

Trends in Major Markets

Transportation

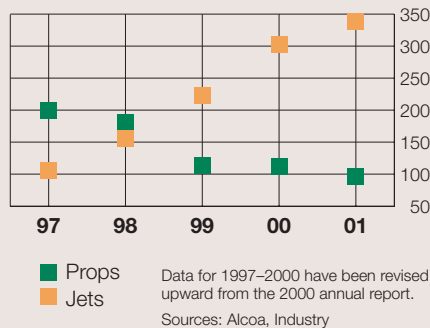
22.7% \$5.2 billion

Alcoa segments that sell products to this market: Flat-Rolled Products, Engineered Products, Other

- Alcoa revenues in this market come from sales to automotive, aerospace and commercial transportation industries.
- The use of aluminum per vehicle in Europe is expected to grow from 198.4 lbs (90 kg) in 2001 to 286.6 lbs (130 kg) in 2005. *European Aluminium Association*
- In the U.S., light trucks, sport-utility vehicles, and vans outsold passenger cars for the first time in 2001. These use more aluminum per vehicle than cars, especially in cast and forged products, which Alcoa supplies for suspension system components such as steering knuckles and control arms.
- China is predicted to be the largest commercial aviation market outside the U.S. by 2020, requiring 1,764 jets worth \$144 billion, 78% of which will be regional and single-aisle aircraft. *Boeing Market Outlook*

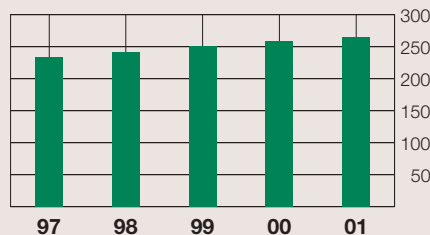
Worldwide Commuter Aircraft Build Rates

less than 100 passengers



Growth in Automotive Aluminum North America

pounds per typical vehicle



Packaging and Consumer Products

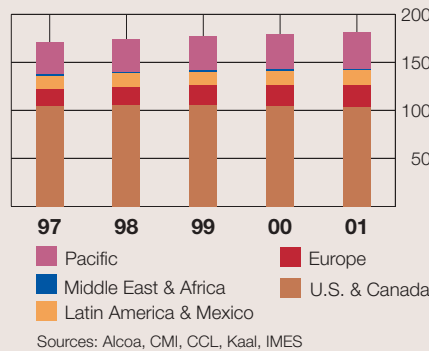
22.3% \$5.1 billion

Alcoa segments that sell products to this market: Flat-Rolled Products, Packaging and Consumer Products

- Alcoa's packaging and consumer products revenues are primarily from sales of beverage can sheet, bottle closures, flexible packaging, packaging machinery, and foodservice packaging, including Reynolds Wrap® and other Reynolds-brand products.
- U.S. shipments of aluminum cans in 2001 held even with 2000 at about 100 billion units.
- Alcoa Consumer Products increased the production capacities outside the U.S. of its Reynolds-branded products, which saw significant growth during 2001 in South America, Africa, Eastern Europe and Southeast Asia.
- Innovative new aluminum bottles in Japan are expected to double sales to about a billion units over the next 2-3 years. Alcoa closures are used on these bottles. *Industrial Information Resources Inc.*

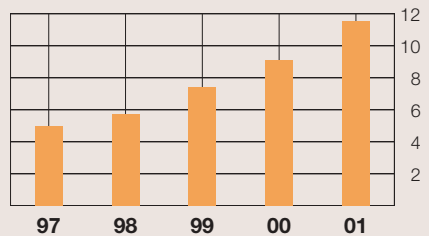
Aluminum Beverage Can Demand

billions of cans



Bottled Water Growth

billions of units



Distribution and Other

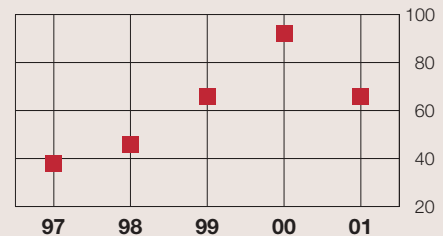
20.1% \$4.6 billion

Alcoa segments that sell products to this market: Flat-Rolled Products, Engineered Products, Other

- Alcoa's revenues in this market principally come from sales of aluminum sheet, plate and extrusions to distributors. 'Other' also includes sales of products and services for telecommunications and power generation.
- In November, Alcoa and Billiton formed a North American metals-distribution 50-50 joint venture that combines Alcoa's Reynolds Aluminum Supply Co. (RASCO) with Billiton's Vincent Metal Goods in the U.S. and Atlas Ideal Metals in Canada. RASCO will not be included in revenues here next year.
- A sharp downturn in the telecommunications market reduced the pace of fiber optic construction projects, one of the markets served by AFL. Current construction activity is roughly at pre-1999 levels.
- Engineering News Record* reports a sharp rise since 1999 in U.S. demand for power generating capacity, which historically increases 2.5 – 3% a year. Alcoa's Howmet is the leading worldwide producer of hot-section components for gas turbine engines used in power generation. While the rate of new demand may slacken in 2002, the large base of installed equipment will begin to need replacement parts. Howmet is in position to be a leading supplier.

