

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM 10-Q**

(Mark One)

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Quarterly Period Ended March 31, 2016

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 1-3610

**ALCOA INC.**

(Exact name of registrant as specified in its charter)

PENNSYLVANIA  
(State of incorporation)

390 Park Avenue, New York, New York  
(Address of principal executive offices)

25-0317820  
(I.R.S. Employer Identification No.)

10022-4608  
(Zip code)

Investor Relations 212-836-2674  
Office of the Secretary 212-836-2732  
(Registrant's telephone number including area code)

(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months, and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months. Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer   
Non-accelerated filer  (Do not check if a smaller reporting company) Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

As of April 29, 2016, 1,315,107,286 shares of common stock, par value \$1.00 per share, of the registrant were outstanding.

**PART I – FINANCIAL INFORMATION****Item 1. Financial Statements.****Alcoa and subsidiaries****Statement of Consolidated Operations (unaudited)****(in millions, except per-share amounts)**

	First quarter ended	
	March 31,	
	2016	2015
Sales (I)	\$4,947	\$ 5,819
Cost of goods sold (exclusive of expenses below)	4,041	4,443
Selling, general administrative, and other expenses	260	232
Research and development expenses	42	55
Provision for depreciation, depletion, and amortization	309	321
Restructuring and other charges (D)	93	177
Interest expense	127	122
Other expenses (income), net (H)	34	(12)
Total costs and expenses	4,906	5,338
Income before income taxes	41	481
Provision for income taxes	30	226
Net income	11	255
Less: Net (loss) income attributable to noncontrolling interests	(5)	60
NET INCOME ATTRIBUTABLE TO ALCOA	\$ 16	\$ 195
AMOUNTS ATTRIBUTABLE TO ALCOA COMMON SHAREHOLDERS (J):		
Net (loss) income	\$ (2)	\$ 178
Earnings per share:		
Basic	\$ 0.00	\$ 0.15
Diluted	\$ 0.00	\$ 0.14
Dividends paid per share	\$ 0.03	\$ 0.03

The accompanying notes are an integral part of the consolidated financial statements.

**Alcoa and subsidiaries**  
**Statement of Consolidated Comprehensive Income (Loss) (unaudited)**  
**(in millions)**

	<u>Alcoa</u>		<u>Noncontrolling Interests</u>		<u>Total</u>	
	<u>First quarter ended March 31,</u>		<u>First quarter ended March 31,</u>		<u>First quarter ended March 31,</u>	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Net income (loss)	\$ 16	\$ 195	\$ (5)	\$ 60	\$ 11	\$ 255
Other comprehensive income (loss), net of tax (C):						
Change in unrecognized net actuarial loss and prior service cost/benefit related to pension and other postretirement benefits	32	105	1	2	33	107
Foreign currency translation adjustments	303	(957)	107	(250)	410	(1,207)
Net change in unrealized gains on available-for-sale securities	1	2	—	—	1	2
Net change in unrecognized losses on cash flow hedges	(80)	(64)	(2)	—	(82)	(64)
Total Other comprehensive income (loss), net of tax	256	(914)	106	(248)	362	(1,162)
Comprehensive income (loss)	<u>\$ 272</u>	<u>\$ (719)</u>	<u>\$ 101</u>	<u>\$ (188)</u>	<u>\$ 373</u>	<u>\$ (907)</u>

The accompanying notes are an integral part of the consolidated financial statements.

