Management's Discussion and Analysis of Financial Condition and Results of Operations

(dollars in millions, except per-share amounts and ingot prices; shipments in thousands of metric tons [mt])

Certain statements in this report under this caption and elsewhere relate to future events and expectations and, as such, constitute forward-looking statements. Forward-looking statements also include those containing such words as "anticipates," "believes," "estimates," "expects," "hopes," "targets," "should," "will," "will likely result," "forecast," "outlook," "projects" or similar expressions. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements of Alcoa to be different from those expressed or implied in the forward-looking statements. For discussion of some of the specific factors that may cause such a difference, see Notes J and T to the financial statements and the disclosures included below under Segment Information and Market Risks.

Alcoa is the world's leading producer of primary aluminum, fabricated aluminum and alumina, and is active in all major aspects of the industry: technology, mining, refining, smelting, fabricating and recycling. Aluminum is a commodity that is traded on the London Metal Exchange (LME) and priced daily based on market supply and demand. Aluminum and alumina represent approximately two-thirds of Alcoa's revenues, and the price of aluminum influences the operating results of Alcoa. Nonaluminum products include precision castings, industrial fasteners, vinyl siding, food service and flexible packaging products, plastic bottles and closures, fiber-optic cables, electrical distribution systems for cars and trucks, and packaging machinery.

Alcoa is a global company operating in 38 countries. North America, including Canada and the United States, is the largest market with 68% of Alcoa's revenues. Europe is also a significant market with 20% of the company's revenues. Alcoa also has investments and activities in Asia and Latin America that present opportunities for substantial growth, including Brazil, China, India, Korea and Mexico. Governmental policies and other economic factors, including inflation and fluctuations in foreign currency exchange rates and interest rates, affect the results of operations in these emerging markets.

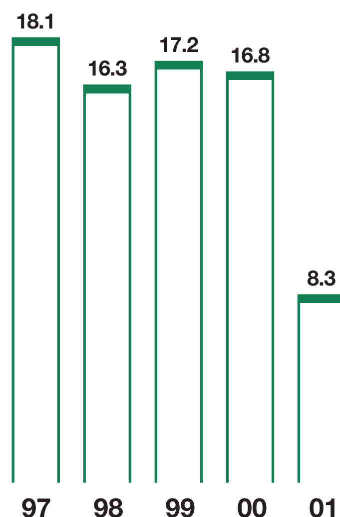
Earnings Summary

Alcoa's net income for 2001 was $908, or $1.05 per diluted share, compared with $1,484, or $1.80 per share, in 2000. Net income in 2001 included special after-tax charges of $355 related to the strategic restructuring of Alcoa's primary and fabricating businesses to optimize assets and lower costs. Excluding these special after-tax charges, net income was $1,263, or $1.46 per share, a decrease of 15% from 2000 results. Revenues in 2001 of $22,859 were essentially flat compared with revenues of $22,936 in 2000. Overall, 2001 results were negatively affected by lower realized prices and lower volumes due to weak market conditions in the transportation, building and construction and distribution markets. Also impacting earnings in 2001 were costs incurred for contract losses, customer claims and bad debts. These negative factors were partially offset by cost savings and gains on the sales of businesses. In 2001, Alcoa announced a goal to reduce costs by $1,000 by December 2003.

Alcoa had a record year in 2000, with net income the highest in the company's 112-year history. The acquisitions of Reynolds and Cordant were completed in 2000. Net income of $1,484, or $1.80 per share, in 2000 was up 41% compared with 1999 net income of $1,054, or $1.41 per share. Revenues of $22,936 in 2000 also increased 41% from 1999 revenues of $16,323. Improved financial results for 2000 relative to 1999 were the result of higher volumes, aided by the Reynolds and Cordant acquisitions, an increase in aluminum prices and continued operating improvements. Additionally, in 2000, Alcoa achieved the cost reduction target initiated in 1998 to eliminate $1,100 in costs through the continued implementation of the Alcoa Business System. Partially offsetting these positive factors in 2000 were higher energy costs, a higher effective tax rate and softening in the transportation, building and construction and distribution markets.

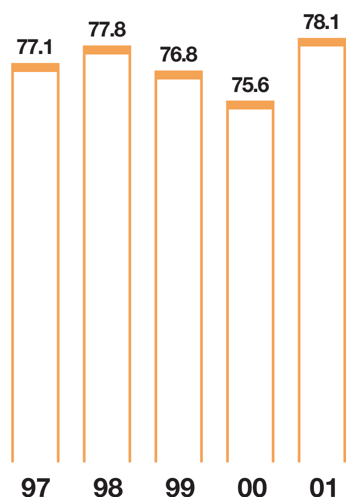
Return on average shareholders' equity for 2001 was 8.3% (11.4% excluding special items) compared with 16.8% in 2000 and 17.2% in 1999. The decrease in 2001 was due to the earnings decline mentioned above, special items recorded in 2001 and a larger average number of shares outstanding during the period primarily resulting from the Reynolds acquisition.

Percent Return on Average Shareholders' Equity



Cost of Goods Sold — COGS as a percentage of sales was 78.1% in 2001, an increase of 2.5 percentage points from 2000. The increase was primarily due to lower realized prices, lower volumes and a full year's impact of the higher cost of sales ratios of the acquired Reynolds and Cordant businesses. Additionally, COGS was impacted by a pretax charge of $56 for contract losses, customer claims and the power failure at the company's Warrick (Ind.) smelter. Partially offsetting these negative factors were cost savings and operating improvements.

Cost of Goods Sold
as a percent of sales



COGS as a percentage of sales was 75.6% in 2000, down 1.2 percentage points from 1999, due primarily to higher sales prices resulting from a stronger LME and cost-cutting efforts, somewhat offset by higher cost of sales at acquired entities and higher energy costs.