North American Telecommunications Capital Expenditures

billions of dollars



Aluminum Ingot

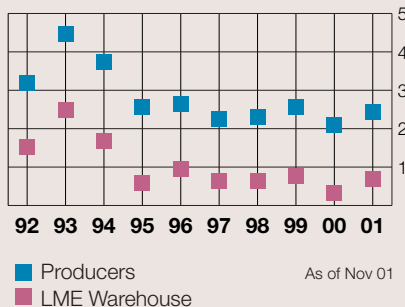
14.8% \$3.4 billion

Alcoa segments that sell products to this market: Primary Metals

- Aluminum ingot is an internationally produced, priced and traded commodity whose principal trading market is the London Metal Exchange, or LME.
- Worldwide primary aluminum capacity is estimated at 26.1 million mtpy, of which about 10% is currently idle. Alcoa has 4.1 million mtpy of smelting capacity, including some 635,000 mtpy idle at the end of 2001. Electricity shortages closed two Alcoa smelters in the U.S. Pacific Northwest and reduced production at Alcoa's two smelters in Brazil.
- Alcoa produces aluminum ingot primarily to use in further fabrication of higher value products. Ingot shipments to third parties in 2001 were 49% of total aluminum shipments.
- Alcoa generates approximately 25% of the power used by its smelters.
- By forming a strategic alliance with Aluminum Corporation of China Limited (Chalco), Alcoa becomes the first aluminum company to establish a foothold in primary aluminum production in China, the fastest growing market in the world.

Worldwide Aluminum Ingot Inventory

millions of metric tons



Building and Construction

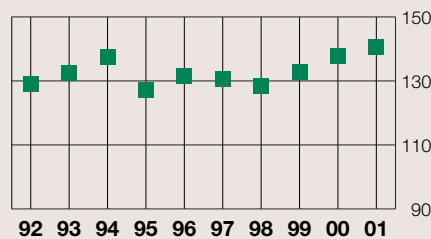
11.8% \$2.7 billion

Alcoa segments that sell products to this market: Flat-Rolled Products, Engineered Products, Other

- Alcoa's revenues in this market are from an array of fabricated aluminum products for commercial and residential applications, as well as vinyl extrusions and injection moldings for new homes and remodeling.
- New U.S. housing starts rose 2.2% in 2001, the third highest rise in the last 15 years. New home sales in 2001, 2.6% above the previous year, were the highest on record. *U.S. Commerce Dept.*
- In 2001, the U.S. construction industry as a whole reported its tenth straight year of growth. Commercial construction, however, was down 4% in 2001 to \$165.8 billion, with the largest declines in new offices, hotels, and warehouses. *F.W. Dodge, McGraw-Hill*

U.S. Repair & Remodeling Expenditures

billions of dollars



Source: U.S. Census Bureau C-50, National Association of Home Builders

Alumina and Chemicals

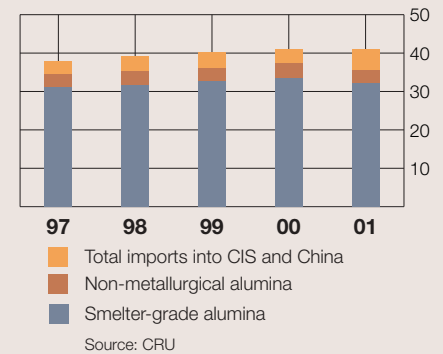
8.3% \$1.9 billion

Alcoa segments that sell products to this market: Alumina and Chemicals

- Alcoa is the world's largest producer of alumina, the white, powdery oxide of aluminum refined from bauxite ore. Alumina is used to produce aluminum and alumina-based chemicals.
- In 2001, Alcoa World Alumina and Chemicals sold approximately half of its consolidated alumina production to third parties.
- Alumina production declined in 2001 due to reduced market demand, chiefly from cutbacks in aluminum smelting. Alcoa closed its St. Croix refinery and reduced production at Point Comfort, Poços de Caldas, São Luis and Jamalco refineries.

Western World Alumina Demand

millions of metric tons



Alcoa Alumina Production

millions of metric tons