**Alcoa and subsidiaries**  
**Consolidated Balance Sheet (unaudited)**  
**(in millions)**

	March 31, 2016	December 31, 2015
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 1,384	\$ 1,919
Receivables from customers, less allowances of \$13 in 2016 and \$13 in 2015 (L)	1,556	1,340
Other receivables (L)	471	522
Inventories (F)	3,549	3,442
Prepaid expenses and other current assets	705	730
Total current assets	<u>7,665</u>	<u>7,953</u>
Properties, plants, and equipment	34,421	33,687
Less: accumulated depreciation, depletion, and amortization	19,405	18,872
Properties, plants, and equipment, net	<u>15,016</u>	<u>14,815</u>
Goodwill	5,402	5,401
Investments	1,684	1,685
Deferred income taxes	2,738	2,668
Other noncurrent assets (E & G)	3,635	3,955
Total assets	<u>\$ 36,140</u>	<u>\$ 36,477</u>
<b>LIABILITIES</b>		
Current liabilities:		
Short-term borrowings	\$ 40	\$ 38
Accounts payable, trade	2,657	2,889
Accrued compensation and retirement costs	779	850
Taxes, including income taxes	274	239
Other current liabilities	1,033	1,174
Long-term debt due within one year (N)	772	21
Total current liabilities	<u>5,555</u>	<u>5,211</u>
Long-term debt, less amount due within one year (N)	8,257	8,993
Accrued pension benefits	3,251	3,298
Accrued other postretirement benefits	2,077	2,106
Other noncurrent liabilities and deferred credits	2,639	2,738
Total liabilities	<u>21,779</u>	<u>22,346</u>
<b>CONTINGENCIES AND COMMITMENTS (G)</b>		
<b>EQUITY</b>		
Alcoa shareholders' equity:		
Preferred stock	55	55
Mandatory convertible preferred stock	3	3
Common stock	1,391	1,391
Additional capital	9,856	10,019
Retained earnings	8,753	8,834
Treasury stock, at cost	(2,657)	(2,825)
Accumulated other comprehensive loss (C)	(5,175)	(5,431)
Total Alcoa shareholders' equity	<u>12,226</u>	<u>12,046</u>
Noncontrolling interests	2,135	2,085
Total equity	<u>14,361</u>	<u>14,131</u>
Total liabilities and equity	<u>\$ 36,140</u>	<u>\$ 36,477</u>

The accompanying notes are an integral part of the consolidated financial statements.

**Alcoa and subsidiaries**  
**Statement of Consolidated Cash Flows (unaudited)**  
**(in millions)**

	<b>Three months ended</b>	
	<b>March 31,</b>	
	<b>2016</b>	<b>2015</b>
<b>CASH FROM OPERATIONS</b>		
Net income	\$ 11	\$ 255
Adjustments to reconcile net income to cash from operations:		
Depreciation, depletion, and amortization	309	321
Deferred income taxes	(86)	23
Equity income, net of dividends	4	24
Restructuring and other charges (D)	93	177
Net loss from investing activities – asset sales	2	—
Net periodic pension benefit cost (M)	83	122
Stock-based compensation	26	26
Excess tax benefits from stock-based payment arrangements	—	(9)
Other	15	(73)
Changes in assets and liabilities, excluding effects of acquisitions, divestitures, and foreign currency translation adjustments:		
(Increase) in receivables	(139)	(146)
(Increase) in inventories	(58)	(266)
(Increase) in prepaid expenses and other current assets	(3)	(20)
(Decrease) in accounts payable, trade	(272)	(183)
(Decrease) in accrued expenses	(343)	(354)
Increase in taxes, including income taxes	64	93
Pension contributions	(70)	(85)
(Increase) in noncurrent assets	(13)	(26)
(Decrease) in noncurrent liabilities	(53)	(54)
<b>CASH USED FOR OPERATIONS</b>	<b>(430)</b>	<b>(175)</b>
<b>FINANCING ACTIVITIES</b>		
Net change in short-term borrowings (original maturities of three months or less)	2	26
Additions to debt (original maturities greater than three months)	439	517
Payments on debt (original maturities greater than three months)	(441)	(519)
Proceeds from exercise of employee stock options	—	24
Excess tax benefits from stock-based payment arrangements	—	9
Dividends paid to shareholders	(57)	(54)
Distributions to noncontrolling interests	(50)	(29)
<b>CASH USED FOR FINANCING ACTIVITIES</b>	<b>(107)</b>	<b>(26)</b>
<b>INVESTING ACTIVITIES</b>		
Capital expenditures	(251)	(247)
Acquisitions, net of cash acquired (E)	—	(204)
Proceeds from the sale of assets and businesses (E)	222	(8)
Additions to investments	(7)	(12)
Sales of investments	19	—
Net change in restricted cash	4	(4)
Other	12	10
<b>CASH USED FOR INVESTING ACTIVITIES</b>	<b>(1)</b>	<b>(465)</b>
<b>EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS</b>	<b>3</b>	<b>(20)</b>
Net change in cash and cash equivalents	(535)	(686)
Cash and cash equivalents at beginning of year	1,919	1,877
<b>CASH AND CASH EQUIVALENTS AT END OF PERIOD</b>	<b>\$ 1,384</b>	<b>\$ 1,191</b>

The accompanying notes are an integral part of the consolidated financial statements.

