

# AEROSPACE SUMMARY

**U**.S. AEROSPACE INDUSTRY SALES INCREASED 2.1% IN 1999, following 1998's gain of 12.5%. DoD led with a 5% increase, while NASA and other federal agencies' combined sales fell slightly. Sales to customers other than the U.S. government rose slightly to record levels.

Here are the highlights of the industry's 1999 performance:

## Sales

Overall industry sales totaled \$151 billion, compared with \$148 billion in 1998. U.S. government sales reached \$58 billion, up \$2.1 billion from the previous year. The "other customers" category rose \$464 million to a record \$67.5 billion.

As usual, aircraft sector sales led all other product groups. Civil and military sales combined totaled \$87 billion, compared with \$84 billion in 1998. Total aircraft sales break down into \$51 billion for civil and \$35 billion for military, with civil aircraft sales dominating military sales for the third time since 1993.

There was also a gain in sales of "related products and services," which surpassed \$25 billion, up \$517 million from the previous year. Likewise, missile sector sales grew to \$8.9 billion, up from \$7.7 billion. Unfortunately, space sector sales declined to \$30 billion, down from \$32 billion in 1998.

For 1999, aerospace industry output amounted to 1.6% of the Gross Domestic Product and 3.5%

of U.S. manufacturing sales, down from 1.7% and 3.7% in 1998.

## Earnings

Net income after taxes was a record \$10.2 billion, up from \$7.7 billion in the previous year. As a percentage of sales, the industry's profit amounted to 6.5%, up from the 1998 aerospace profit-to-sales ratio of 5.0%. By comparison, the average for all U.S. manufacturing industries was 6.2%. As a percentage of assets, aerospace earnings amounted to 6.2%; as a percentage of equity, 21.8%.

The consolidated aerospace balance sheet showed net working capital of \$11.7 billion, up from \$11.5 billion in 1998. Stockholders' equity grew from \$43 billion in 1998 to \$50 billion in 1999 and total assets climbed substantially from \$160 billion to \$170 billion.

## Orders and Backlog

Net new orders for aerospace products and services rose \$4.3 billion, or 3.9%, to \$114 billion, up from \$110 billion in 1998, reversing the last two years' downward trend. The increase reflects a rise in military orders from \$39

billion in 1998 to \$51 billion in 1999. Orders in the civil sector fell from \$71 billion in 1998 to \$64 billion in 1999.

The industry's backlog at year-end 1999 was \$190 billion, down from \$200 billion in the previous year. Of that, 63%, or \$120 billion, are orders for non-military products. The backlog for military systems held steady at \$70 billion.

### **Civil Aircraft Production**

U.S. manufacturers shipped 3,477 civil aircraft in 1999 worth a total \$45 billion. That represents a gain of 342 units and \$3.7 billion in sales over 1998 levels.

Civil transport production—620 aircraft valued at a record \$38 billion—accounted for 84% of the total value. These figures compare with 559 aircraft worth \$36 billion in 1998.

Production of civil helicopters remained almost even with 1998 at 361 units (down 2) valued at \$187 million (down \$65 million).

General aviation aircraft sales increased to 2,496 units (up 283) and in dollar value to \$6.9 billion (up \$1.2 billion). This sales level marked the seventh straight record year for general aviation.

### **Military Aircraft Production**

The Census Bureau reported 1999 sales of military aircraft and parts, including engines, to be \$26.3 billion. That figure compares with \$23.8 billion in 1998.



The industry produced 333 military aircraft: 107 were delivered to U.S. military agencies and 226 were exported either through Foreign Military Sales arrangements or through direct company-to-foreign-customer sales. The comparable figures for 1998 were 418 total, 149 for the U.S. military services, and 269 exports.