Selling and General Administrative Expenses — S&GA expenses were $1,276, or 5.6% of sales, in 2001 compared with S&GA expenses of $1,108, or 4.8% of sales, in 2000. The increase in 2001 was primarily due to customer bad debt write-offs of $78 and the full-year impact of the acquisitions of Reynolds and Cordant, as well as lower sales volumes in 2001.

S&GA expenses increased from $851 in 1999 to $1,108 in 2000. The increase in 2000 was due primarily to acquisitions and higher personnel costs related to pay for performance, partially offset by cost-cutting improvements. S&GA as a percentage of sales decreased from 5.2% in 1999 to 4.8% in 2000, primarily due to higher sales prices.

Research and Development Expenses — In 2001, R&D expenses increased $9 to $203 from 2000 primarily due to the full-year impact of acquisitions made in 2000 and an increase in spending in the Primary Metals segment related to inert anode technology.

In 2000, R&D expenses increased $66 to $194 from 1999 with acquisitions accounting for half of the increase. The remaining increase was due to corporate spending and increases in the Primary Metals and Flat-Rolled Products segments as well as at Alcoa Fujikura Ltd. (AFL).

Special Items — During 2001, Alcoa recorded charges of $566 ($355 after tax and minority interests) as a result of a restructuring plan. The company completed a strategic review of its primary products and fabricating businesses aimed at optimizing and aligning its manufacturing systems with customer needs, while positioning the company for stronger profitability. The charge of $566 consisted of a charge of $212 ($114 after tax and minority interests) in the second quarter of 2001 and a charge of $354 ($241 after tax and minority interests) in the fourth quarter of 2001. These charges consisted of asset write-downs ($372 pretax), employee termination and severance costs ($178 pretax) related to workforce reductions of approximately 10,400 employees, and exit costs ($16 pretax). The second quarter charge was primarily due to actions taken in Alcoa's primary products businesses because of economic and competitive conditions. These actions included the shutdown of three facilities in the U.S. Alcoa expects to complete these actions by mid-2002. The fourth quarter charge was primarily due to actions taken in Alcoa's fabricating businesses. These actions included the shutdown of 15 facilities in the U.S. and Europe. Alcoa expects to complete these actions by the end of 2002. These charges were not recorded in the segment results. The impact to the segments would have been a pretax charge of $94 in Alumina and Chemicals, $157 in Primary Metals, $105 in Flat-Rolled Products, $126 in Engineered Products and $63 in the Other group. Additional unaccruable employee termination costs of approximately $30 related to the restructuring plan are expected to be recognized in 2002. As a result of the restructuring, management anticipates stronger profitability through lower depreciation, employee and other costs.

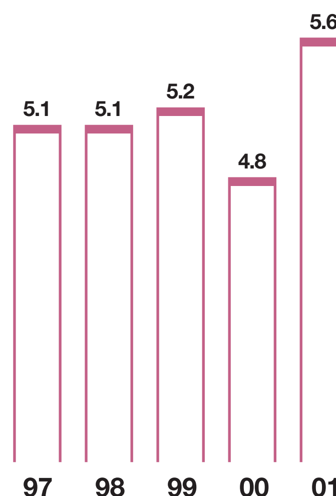
Interest Expense — Interest expense decreased $56 from 2000 to $371 in 2001, due to lower interest rates as well as the pay down of debt, primarily short-term borrowings.

Interest expense rose $232 from 1999 to $427 in 2000, primarily as a result of the Reynolds and Cordant acquisitions.

Other Income/Foreign Currency — Other income increased $154 to $308 in 2001. The increase was primarily due to $114 ($93 after tax) of gains on asset sales related primarily to the sales of Thiokol Propulsion (Thiokol), Alcoa Proppants, Inc. and Alcoa's interest in a Latin American cable business, as well as the impact of foreign currency exchange adjustments.

In 2000, other income increased $30 to $154. The increase was due to a $59 increase in equity income and higher interest and dividend income, offset by the negative impact of foreign currency exchange adjustments.

Selling and General Administrative Expenses
as a percent of sales



Foreign exchange losses included in other income were $11 in 2001, $82 in 2000 and $19 in 1999.

Effective July 1, 1999, the Brazilian real became the functional currency for translating the financial statements of Alcoa's 59%-owned Brazilian subsidiary, Alcoa Aluminio S.A. (Aluminio). As a result of the change, Alcoa's accumulated other comprehensive loss (unrealized translation adjustments) and minority interests accounts were reduced by $156 and $108, respectively. These amounts were driven principally by a reduction in fixed assets and resulted in decreases in Aluminio's depreciation expense of $30 in 2001 and 2000 and $15 in 1999.

Income Taxes — Alcoa's effective tax rate was 32% in 2001 and 33.5% in 2000, which differed from the statutory rate of 35%, primarily due to lower taxes on foreign income. Alcoa's effective tax rate in 1999 was 29.9%, primarily driven by lower taxes on foreign income including a reduction in the Australian corporate income tax rate. In the 1999 fourth quarter, Australia reduced its corporate income tax rate from 36% to 34% for 2000 and to 30% for 2001.

Minority Interests — Minority interests' share of income from operations decreased $173 to $208 in 2001. The decrease was primarily due to lower earnings at AFL, Alcoa World Alumina and Chemicals (AWAC) and Aluminio, as well as the impact of special charges of $42. In 2000, minority interests' share of income from operations increased $139 from 1999 to $381. The increase was due to higher earnings at Alcoa of Australia, AFL and Aluminio.