**Alcoa and subsidiaries**  
**Statement of Changes in Consolidated Equity (unaudited)**  
(in millions, except per-share amounts)

	Alcoa Shareholders						Accumulated other comprehensive loss	Non- controlling interests	Total equity
	Preferred stock	Mandatory convertible preferred stock	Common stock	Additional capital	Retained earnings	Treasury stock			
<b>Balance at December 31, 2014</b>	\$ 55	\$ 3	\$ 1,304	\$ 9,284	\$ 9,379	\$(3,042)	\$ (4,677)	\$ 2,488	\$14,794
Net income	—	—	—	—	195	—	—	60	255
Other comprehensive loss (C)	—	—	—	—	—	—	(914)	(248)	(1,162)
Cash dividends declared:									
Preferred-Class A @ \$0.9375 per share	—	—	—	—	(1)	—	—	—	(1)
Preferred-Class B @ \$6.71875 per share	—	—	—	—	(17)	—	—	—	(17)
Common @ \$0.03 per share	—	—	—	—	(36)	—	—	—	(36)
Stock-based compensation	—	—	—	26	—	—	—	—	26
Common stock issued: compensation plans	—	—	—	(186)	—	201	—	—	15
Distributions	—	—	—	—	—	—	—	(29)	(29)
Other	—	—	—	—	—	—	—	(2)	(2)
<b>Balance at March 31, 2015</b>	\$ 55	\$ 3	\$ 1,304	\$ 9,124	\$ 9,520	\$(2,841)	\$ (5,591)	\$ 2,269	\$13,843
<b>Balance at December 31, 2015</b>	\$ 55	\$ 3	\$ 1,391	\$ 10,019	\$ 8,834	\$(2,825)	\$ (5,431)	\$ 2,085	\$14,131
Net income (loss)	—	—	—	—	16	—	—	(5)	11
Other comprehensive loss (C)	—	—	—	—	—	—	256	106	362
Cash dividends declared:									
Preferred-Class A @ \$0.9375 per share	—	—	—	—	(1)	—	—	—	(1)
Preferred-Class B @ \$6.71875 per share	—	—	—	—	(17)	—	—	—	(17)
Common @ \$0.06 per share	—	—	—	—	(79)	—	—	—	(79)
Stock-based compensation	—	—	—	26	—	—	—	—	26
Common stock issued: compensation plans	—	—	—	(189)	—	168	—	—	(21)
Distributions	—	—	—	—	—	—	—	(50)	(50)
Other	—	—	—	—	—	—	—	(1)	(1)
<b>Balance at March 31, 2016</b>	\$ 55	\$ 3	\$ 1,391	\$ 9,856	\$ 8,753	\$(2,657)	\$ (5,175)	\$ 2,135	\$14,361

The accompanying notes are an integral part of the consolidated financial statements.

## Alcoa and subsidiaries

### Notes to the Consolidated Financial Statements (unaudited)

(dollars in millions, except per-share amounts)

**A. Basis of Presentation** – The interim Consolidated Financial Statements of Alcoa Inc. and its subsidiaries (“Alcoa” or the “Company”) are unaudited. These Consolidated Financial Statements include all adjustments, consisting of only normal recurring adjustments, considered necessary by management to fairly state the Company’s results of operations, financial position, and cash flows. The results reported in these Consolidated Financial Statements are not necessarily indicative of the results that may be expected for the entire year. The 2015 year-end balance sheet data was derived from audited financial statements but does not include all disclosures required by accounting principles generally accepted in the United States of America (GAAP). This Form 10-Q report should be read in conjunction with Alcoa’s Annual Report on Form 10-K for the year ended December 31, 2015, which includes all disclosures required by GAAP. Certain amounts in previously issued financial statements were reclassified to conform to the current period presentation (see Note B).