For Fiscal Year (FY) 2000, the major aircraft types procured were: the Air Force C-17 Globemaster III transport, the Navy F/A-18E/F fighter, the Air Force F-22 Raptor fighter, the Navy/Marine Corps V-22 Osprey tiltrotor aircraft, the Army AH-64 Apache helicopter, the Air Force/Navy C-130J Hercules transport, the Navy E-2C Hawkeye early warning and control aircraft, the Air Force E-8C JSTARS surveillance aircraft, the Navy CH-60S helicopter, and the Navy T-45 Goshawk trainer.

### **Foreign Trade**

Aerospace exports remained strong at \$62 billion, but declined 2.5% from 1998's all-time high of \$64 billion.

The aerospace trade balance also remained healthy although down from 1998's record. Total



imports reached an all-time high of \$25 billion, compared with \$23 billion in 1998. This resulted in a trade balance of \$37 billion, down \$3.6 billion or 8.7%.

Civil exports accounted for a majority (81%) of total aerospace exports in 1999. The civil export total of \$51 billion compares with \$52 billion the previous year, a 2.6% decrease. The largest component of aerospace exports was civil transport aircraft, which at \$26 billion accounted for more than half of the civil export total. Jetliner exports were \$3.5 billion lower than in the previous year.

### **Space Programs**

Sales of space systems and services came to \$30 billion in 1999, down from \$32 billion in 1998. AIA figures include civil and military space systems and parts plus U.S. government space activities, including contracts for Research, Development, Test, and Evaluation (RDT&E).

The Census Bureau uses a reporting system that excludes launch vehicle propulsion systems, spacecraft orbital adjustment engines/motors, and RDT&E. The Bureau reported that space systems sales continued a decline which began in 1998, with a total for 1999 of \$9 billion, down from \$9.5 billion in the previous year. The 1999 sales figure included \$3.9 billion in non-military work (commercial plus government-sponsored civil space) and \$5.1 billion in military work.

### **Missile Programs**

According to AIA statistics, missile sector sales rose 14.5% in 1999. Missile sector sales amounted to \$8.9 billion in 1999, up from \$7.7 billion in the previous year. However,

Census Bureau data (which excludes the sale of some propulsion units and RDT&E) showed a smaller rise of 3.8% in the sales of missile systems and parts to \$4.5 billion.

DoD outlays for missile procurement began to turn around from the decline that began in FY 1991. Missile outlays for FY 2000 totaled \$4.3 billion, up from the FY 1999 figure of \$4.1 billion. Another increase in outlays was planned for FY 2001 (\$4.5 billion). A significant chunk of funding (\$4.3 billion in FY 2000 and \$3.9 billion in FY 2001) will go to RDT&E programs related to ballistic missile defense rather than procurement of production-type systems.

Major production programs of 1999/2000 included the Navy Trident II Fleet Ballistic Missile, the Army/Marine Corps Javeline antiarmor missile, the Army/Ballistic Missile Defense Organization Patriot PAC-3 air defense system, and the Army/USMC Hellfire antiarmor missile.

### **Research and Development**

In 1999, total U.S. funding for research and development (R&D) amounted to \$245 billion, up from \$227 billion in the previous year, according to the National Science Foundation (NSF). Two-thirds of the total (66%) was funded by in-

dustry (\$162 billion), which also performed the great bulk of R&D work (75%). For 2000, NSF estimated total R&D funding at \$264 billion, indicating that industry would again be the principal funding source (68%) and performer (76%).

In 1998 (the latest year for which NSF data was available by industry), aerospace R&D funding totaled \$14.4 billion, a decrease of 11% from the previous year. Aerospace industry investment in R&D (federal and company funds) amounted to 9.3% of net sales, down from 11.2% in the previous year. Company funding as a percentage of net sales was 3.3%; the average for all U.S. manufacturing industries was 3.2%.

### **Employment**

Employment in the aerospace industry declined in 1999 after two years of growth. On an annual average employment basis, the industry's labor force fell by 50,000 to a total of 846,000. The 1999 employment figure represented 4.6% of the total employment in all U.S. manufacturing industries. The aerospace workforce also represented 7.6% of total employment by U.S. companies engaged in production of durable goods.