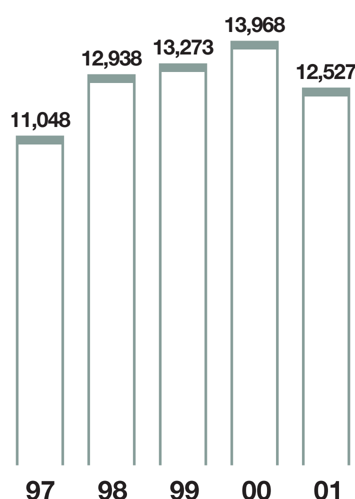
Segment Information

Alcoa's operations consist of five worldwide segments: Alumina and Chemicals, Primary Metals, Flat-Rolled Products, Engineered Products and Packaging and Consumer. Alcoa businesses that are not reported to management as part of one of these five segments are aggregated and reported as "Other." Alcoa's management reporting system measures the after-tax operating income (ATOI) of each segment. Nonoperating items, such as interest income, interest expense, foreign exchange gains/losses, the effects of last-in, first-out (LIFO) inventory accounting, minority interests and special items are excluded from segment ATOI. In addition, certain expenses, such as corporate general administrative expenses, and depreciation and amortization on corporate assets, are not included in segment ATOI. Segment assets exclude cash, cash equivalents, short-term investments and all deferred taxes. Segment assets also exclude items such as corporate fixed assets, LIFO reserves, goodwill allocated to corporate and other amounts.

ATOI for all segments totaled $2,043 in 2001, compared with $2,389 in 2000 and $1,489 in 1999. See Note L to the financial statements for additional information. The following discussion provides shipment, revenue and ATOI data for each segment for the years 1999 through 2001.

Alumina Production

thousands of metric tons



Alumina and Chemicals

	2001	2000	1999
Alumina production (mt)	12,527	13,968	13,273
Third-party alumina shipments (mt)	7,217	7,472	7,054
Third-party sales	$1,908	$2,108	$1,842
Intersegment sales	1,021	1,104	925
Total sales	$2,929	$3,212	$2,767
After-tax operating income	$ 471	$ 585	$ 307

This segment consists of Alcoa's worldwide alumina and chemicals system, that includes the mining of bauxite, which is then refined into alumina. Alumina is sold directly to internal and external smelter customers worldwide or is processed into industrial chemical products. The industrial chemical products are sold to a broad spectrum of markets including refractories, ceramics, abrasives, chemicals processing and other specialty applications. Slightly more than half of Alcoa's alumina production is sold under supply contracts to third parties worldwide, while the remainder is used internally. Alumina comprises approximately two-thirds of total third-party sales.

In 2001, third-party sales of alumina decreased 13% compared with 2000, primarily due to a decrease in shipments of 3% and a decrease in realized prices of 10%. In 2000, third-party sales of alumina increased 19% compared with 1999 as a result of a 6% increase in shipments along with a 13% increase in prices. The increased shipments were driven by increased production with the completion of the 440,000-mt expansion of Alcoa's Wagerup, Australia alumina refinery as well as increased production levels at Kwinana and Pinjarra, also in Australia, and San Ciprián, Spain.

Third-party sales of alumina-based chemical products were down 31% in 2001 compared with 2000, primarily due to lower volumes. In 2000, third-party sales of alumina-based chemical products were up 2% compared with 1999, primarily attributable to increased volume in Alcoa's Latin American chemical operations.

Segment ATOI in 2001 fell 20% from 2000 to $471 due to lower volumes, resulting from production curtailments at Point Comfort

(Tex.) and Brazil and the shutdown of the alumina refinery in St. Croix, as well as lower prices. Segment ATOI in 2000 rose 91% over 1999 due to higher alumina prices, higher shipment volumes and continued cost reductions, partially offset by higher energy costs.

Primary Metals

	2001	2000	1999
Aluminum production (mt)	3,488	3,539	2,851
Third-party aluminum shipments (mt)	1,873	2,071	1,442
Third-party sales	$3,432	$3,756	$2,241
Intersegment sales	3,300	3,504	2,793
Total sales	$6,732	$7,260	$5,034
After-tax operating income	$ 905	$1,000	$ 535

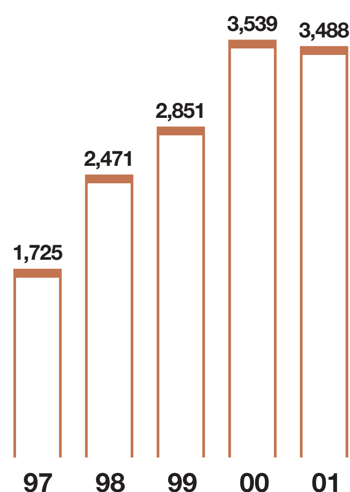
This segment consists of Alcoa's worldwide smelter system. Primary Metals receives alumina primarily from the Alumina and Chemicals segment and produces aluminum ingot to be used by Alcoa's fabricating businesses, as well as sold to external customers, aluminum traders and commodity markets. Results from the sale of aluminum powder, scrap and excess power are also included in this segment, as well as the results of aluminum derivative contracts. Aluminum ingot produced by Alcoa and used internally is transferred to other segments at prevailing market prices. The sale of ingot represents approximately 80% of this segment's third-party sales.

Third-party sales in 2001 decreased $324, or 9%, from 2000. The decrease was primarily due to a 10% decrease in shipments and lower realized prices, partially offset by power sales and the full-year results of the Reynolds acquisition. In 2000, third-party sales rose $1,515, or 68%. Approximately two-thirds of this increase was the result of the Reynolds acquisition. The remaining increase was due to a 7% increase in shipments and higher realized prices for ingot in 2000. Alcoa's average third-party realized price for ingot in 2001 was 72 cents per pound, a decrease of 7% from the average realized price of 77 cents per pound in 2000. In 1999, the average realized price was 67 cents. This compares with average 3-month prices on the LME of 66 cents per pound in 2001, 71 cents per pound in 2000 and 63 cents per pound in 1999.

Primary Metals ATOI decreased by $95, or 10%, in 2001 from 2000. The decrease is primarily attributed to lower volumes and lower prices, partially offset by power sales. The year-over-year impact of power sales, net of volume-related decreases, was approximately $50. ATOI increased by $465, or 87%, in 2000 from 1999. Higher metal prices in 2000 were responsible for approximately two-thirds of the increase, while the Reynolds acquisition accounted for approximately one-fourth of the increase. The remainder of the increase was due to increased volumes and cost reductions, offset somewhat by higher energy prices.