### **B. Recently Adopted and Recently Issued Accounting Guidance**

#### Adopted

On January 1, 2016, Alcoa adopted changes issued by the Financial Accounting Standards Board (FASB) to the presentation of extraordinary items. Such items are defined as transactions or events that are both unusual in nature and infrequent in occurrence, and, previously, were required to be presented separately in an entity’s income statement, net of income tax, after income from continuing operations. The changes eliminate the concept of an extraordinary item and, therefore, the presentation of such items is no longer required. Notwithstanding this change, an entity is still required to present and disclose a transaction or event that is both unusual in nature and infrequent in occurrence in the notes to the financial statements. The adoption of these changes had no impact on the Consolidated Financial Statements.

On January 1, 2016, Alcoa adopted changes issued by the FASB to the analysis an entity must perform to determine whether it should consolidate certain types of legal entities. These changes (i) modify the evaluation of whether limited partnerships and similar legal entities are variable interest entities or voting interest entities, (ii) eliminate the presumption that a general partner should consolidate a limited partnership, (iii) affect the consolidation analysis of reporting entities that are involved with variable interest entities, particularly those that have fee arrangements and related party relationships, and (iv) provide a scope exception from consolidation guidance for reporting entities with interests in legal entities that are required to comply with or operate in accordance with requirements that are similar to those in Rule 2a-7 of the Investment Company Act of 1940 for registered money market funds. The adoption of these changes had no impact on the Consolidated Financial Statements.

On January 1, 2016, Alcoa adopted changes issued by the FASB to the presentation of debt issuance costs. Previously, such costs were required to be presented as a noncurrent asset in an entity’s balance sheet and amortized into interest expense over the term of the related debt instrument. The changes require that debt issuance costs be presented in an entity’s balance sheet as a direct deduction from the carrying value of the related debt liability. The amortization of debt issuance costs remains unchanged. The FASB issued an update to these changes based on an announcement of the staff of the U.S. Securities and Exchange Commission. This update provides an exception to the FASB changes allowing debt issuance costs related to line-of-credit arrangements to continue to be presented as an asset regardless of whether there are any outstanding borrowings under such arrangement. This additional change also was adopted by Alcoa on January 1, 2016. This adoption is required on a retrospective basis; therefore, the December 31, 2015 Consolidated Balance Sheet has been updated to conform to the March 31, 2016 presentation. As a result, \$51 of debt issuance costs (previously reported in Other noncurrent assets) were reclassified to the Long-term debt, less amount due within one year line item on the December 31, 2015 Consolidated Balance Sheet.

#### Issued

In March 2016, the FASB issued changes to employee share-based payment accounting. Currently, an entity must determine for each share-based payment award whether the difference between the deduction for tax purposes and the compensation cost recognized for financial reporting purposes results in either an excess tax benefit or a tax deficiency. Excess tax benefits are recognized in additional paid-in capital; tax deficiencies are recognized either as an offset to accumulated excess tax benefits, if any, or

in the income statement. Excess tax benefits are not recognized until the deduction reduces taxes payable. The changes require all excess tax benefits and tax deficiencies related to share-based payment awards to be recognized as income tax expense or benefit in the income statement. The tax effects of exercised or vested awards should be treated as discrete items in the reporting period in which they occur. An entity also should recognize excess tax benefits regardless of whether the benefit reduces taxes payable in the current period. Additionally, the presentation of excess tax benefits related to share-based payment awards in the statement of cash flows is changed. Currently, excess tax benefits must be separated from other income tax cash flows and classified as a financing activity. The changes require excess tax benefits to be classified along with other income tax cash flows as an operating activity. Also, the changes require cash paid by an employer when directly withholding shares for tax-withholding purposes to be classified as a financing activity. Currently, there is no specific guidance on the classification in the statement of cash flows of cash paid by an employer to the tax authorities when directly withholding shares for tax-withholding purposes. Additionally, for a share-based award to qualify for equity classification it cannot partially settle in cash in excess of the employer's minimum statutory withholding requirements. The changes permit equity classification of share-based awards for withholdings up to the maximum statutory tax rates in applicable jurisdictions. These changes become effective for Alcoa on January 1, 2017. Management is currently evaluating the potential impact of these changes on the Consolidated Financial Statements.

