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## SINGAPORE AIRSHOW:

### China's Aviation Industry on the Horizon?

By Michael Raska

#### ***Synopsis***

*While major international airshows such as the Paris Airshow or Singapore Airshow have been dominated by US and European aerospace giants the likes of Boeing, Lockheed Martin, or Airbus Group, their presence is increasingly challenged by the Chinese aviation firms led by AVIC (Aviation Industries of China).*

#### ***Commentary***

IN 2013, Aviation Industries of China (AVIC) displayed its “Pterodactyl” unmanned combat aerial vehicle (UCAV) for the first time at an international defence exhibition at the Paris Airshow. The Paris-shown UCAV is only one of the dozens of new UAV designs that China exhibited at the 2012 China Airshow in Zhuhai, including a variety of precision-guided munitions.

Over the past decade, China's aviation industry has unveiled a wide array of airborne platforms and systems that define China's ongoing military modernisation. AVIC's portfolio of platforms currently includes the Chengdu J-10 multirole fighter; the Chengdu FC-1/JF-17 light fighter for export; the Shenyang J-11B – an upgraded variant of the J-11A (a reverse-engineered version of the Russian SU-27SK); Hongdu L-15 advanced jet trainer, the KJ-2000 airborne early warning and control platform, and a range of attack helicopters such as Z-10 and Z-19, and UAVs.

#### **AVIC's growing business performance**

While upgrading existing third- and fourth-generation fighters, AVIC is also focused on the next-generation indigenous stealth fighters (J-20 and J-31) and strategic transport aircraft (Y-20). These programmes remain in their development and flight-testing stages and may face important technological hurdles, including the integration of reliable, advanced, high-performance jet engines. Still, these new products signal the industry's ongoing transformation and growing potential for innovation.

AVIC represents a giant state-owned enterprise group consisting of 10 principal business units with nearly 200 subsidiaries, 33 R&D institutions, which together employ around 450,000 people. Its defence aviation business units, for example, comprise five core defence-aerospace prime contractors: Chengdu Aircraft Industry Corporation, Shenyang Aircraft Corporation, Hongdu Aviation Industry Group, Xi'an Aircraft Company, and Changhe/Hafei Aviation.

These are supported by first-tier suppliers and system-integrators, such as Shenyang Liming Aero-Engine, Xian Aero Engine, and AVIC Avionics. These are then supplied by second-tier and third-tier manufacturers of sub-systems and components.

On 1 January 2014 AVIC released a statement that its 2013 revenues are expected to reach CNY350 billion (US\$58 billion), while profit will reach nearly CNY 14 billion (US\$2.3 billion). These figures represent a record high turnover and profit, year-on-year increases of 16% and 6% respectively. The value of AVIC's total assets in 2013 exceeded CNY500 billion (US\$80 billion).

During 2008 and 2011, AVIC recorded a 20 percent compound annual rate of revenue growth. In 2011, AVIC achieved a double-digit growth in both revenue and net earnings – revenue increased 20 percent to CNY250 billion (US\$40 billion) and net earnings increased over 15 percent to CNY12 billion (US\$2 billion). AVIC's revenues in 2011 exceeded those of some European and US prime contractors: BAE Systems, Lockheed Martin, and Northrop Grumman, which achieved sales of US\$30 billion, US\$46.5 billion, and US\$26.4 billion, respectively. On the other hand, AVIC trailed Airbus and Boeing, whose sales in 2011 reached US\$69 and US\$66 billion respectively.

In 2012, AVIC reported its turnover grew 14% to CNY300 billion (US\$48 billion) and its profit climbed 5% to CNY13 billion (US\$2.6 billion). AVIC has also enhanced its financial position by raising capital on the markets. Further to the central government's 2007 defence-industrial reform guidelines, the group has listed subsidiaries in initial public offerings on Chinese stock exchanges. It has also privately placed shares and issued bonds on interbank markets. Of China's defence industrial groups, AVIC has been the most active at both investing and divesting assets.

### **AVIC's global strategy**

While domestic demand has been a key driver of AVIC's recent performance, the group's long-term developmental strategy aims outward. Indeed, AVIC's long-term strategic aims consist of "two integrations": integration with the global aviation industry and with regional aircraft-manufacturing economies. In recent years, AVIC has pursued these goals by expanding exports of defence items, string of foreign acquisitions, and integration into the global commercial aircraft industry by fostering the establishment of China-based joint ventures with leading foreign firms – particularly on the ARJ21 and C919 programmes.

Currently, AVIC controls less than 4% of the global defence aircraft exports by value. However, this share may increase in the next decade as select programmes mature and new opportunities arise in emerging markets in South America, Central and Southeast Asia. In these select markets, Chinese manufacturers can compete on price, which may attract buyers with limited defence budgets or buyers who cannot access controlled US and European technologies.

The cumulative effects of these developments are substantial. For the past 30 years, the major constraints on China's defence aviation industry have been fiscal and technological. In recent years, China's growing defence budgets have all but eliminated the fiscal constraints. In parallel, global commercial partnerships have complemented China's "indigenous innovation" efforts in defence aviation, mitigating select technological constraints. As a result, China's defence aviation catalogue today is gradually catching up with the most sophisticated air forces in the world.

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