Alcoa announced various capacity curtailments and restarts. After the curtailment and restart of capacity, Alcoa will have approximately 635,000 mt per year of idle capacity. Additionally, in December 2001, approximately two-thirds of the capacity at the company's Warrick (Ind.) smelter was impacted by power failures. The total financial impact of approximately $45 (pretax) associated with the power failures and related restart of capacity at Warrick is expected to be incurred primarily in the first quarter of 2002.

Aluminum Production
thousands of metric tons



Flat-Rolled Products

	2001	2000	1999
Third-party aluminum shipments (mt)	1,818	1,960	1,982
Third-party sales	$4,999	$5,446	$5,113
Intersegment sales	64	97	51
Total sales	$5,063	$5,543	$5,164
After-tax operating income	$ 262	$ 299	$ 281

This segment's principal business is the production and sale of aluminum plate, sheet and foil. This segment includes rigid container sheet (RCS), which is sold directly to customers in the packaging and consumer market and is used to produce aluminum beverage cans. Seasonal increases in RCS sales are generally experienced in the second and third quarters of the year. This segment also includes sheet and plate used in transportation and distributor markets, of which approximately two-thirds is sold directly to customers while the remainder is sold through distributors. Approximately 60% of the third-party sales in this segment are derived from sheet and plate, and foil used in industrial markets, while the remaining 40% of third-party sales consists of RCS. Sales of RCS, sheet and plate are dependent on a relatively small number of customers.

In 2001, third-party sales from this segment decreased by $447, or 8%, from 2000. This decrease was driven primarily by 7% lower shipments due to weakness in the transportation and distribution markets in North America and Europe, partially offset by sales increases resulting from the acquisition of British Aluminium and improved mix on sheet and plate sales. In 2000, third-party sales from this segment increased $333 from 1999, with rising prices offsetting a slight decrease in shipments.

ATOI for Flat-Rolled Products decreased in 2001 by 12% due to lower volumes in North America and Europe, which were partly offset by a more profitable product mix for sheet and plate in the U.S. ATOI increased in 2000 by 6% from 1999 as higher prices and equity earnings offset lower shipments and higher energy costs.

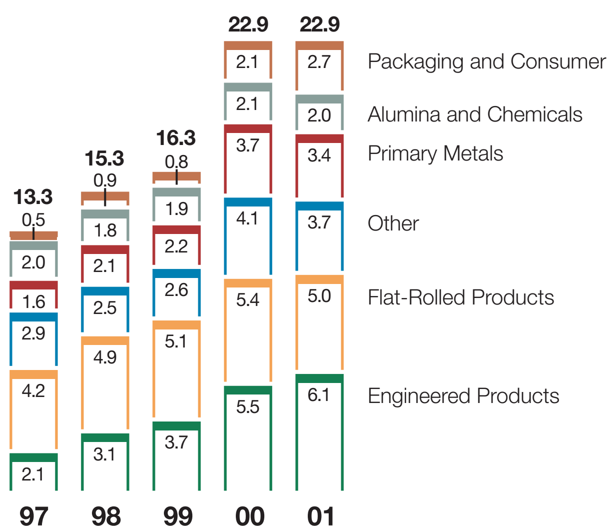
Engineered Products

	2001	2000	1999
Third-party aluminum shipments (mt)	932	1,061	989
Third-party sales	$6,098	$5,471	$3,728
Intersegment sales	35	62	26
Total sales	$6,133	$5,533	$3,754
After-tax operating income	$ 173	$ 210	$ 180

This segment includes hard- and soft-alloy extrusions, including architectural extrusions, super-alloy castings, steel and aluminum fasteners, aluminum forgings and wheels. These products serve the transportation, building and construction and distributor markets and are sold directly to customers and through distributors.

In 2001, third-party sales increased 11% primarily due to a full-year's results of the 2000 acquisitions of Reynolds, Cordant and British Aluminium, partially offset by a decrease in volume, mainly in North America, due to weakness in the transportation and distributor markets. In 2000, third-party sales increased 47% primarily due to the acquisitions of Reynolds and Cordant, as well as price increases in other businesses. The aluminum shipment data for this segment was not impacted in 2001 and 2000 by the additions of Huck and Howmet, which produce revenues but do not have third-party aluminum shipments.

ATOI for Engineered Products decreased 18% from 2000 to $173 in 2001. This decrease is primarily due to decreased volumes as a result of weak market conditions and the impact of exchange rate fluctuations in Brazil, partially offset by the positive impact of acquisitions and cost-reduction efforts. ATOI in 2000 increased by 17% from 1999 to $210 due to the impact of acquisitions, primarily Huck and Howmet, offset by a decline in other U.S. and European businesses as a result of the overall decline in the transportation market.



Packaging and Consumer

	2001	2000	1999
Third-party aluminum shipments (mt)	143	119	9
Third-party sales	$2,720	$2,084	$801
After-tax operating income	$ 185	$ 131	$ 68

This segment includes foodservice, flexible packaging, consumer products and packaging graphics design, as well as closures, PET (polyethylene terephthalate) bottles and packaging machinery. The principal products in this segment include aluminum foil; plastic wraps and bags; metal and plastic beverage and food closures; pre-press services; and plastic shrink film and wraps. Consumer products are marketed under brands including Reynolds Wrap, Diamond®, Baco and Cut-Rite® wax paper. Products are sold directly to customers, consisting of various retail chains and commercial foodservice distributors. Sales in this segment are dependent on a relatively small number of customers.

Third-party sales were $2,720 in 2001, an increase of $636 over 2000. The increase is primarily due to the full-year results of the Reynolds acquisition, as well as several smaller acquisitions in 2000. Third-party sales were $2,084 in 2000, up $1,283 from 1999 due to the acquisition of Reynolds packaging and consumer businesses in 2000.