In March 2016, the FASB issued changes eliminating the requirement for an investor to adjust an equity method investment, results of operations, and retained earnings retroactively on a step-by-step basis as if the equity method had been in effect during all previous periods that the investment had been held as a result of an increase in the level of ownership interest or degree of influence. Additionally, an entity that has an available-for-sale equity security that becomes qualified for the equity method of accounting must recognize through earnings the unrealized holding gain or loss in accumulated other comprehensive income at the date the investment becomes qualified for use of the equity method. These changes become effective for Alcoa on January 1, 2017. Management is currently evaluating the potential impact of these changes on the Consolidated Financial Statements.

In March 2016, the FASB issued changes to derivative instruments designated as hedging instruments. These changes clarify that a change in the counterparty to a derivative instrument that has been designated as a hedging instrument does not, in and of itself, require dedesignation of that hedging relationship provided that all other hedge accounting criteria continue to be met. These changes become effective for Alcoa on January 1, 2017. Management does not expect these changes to have a material impact on the Consolidated Financial Statements.

In February 2016, the FASB issued changes to the accounting and presentation of leases. These changes require lessees to recognize a right of use asset and lease liability on the balance sheet for all leases with terms longer than 12 months. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize a right of use asset and lease liability. Additionally, when measuring assets and liabilities arising from a lease, optional payments should be included only if the lessee is reasonably certain to exercise an option to extend the lease, exercise a purchase option, or not exercise an option to terminate the lease. These changes become effective for Alcoa on January 1, 2019. Management is currently evaluating the potential impact of these changes on the Consolidated Financial Statements.

In January 2016, the FASB issued changes to equity investments. These changes require equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income. However, an entity may choose to measure equity investments that do not have readily determinable fair values at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investment of the same issuer. Additionally, the impairment assessment of equity investments without readily determinable fair values has been simplified by requiring a qualitative assessment to identify impairment. These changes become effective for Alcoa on January 1, 2018. Management is currently evaluating the potential impact of these changes on the Consolidated Financial Statements.

In July 2015, the FASB issued changes to the subsequent measurement of inventory. Currently, an entity is required to measure its inventory at the lower of cost or market, whereby market can be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. The changes require that inventory be measured at the lower of cost and net realizable value, thereby eliminating the use of the other two market methodologies. Net realizable value is defined as the estimated selling prices in the ordinary course of business less reasonably predictable costs of completion, disposal, and transportation. These changes do not apply to inventories measured using LIFO (last-in, first-out) or the retail inventory method. Currently, Alcoa applies the net realizable value market option to measure non-LIFO inventories at the lower of cost or market. These changes become effective for Alcoa on January 1, 2017. Management has determined that the adoption of these changes will not have an impact on the Consolidated Financial Statements.



In May 2014, the FASB issued changes to the recognition of revenue from contracts with customers. These changes created a comprehensive framework for all entities in all industries to apply in the determination of when to recognize revenue, and, therefore, supersede virtually all existing revenue recognition requirements and guidance. This framework is expected to result in less complex guidance in application while providing a consistent and comparable methodology for revenue recognition. The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services. To achieve this principle, an entity should apply the following steps: (i) identify the contract(s) with a customer, (ii) identify the performance obligations in the contract(s), (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations in the contract(s), and (v) recognize revenue when, or as, the entity satisfies a performance obligation. In August 2015, the FASB deferred the effective date by one year, making these changes effective for Alcoa on January 1, 2018. In March 2016, the FASB issued amendments to clarify the implementation guidance on principal versus agent considerations. Management is currently evaluating the potential impact of these changes on the Consolidated Financial Statements.

In August 2014, the FASB issued changes to the disclosure of uncertainties about an entity's ability to continue as a going concern. Under GAAP, continuation of a reporting entity as a going concern is presumed as the basis for preparing financial statements unless and until the entity's liquidation becomes imminent. Even if an entity's liquidation is not imminent, there may be conditions or events that raise substantial doubt about the entity's ability to continue as a going concern. Because there is no guidance in GAAP about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern or to provide related note disclosures, there is diversity in practice whether, when, and how an entity discloses the relevant conditions and events in its financial statements. As a result, these changes require an entity's management to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that financial statements are issued. Substantial doubt is defined as an indication that it is probable that an entity will be unable to meet its obligations as they become due within one year after the date that financial statements are issued. If management has concluded that substantial doubt exists, then the following disclosures should be made in the financial statements: (i) principal conditions or events that raised the substantial doubt, (ii) management's evaluation of the significance of those conditions or events in relation to the entity's ability to meet its obligations, (iii) management's plans that alleviated the initial substantial doubt or, if substantial doubt was not alleviated, management's plans that are intended to at least mitigate the conditions or events that raise substantial doubt, and (iv) if the latter in (iii) is disclosed, an explicit statement that there is substantial doubt about the entity's ability to continue as a going concern. These changes become effective for Alcoa for the 2016 annual financial statements. Management has determined that the adoption of these changes will not have an impact on the Consolidated Financial Statements. Subsequent to adoption, this guidance will need to be applied by management at the end of each annual period and interim period therein to determine what, if any, impact there will be on the Consolidated Financial Statements in a given reporting period.

