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## Aerospace investors eye engines for growth

By Jorn Madslien  
Business reporter, BBC News, Paris air show

The Paris air show gets ready to throw open its gates to the public over the weekend, after a week of spectacular flying displays for aerospace and defence executives.

Even this jaded audience of tailored suits, of stars and stripes, is left in awe as enormous passenger jets pirouette, as nimble fighter jets stall mid-air before plunging - then soaring, or as helicopters seemingly defy the laws of physics.

And then there is the sound; nothing can prepare you for the roaring, whining engines of a fighter jet blasting past.

To cool-hearted executives and investors, the engine roar is the sound of money, especially this year when the aircraft makers are seeing orders for new planes dry up.

### Predictable engines

These days, the engine for growth in the aerospace industry is made up of engine makers such as Rolls-Royce, GE Aviation, or Pratt & Whitney, analysts say.

"Engine values have traditionally demonstrated better resilience to the market cycle than aircraft values," says George Dimitroff at aviation analyst Ascend.

That is not to say the engine makers are immune to the downturn; far from it.

"Their business model has always been different from the 'airframers', but not necessarily better," Scott Carson, chief executive of Boeing's civilian aircraft division, tells BBC News.

The world's largest jet engine maker, GE Aviation, predicts orders will halve this year - in line with a sharp fall in orders for aircraft from Boeing, Airbus and their smaller rivals.

GE Aviation's chief executive, Jack Lutze, points to how the aerospace industry "lurches from boom to bust", and how the engine makers "lag the industry on the way down and on the way up".

This makes the engine industry more predictable, a factor that investors in the sector tend to appreciate, according to Paolo Carmassi, Honeywell Aerospace president for Europe, the Middle East, Africa and India.

"We are a safety obsessed industry, and predictability goes hand in hand with safety," he tells BBC News in an interview at the Paris air show.

### Guaranteed revenue



Orders for new planes have been hit hard by the economic downturn

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Scott Carson, chief executive of Boeing's civilian aircraft division



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Paolo Carmani, Honeywell Aerospace president for Europe, the Middle East, Africa and India

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But the main difference between aircraft makers - or "airframers" - and the engine makers lies in their earnings models. Boeing and Airbus tends to earn the most when they sell a plane.

By contrast, engine makers make relatively low margins on engine sales, one Rolls-Royce executive explains.

"The business model of engine makers is very different from other manufacturers," explains Accenture aerospace and defence analyst Damien Lasou. "Their business model is a service model, which is very protective during a downturn."

Put simply; when an aircraft manufacturer buys an engine, it enters into a long-term service agreement with its maker.

Broadly speaking, the original purchase price makes up only about a fifth of the total cost of an engine's 30-year lifetime, according to Mr Lasou.

"Having many engines in service is a guarantee of future revenue," he says.

The same is true for suppliers of any "selectable" aircraft equipment, including anything from radars to tyres, sound systems to aviation electronics, observes Honeywell's Mr Carmassi.



"In the commercial world, it is not uncommon for a product to be given for free to be installed in a Boeing or an Airbus, in the knowledge that it has a 30-year servicing requirement paid for by the airlines," he explains.

#### Rising value

But if engine makers make money from engine servicing, so do their owners - because an overhauled engine is as good as a new one.

"Every time an overhaul is carried out on the engine and the life-limited parts replaced, its value is being replenished," explains Mr Dimitroff.

"A large proportion of an engine's value is in its maintenance condition."

Overhauling a relatively new engine can double its value. As the engine gets older, the value added by servicing rises to 80%, Mr Dimitroff explains, "and by the time it is 30 years old it can be close to 100%".

“ Values of some older engine types have taken several hits over the past year, [whilst] newer, in-production [engines] have been holding their fort quite well ”

George Dimitroff, aviation analyst, Ascend

Consequently, if engine makers raise the prices of new engines, even old ones "can see their value increase over time, rather than depreciating... as aircraft might", he says.

Though in many cases, even aircraft - or "airframes" - can be revived, according to Mr Carmassi. New avionics that help the pilots fly more efficiently and thus reduce fuel costs could make an aircraft worth more to an airline, he explains.

#### Old aircraft

Engine values are thus not so much affected by their own quality.

Rather; their values fall when the aircraft they power are taken out of service, reducing demand for the engines, explains Mr Dimitroff.

In addition, as parts are stripped out of the parked aircraft, it becomes cheaper to add to the supply of engines that are still working well.

This is why "values of some older engine types have taken several hits over the past year, [whilst] newer, in-production [engines] have been holding their fort quite well", Mr Dimitroff says.

At a corporate level, this has helped boost the market share of Rolls-Royce, simply because it has only become a really large player during the last couple of decades.

Companies that were huge some 30 years ago - GE and Pratt & Whitney - delivered most of the engines at the time, and are thus suffering the most from the grounding of old aircraft and the



Rolls-Royce is gaining market share during the recession.

resulting loss in servicing earnings.


Currently, there are some 55,000 engines in service across the world. GE is looking after some 20,000 of them, hotly followed by Pratt & Whitney, while Rolls-Royce has 14,000 engines in service.

However, Rolls-Royce commands about half the new orders in the most lucrative wide-bodied aircraft market, with GE taking some 40% of the new orders and Pratt & Whitney securing about a tenth of the new orders.

The power balance in the engine industry is changing slowly, and considerably more silent than the products they are producing.

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