ATOI increased 41% in 2001 from 2000 due primarily to acquisitions as well as improved volumes in closures sales. ATOI increased by 93% in 2000 from 1999 due to the acquisition of the Reynolds packaging and consumer businesses.

Seasonal increases generally occur in the third and fourth quarters of the year for such products as consumer foil and plastic wraps and bags, while seasonal slowdowns for closures generally occur in the fourth quarter of the year.

Other

	2001	2000	1999
Third-party aluminum shipments (mt)	228	187	56
Third-party sales	$3,702	$4,071	$2,592
After-tax operating income	$ 47	$ 164	$ 118

This group includes other Alcoa businesses that are not included in the segments previously mentioned. This group includes AFL, which produces fiber-optic cable and provides services to the telecommunications industry and produces electrical components for the automotive industry; residential building products operations, Alcoa Building Products (ABP); automotive parts businesses; Thiokol, a producer of solid rocket propulsion systems (Thiokol was sold in April 2001); and Reynolds' metal distribution business, RASCO (in November 2001, the net assets of RASCO were contributed to a joint venture, Integris Metals, Inc., in which Alcoa retains a 50% equity interest). Products in this segment are generally sold directly to customers or through distributors. AFL sales are dependent on a relatively small number of customers. Seasonal increases in the building products business generally occur in the second and third quarters of the year.

In 2001, third-party sales were down 9% due primarily to the sale of Thiokol in 2001, as well as lower volumes and prices in the AFL automotive and telecommunications businesses. These decreases

were somewhat offset by improved demand for residential building products. In 2000, third-party sales were up 57% due primarily to the RASCO, Thiokol and AFL telecommunications acquisitions, partially offset by a sales decrease at ABP. The decline in ABP sales in 2000 was due to softness in the overall housing and construction market.

In 2001, ATOI for this group decreased $117 primarily as a result of volume and price declines at AFL, partially offset by improved sales of building products and gains totaling $87 from the sales of Thiokol, Alcoa Proppants, Inc. and Alcoa's interest in a Latin American cable business. In 2000, ATOI for this group increased by 39% from 1999 primarily due to the RASCO, Thiokol and AFL telecommunications acquisitions, offset by a decrease at ABP, due to lower volumes and higher resin costs.

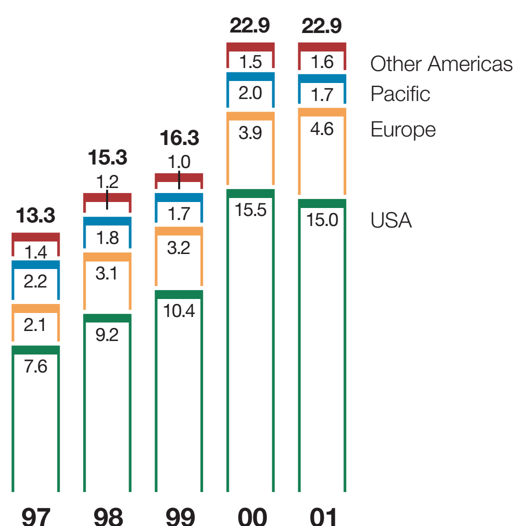
Reconciliation of ATOI to Consolidated Net Income

The following reconciles segment ATOI to Alcoa's consolidated net income and explains each line item in the reconciliation:

	2001	2000	1999
Total after-tax operating income	$2,043	$2,389	$1,489
Impact of intersegment profit eliminations	(20)	24	(24)
Unallocated amounts (net of tax):			
Interest income	40	40	26
Interest expense	(242)	(278)	(126)
Minority interests	(208)	(381)	(242)
Special items	(397)	—	—
Corporate expense	(261)	(227)	(171)
Other	(47)	(83)	102
Consolidated net income	$ 908	$1,484	$1,054

Items required to reconcile ATOI to consolidated net income include:

- Corporate adjustments to eliminate any remaining profit or loss between segments;
- The after-tax impact of interest income and expense at the statutory rate;
- Minority interests;
- Special items (excluding minority interests) related to the strategic restructuring in 2001;



- Corporate expense, comprised of general administrative and selling expenses of operating the corporate headquarters and other global administrative facilities along with depreciation on corporate owned assets; and
- Other, which includes the impact of LIFO, differences between estimated tax rates used in the segments and the corporate effective tax rate and other nonoperating items such as foreign exchange.

The variance in Other between 1999 and 2000 was due to LIFO adjustments in 1999 and adjustments to deferred taxes in 1999 that resulted from a change in the Australian corporate income tax rate.

Market Risks

In addition to the risks inherent in its operations, Alcoa is exposed to financial, market, political and economic risks. The following discussion provides additional detail regarding Alcoa's exposure to the risks of changing commodity prices, foreign exchange rates and interest rates.

Derivatives

Alcoa's commodity and derivative activities are subject to the management, direction and control of the Strategic Risk Management Committee (SRMC). SRMC is composed of the chief executive officer, the chief financial officer and other officers and employees that the chief executive officer selects. SRMC reports to the Board of Directors on the scope of its derivative activities.

All of the aluminum and other commodity contracts, as well as various types of derivatives, are held for purposes other than trading. They are used primarily to mitigate uncertainty and volatility, and cover underlying exposures. The company is not involved in energy-trading activities or weather derivatives or to any material extent in other nonexchange commodity trading activities.

The following discussion includes sensitivity analyses for hypothetical changes in the commodity price, exchange rate or interest rate contained in the various derivatives used for hedging certain exposures. In all cases, the hypothetical change was calculated based on a parallel shift in the forward price curve existing at December 31, 2001. The forward curve takes into account the time value of money and the future expectations regarding the value of the underlying commodity, currency and interest rate.

Commodity Price Risks — Alcoa is a leading global producer of aluminum ingot and aluminum fabricated products. As a condition of sale, customers often require Alcoa to enter into long-term fixed-price commitments. These commitments expose Alcoa to the risk of fluctuating aluminum prices between the time the order is committed and the time that the order is shipped.