### C. Accumulated Other Comprehensive Loss

The following table details the activity of the four components that comprise Accumulated other comprehensive loss for both Alcoa's shareholders and noncontrolling interests:

	<u>Alcoa</u>		<u>Noncontrolling Interests</u>	
	<u>First quarter ended</u>		<u>First quarter ended</u>	
	<u>March 31,</u>		<u>March 31,</u>	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
<b>Pension and other postretirement benefits (M)</b>				
Balance at beginning of period	\$(3,611)	\$(3,601)	\$ (56)	\$ (64)
Other comprehensive income:				
Unrecognized net actuarial loss and prior service cost/benefit	(59)	42	—	—
Tax benefit (expense)	23	(11)	—	—
Total Other comprehensive (loss) income before reclassifications, net of tax	(36)	31	—	—

	Alcoa		Noncontrolling Interests	
	First quarter ended March 31,		First quarter ended March 31,	
	2016	2015	2016	2015
Amortization of net actuarial loss and prior service cost/benefit <sup>(1)</sup>	104	114	2	3
Tax expense <sup>(2)</sup>	(36)	(40)	(1)	(1)
Total amount reclassified from Accumulated other comprehensive loss, net of tax <sup>(8)</sup>	68	74	1	2
Total Other comprehensive income	32	105	1	2
Balance at end of period	<u>\$(3,579)</u>	<u>\$(3,496)</u>	<u>\$ (55)</u>	<u>\$ (62)</u>
<b>Foreign currency translation</b>				
Balance at beginning of period	\$ (2,412)	\$ (846)	\$ (780)	\$ (351)
Other comprehensive income (loss) <sup>(3)</sup>	303	(957)	107	(250)
Balance at end of period	<u>\$(2,109)</u>	<u>\$(1,803)</u>	<u>\$ (673)</u>	<u>\$ (601)</u>
<b>Available-for-sale securities</b>				
Balance at beginning of period	\$ (5)	\$ —	\$ —	\$ —
Other comprehensive income <sup>(4)</sup>	1	2	—	—
Balance at end of period	<u>\$ (4)</u>	<u>\$ 2</u>	<u>\$ —</u>	<u>\$ —</u>
<b>Cash flow hedges (N)</b>				
Balance at beginning of period	\$ 597	\$ (230)	\$ (3)	\$ (2)
Other comprehensive loss:				
Net change from periodic revaluations	(117)	(110)	(3)	—
Tax benefit	37	34	1	—
Total Other comprehensive loss before reclassifications, net of tax	<u>(80)</u>	<u>(76)</u>	<u>(2)</u>	<u>—</u>
Net amount reclassified to earnings:				
Aluminum contracts <sup>(5)</sup>	(5)	13	—	—
Energy contracts <sup>(6)</sup>	1	2	—	—
Foreign exchange contracts <sup>(5)</sup>	1	—	—	—
Interest rate contracts <sup>(7)</sup>	—	—	—	—
Nickel contracts <sup>(6)</sup>	1	—	—	—
Sub-total	<u>(2)</u>	<u>15</u>	<u>—</u>	<u>—</u>
Tax benefit (expense) <sup>(2)</sup>	<u>2</u>	<u>(3)</u>	<u>—</u>	<u>—</u>
Total amount reclassified from Accumulated other comprehensive (loss) income, net of tax <sup>(8)</sup>	<u>—</u>	<u>12</u>	<u>—</u>	<u>—</u>
Total Other comprehensive loss	<u>(80)</u>	<u>(64)</u>	<u>(2)</u>	<u>—</u>
Balance at end of period	<u>\$ 517</u>	<u>\$ (294)</u>	<u>\$ (5)</u>	<u>\$ (2)</u>

