deliver on the 525's impressive sounding spec sheet. Airbus Helicopters has already delayed entry into service of the EC175 on two occasions and saw 2013 sales suffer as a result. The potential performance characteristics of the 525 and technological advances such as fly-by-wire controls are compelling on paper, but the helicopter may prove harder than anticipated to certificate.

Bell recently delayed the first flight of the 525 until early in 2015. This does not indicate that the programme's schedule will slip, but aircraft developments seldom run entirely to plan. Bell has a good opportunity to seize a sizeable chunk of the super-medium market with the Relentless, but if it delivers late then it risks missing the boat entirely.

The next few years will be exciting ones for the helicopter sector, particularly regarding the development of the super-mediums. Logic would dictate that none of the manufacturers will let their horse perform poorly, but it will be the market which ultimately decides if any, all, or some will be a winner or loser.

About Ascend

Flightglobal Consultancy

With an expert team of 20 analysts based across the globe, Ascend Flightglobal Consultancy provides manufacturers, airlines and financiers with expert advisory and valuations services to inform multimillion dollar growth, risk advisory and strategy decisions.

Part of Flightglobal, Ascend provides unique value for clients by combining around 50 years of industry experience with the most comprehensive historical and future aircraft fleet and airline schedules data and an unprecedented historical aircraft values database, to provide a unique view on aircraft values and the impact of industry trends.

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