Alcoa's aluminum commodity risk management policy is to manage, through the use of futures and options contracts, the aluminum price risk associated with a portion of its fixed price firm commitments. At December 31, 2001, these contracts totaled approximately 802,000 mt with a fair value loss of approximately $65 ($42 after tax). A hypothetical 10% increase (or decrease) in aluminum ingot prices from the year-end 2001 level of $1,355 per mt would result in a pretax gain (or loss) of $108 related to these positions.

Past accounting convention required that certain long positions be marked to market. As a result of the change in accounting under Statement of Financial Accounting Standards (SFAS) No. 133, "Accounting for Derivative Instruments and Hedging Activities," these contracts were re-designated and qualified as hedges on January 1, 2001.

Alcoa sells products to various third parties at prices that are influenced by changes in LME aluminum prices. From time to time, the company may elect to sell forward a portion of its anticipated primary aluminum and alumina production to reduce the risk of fluctuating market prices on these sales. Toward this end, Alcoa may enter into short positions using futures and options contracts. At December 31, 2001, these contracts totaled 28,000 mt. The fair value of these contracts at December 31, 2001 was not material. These contracts act to fix a portion of the sales price related to these sales contracts. A hypothetical 10% increase (or decrease) in aluminum ingot prices from the year-end 2001 level of $1,355 per mt would result in a pretax loss (or gain) of $4 related to these positions.

Alcoa is required to purchase natural gas to meet its production requirements. These purchases expose the company to the risk of higher natural gas prices. To hedge this risk, Alcoa enters into long positions, principally using futures and options. Alcoa follows a stable pattern of purchasing natural gas; therefore, it is highly likely that anticipated natural gas purchases will occur. The fair value of the contracts for natural gas was a loss of approximately $30 ($18 after tax and minority interests) at December 31, 2001. A hypothetical 50% increase (or decrease) in the market price of natural gas from the year-end 2001 level would result in a pretax gain (or loss) to future earnings of $26.

Alcoa also purchases certain other commodities, such as fuel oil and electricity, for its operations and may enter into futures and options contracts to eliminate volatility in the prices of such products. None of these contracts were material.

Financial Risk

Currencies — Alcoa is subject to significant exposure from fluctuations in foreign currencies. Foreign currency exchange contracts are used to hedge the variability in cash flows from the forecasted payment or receipt of currencies other than the functional currency. These contracts cover periods commensurate with known or expected exposures, generally within three years. The fair value of these contracts was a loss of approximately $132 ($51 after tax and minority interests) at December 31, 2001.

A hypothetical 10% strengthening (or weakening) of the U.S. dollar at December 31, 2001, would result in a pretax loss (or gain) of approximately $114 related to these positions.

Interest Rates — Alcoa uses interest rate swaps to help maintain a reasonable balance between fixed- and floating-rate debt and to keep financing costs as low as possible. The company has entered into pay floating, receive fixed interest rate swaps to change the interest rate risk exposure of its outstanding debt. The fair value of these swaps was a gain of $34 ($23 after tax) at December 31, 2001.

At December 31, 2001 and 2000, Alcoa had $6,633 and $8,133 of debt outstanding at effective interest rates of 5.0% for 2001 and 7.6% for 2000, after the impact of interest rate swaps is taken into account. A hypothetical change of 10% in Alcoa's effective interest rate from year-end 2001 levels would increase or decrease interest expense by $33.

Material Limitations — The disclosures with respect to commodity prices and foreign exchange risk do not take into account the underlying anticipated purchase obligations and the underlying transactional foreign exchange exposures. If the underlying items were included in the analysis, the gains or losses on the futures and options contracts may be offset. Actual results will be determined by a number of factors that are not under Alcoa's control and could vary significantly from those factors disclosed.

Alcoa is exposed to credit loss in the event of nonperformance by counterparties on the above instruments, as well as credit or performance risk with respect to its hedged customers' commitments. Although nonperformance is possible, Alcoa does not anticipate nonperformance by any of these parties. Futures and options contracts are with creditworthy counterparties and are further supported by cash, treasury bills or irrevocable letters of credit issued by carefully chosen banks. In addition, various master netting arrangements are in place with counterparties to facilitate settlement of gains and losses on these contracts.

For additional information on derivative instruments, see Notes A and S to the financial statements.

Environmental Matters

Alcoa continues to participate in environmental assessments and cleanups at a number of locations. These include approximately 31 owned or operating facilities and adjoining properties, approximately 28 previously owned or operated facilities and adjoining properties, and approximately 91 Superfund and other waste sites. A liability is recorded for environmental remediation costs or damages when a cleanup program becomes probable and the costs or damages can be reasonably estimated. For additional information, see Notes A and T to the financial statements.

As assessments and cleanups proceed, the liability is adjusted based on progress in determining the extent of remedial actions and related costs and damages. The liability can change substantially due to factors such as the nature and extent of contamination, changes in remedial requirements and technological changes. Therefore, it is not possible to determine the outcomes or to estimate with any degree of accuracy the potential costs for certain of these matters. For example, there are issues related to Alcoa's Massena, New York and Point Comfort, Texas sites where investigations have been ongoing and where natural resource damage or off-site contaminated sediments have been alleged. In the case of Massena, the company submitted a revised draft Analysis of Alternatives Report to the EPA in February 2002 which included remedial alternatives required by the EPA related to PCB contamination of the Grasse River, adjacent to Alcoa's Massena, New York plant site. The range of costs associated with the remedial alternatives evaluated in the 2002 report is between $2 and $525. Alcoa believes that several of those alternatives, involving the largest amounts of sediment removal, should not be selected for the Grasse River remedy. Alcoa believes the alternatives that should be selected are those ranging from monitored natural recovery ($2) to a combination of moderate dredging and capping

($90). A reserve of $2 has been recorded for any probable losses, as no one of the alternatives is more likely to be selected than any other.

Based on these facts, it is possible that Alcoa's results of operations, in a particular period, could be materially affected by matters relating to these sites. However, based on facts currently available, management believes that the disposition of these matters will not have a materially adverse effect on the financial position or liquidity of the company.

Alcoa's remediation reserve balance at the end of 2001 was $431, of which $74 was classified as a current liability, and reflects the most probable costs to remediate identified environmental conditions for which costs can be reasonably estimated. Of the 2001 reserve balance, approximately 8% relates to the Massena, New York plant sites, 6% relates to the Troutdale, Oregon plant site, and 23% relates to the Sherwin, Texas site. Remediation expenses charged to the reserve were $72 in 2001, $77 in 2000, and $47 in 1999. These include expenditures currently mandated, as well as those not required by any regulatory authority or third party. In 2001, the reserve balance was increased by $56, primarily as a result of acquisitions and the shutdown of the company's magnesium plant in Addy, Washington.

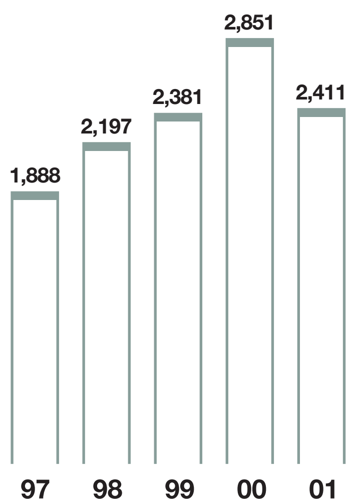
Included in annual operating expenses are the recurring costs of managing hazardous substances and environmental programs. These costs are estimated to be about 2% of cost of goods sold.

Liquidity and Capital Resources

Cash from Operations

Cash from operations decreased 15% to $2,411, following an increase of 20% to $2,851 in 2000 from $2,381 in 1999. The decrease in 2001 is primarily the result of lower earnings. The increase in cash from operations in 2000 relative to 1999 was primarily due to the impact of acquisitions, higher aluminum prices resulting in increased earnings, and an increase in depreciation and amortization, partially offset by changes in noncurrent assets and liabilities.

Cash from Operations
millions of dollars

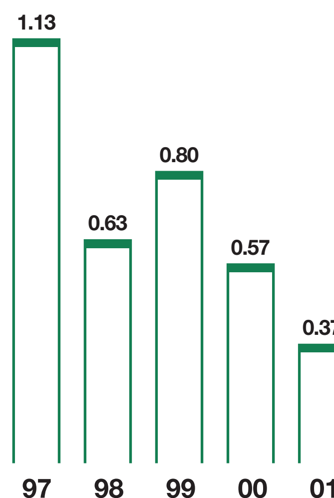


Financing Activities

Cash used for financing activities was $3,127 in 2001 compared with cash provided from financing activities of $1,552 in 2000. The increase in cash used was primarily due to debt repayments that were funded by the proceeds from the sales of operations required to be divested from the Reynolds merger, the sale of Thiokol and issuing additional debt. In 2000, cash provided from financing activities was $1,552, versus cash used for financing activities of $1,311 in 1999. The increase in cash in 2000 was due to increases in short-term borrowings, commercial paper and long-term debt. This was partially offset by a decrease in common stock issued for employee stock compensation plans.

In 2001 and 2000, additions to long-term debt exceeded payments on long-term debt by $1,112 and $571, respectively. In May 2001, Alcoa issued $1,500 of notes. Of these notes, $1,000 mature in 2011 and carry a coupon rate of 6.50%, and $500 mature in 2006 and carry a coupon rate of 5.875%. In December 2001, Alcoa issued an additional $1,500 of notes. This issue consisted of $1,000 of notes that mature in 2012 and carry a coupon rate of 6% and $500 of floating-rate notes that mature in 2004. In 2000, Alcoa issued $1,500 of notes. Of these notes, $1,000 mature in 2010 and carry a coupon rate of 7.375%, and $500 mature in 2005 and carry a coupon rate of 7.25%.

Free Cash Flow to Debt Coverage
times covered



In April 2001, Alcoa refinanced the $2,490 revolving-credit facility that was to expire in April 2001 and the $510 revolving-credit facility that expires in April 2005. These facilities were refinanced into a $2,000 revolving-credit agreement that expires in April 2002 and a $1,000 revolving-credit agreement that expires in April 2005. The revolving-credit facilities are used to support Alcoa's commercial paper program.

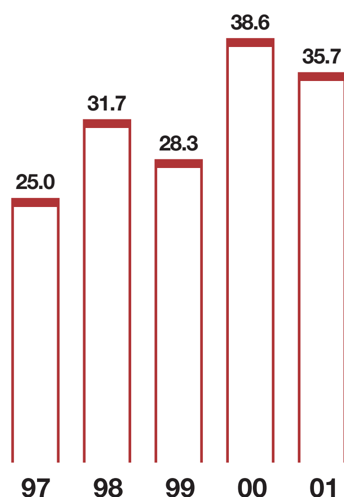
The increase in cash used for financing activities in 2001 was also attributed to the repurchase of 39,348,136 shares of the company's common stock for $1,452 at an average price of $36.87 per share.

In 2000, Alcoa used $763 to repurchase 21,742,600 shares of the company's common stock at an average price of $35.08 per share. Stock repurchases in 2001 and 2000 were partially offset by stock issued for employee stock compensation plans of 21,412,772 shares for $552 in 2001 and 16,579,158 shares for $251 in 2000.

Debt as a percentage of invested capital was 35.7% at the end of 2001, compared with 38.6% for 2000 and 28.3% for 1999.

In 2001, dividends paid to shareholders increased by $100 to $518. The increase was primarily due to an increase in the total common stock dividend paid from 50 cents per share in 2000 to 60 cents per share in 2001, due to the payout of a variable dividend in addition to Alcoa's base dividend in 2001. Alcoa had a variable dividend program that provided for the distribution, in the following year, of 30% of Alcoa's annual earnings in excess of $1.50 per basic share. In January 2002, the Board of Directors approved eliminating the variable dividend and declared a quarterly dividend of 15 cents per common share, which represents a 20% increase in the quarterly dividend from the prior 12.5 cents per common share. In 2000, dividends paid to shareholders increased by $120 to $418. The increase was due to a higher number of shares outstanding as well as an increase in the dividend per share in 2000, with a total payout of 50 cents per share versus 40.3 cents per share in 1999.

Debt as a Percent of Invested Capital

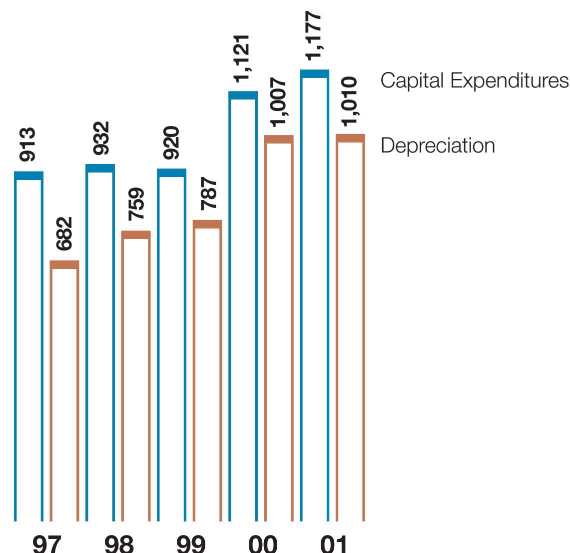


Investing Activities

Cash provided from investing activities in 2001 totaled $939, compared with cash used for investing activities of $4,309 in 2000. The increase of $5,248 was partly due to $2,507 of proceeds from asset sales in 2001 due to dispositions of assets required to be divested from the Reynolds merger, as well as proceeds from the sale of Thiokol. Additionally, cash paid for acquisitions in 2001 was $159, while in 2000, cash paid for acquisitions was $3,121, primarily attributable to the acquisition of Cordant.

Capital Expenditures and Depreciation

millions of dollars



Capital expenditures totaled $1,177 in 2001, compared with $1,121 and $920 in 2000 and 1999, respectively. Of the total capital expenditures in 2001, 37% related to capacity expansion, primarily in the Engineered Products segment. Also included are costs of new and expanded facilities for environmental control in ongoing operations totaling $80 in 2001, $96 in 2000, and $91 in 1999. Capital expenditures related to environmental control are anticipated to be approximately $123 in 2002.

Alcoa added $270, $94 and $96 to its investments in 2001, 2000 and 1999, respectively. The increase of $176 in 2001 was primarily due to Alcoa's purchase of an 8% interest in Aluminum Corporation of China (Chalco) for approximately $150, as part of a strategic alliance to form a 50/50 joint venture at Chalco's facility in Pingguo, China. The increase in investments is also due to Alcoa's increased investment in the Norwegian metals producer, Elkem ASA. On January 9, 2002, Alcoa raised its equity stake in Elkem above 40% which, under Norwegian law, required Alcoa to initiate an unconditional cash tender offer for the remaining outstanding shares of Elkem. Under the tender offer, which will expire on February 22, 2002, Alcoa will pay approximately $17.40 for each outstanding share of Elkem. Alcoa's potential cash commitment if all outstanding shares are tendered is approximately $515. Additions to investments in 2000 and 1999 were primarily related to Elkem.

Contractual Obligations and Commercial Commitments

The company is obligated to make future payments under various contracts such as debt agreements, lease agreements and unconditional purchase obligations and has certain contingent commitments such as debt guarantees. The following tables represent the significant contractual cash obligations and other commercial commitments of Alcoa as of December 31, 2001.

Contractual Cash Obligations	Total	Due in 2002	Due in 2003	Due in 2004	Due in 2005	Due in 2006	Thereafter
Long-term debt (including $44 of capital lease obligations)	$ 6,491	$103	$ 91	$563	$ 979	$586	$4,169
Operating leases	650	128	98	77	64	60	223
Unconditional purchase obligations	3,116	176	180	185	178	154	2,243
Total contractual cash obligations	$10,257	$407	$369	$825	$1,221	$800	$6,635

See Notes H, J, and Q to the Consolidated Financial Statements for additional information regarding these obligations.

Other Commercial Commitments	Total Amounts Committed	Amount of commitment expiration per period			
		Less than 1 year	1–3 years	4–5 years	Over 5 years
Standby letters of credit	$181	$181	$ —	$ —	$ —
Guarantees	136	—	—	—	136
Total commercial commitments	$317	$181	$ —	$ —	$136

The standby letters of credit are related to environmental, insurance and other activities. See Note J to the Consolidated Financial Statements for additional information regarding guarantees.

Critical Accounting Policies

Alcoa's significant accounting policies are described in Note A to the Consolidated Financial Statements. The application of these policies may require management to make judgments and estimates about the amounts reflected in the financial statements. Management uses historical experience and all available information to make these estimates and judgments, and different amounts could be reported using different assumptions and estimates. In addition to the information described in Note A to the Consolidated Financial Statements, a discussion of the judgments and uncertainties associated with accounting for derivatives and environmental matters can be found in the Market Risks and Environmental Matters sections.

Related Party Transactions

Alcoa buys products from and sells products to various related companies, consisting of entities in which Alcoa retains a 50% or less equity interest, at negotiated prices between the two parties. These transactions were not material to the financial position or results of operations of Alcoa at December 31, 2001.

Recently Adopted and Recently Issued Accounting Standards

The Financial Accounting Standards Board has recently issued various new accounting standards, including SFAS No. 141, "Business Combinations," SFAS No. 142, "Goodwill and Other Intangible Assets," SFAS No. 143, "Accounting for Asset Retirement Obligations," and SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." See Note A to the Consolidated Financial Statements for additional information on these standards, including a description of the new standards and the timing of adoption.