- (1) These amounts were included in the computation of net periodic benefit cost for pension and other postretirement benefits (see Note M).
- (2) These amounts were included in Provision for income taxes on the accompanying Statement of Consolidated Operations.
- (3) In all periods presented, there were no tax impacts related to rate changes and no amounts were reclassified to earnings.
- (4) In all periods presented, unrealized and realized gains and losses related to these securities were immaterial. Realized gains and losses were included in Other expenses (income), net on the accompanying Statement of Consolidated Operations.
- (5) These amounts were included in Sales on the accompanying Statement of Consolidated Operations.
- (6) These amounts were included in Cost of goods sold on the accompanying Statement of Consolidated Operations.
- (7) These amounts were included in Interest expense on the accompanying Statement of Consolidated Operations.
- (8) A positive amount indicates a corresponding charge to earnings and a negative amount indicates a corresponding benefit to earnings. These amounts were reflected on the accompanying Statement of Consolidated Operations in the line items indicated in footnotes 2 through 7.

**D. Restructuring and Other Charges** – In the first quarter of 2016, Alcoa recorded Restructuring and other charges of \$93 (\$61 after-tax and noncontrolling interest), which were comprised of the following components: \$60 (\$39 after-tax) related to the 2015 announced permanent closure of the Warrick smelter; \$19 (\$14 after-tax and noncontrolling interest) for layoff costs, including the separation of approximately 560 employees (500 in the Engineered Products and Solutions segment, 30 in the Primary Metals segment, and 30 in the Global Rolled Products segment); \$18 (\$11 after-tax and noncontrolling interest) related to the curtailments of the Point Comfort refinery and Wenatchee smelter; and \$4 (\$3 after-tax and noncontrolling interest) for the reversal of a number of small layoff reserves related to prior periods and other miscellaneous items.

In 2016, costs related to the closure and curtailment actions included \$70 for accelerated depreciation as the Warrick facility continued to operate through March 2016, \$27 in other exit costs primarily for contract terminations, and \$19 for the reversal of previously accrued severance costs that will not be incurred. Additionally in the first quarter of 2016, inventories were written down to their net realizable value, resulting in a charge of \$3 (\$2 after-tax), which was recorded in Cost of goods sold on the accompanying Statement of Consolidated Operations.

In the first quarter of 2015, Alcoa recorded Restructuring and other charges of \$177 (\$158 after-tax and noncontrolling interest) which were comprised of the following components: \$149 (\$142 after-tax and noncontrolling interest) related to the March 2015 divestiture of a rolling mill in Russia and post-closing adjustments associated with three December 2014 divestitures; \$16 (\$11 after-tax) for the separation of approximately 680 employees (Primary Metals segment) and supplier contract-related costs associated with the decision to temporarily curtail the remaining capacity (74,000 metric-tons-per-year) at the São Luís smelter in Brazil; \$13 (\$8 after-tax and noncontrolling interest) for layoff costs, including the separation of approximately 210 employees (80 in the Engineered Products and Solutions segment, 40 in the Transportation and Construction Solutions segment, 30 in the Global Rolled Products segment, and 60 in Corporate); a net charge of \$6 (\$3 after-tax and noncontrolling interest) for other miscellaneous items; and \$7 (\$6 after-tax) for the reversal of a number of small layoff reserves related to prior periods.

Alcoa does not include Restructuring and other charges in the results of its reportable segments. The pretax impact of allocating such charges to segment results would have been as follows:

	First quarter ended March 31,	
	2016	2015
Alumina	\$ 5	\$ 7
Primary Metals	78	25
Global Rolled Products	2	135
Engineered Products and Solutions	8	3
Transportation and Construction Solutions	—	2
Segment total	93	172
Corporate	—	5
Total restructuring and other charges	\$ 93	\$ 177

As of March 31, 2016, approximately 320 of the 560 employees associated with 2016 restructuring programs, approximately 2,750 of the 5,050 (previously 5,200 – updated to reflect employees accepting other positions within Alcoa and natural attrition) employees associated with 2015 restructuring programs, and approximately 2,590 of the 2,820 employees (previously 2,870 – updated to reflect employees accepting other positions within Alcoa and natural attrition) associated with 2014 restructuring programs were separated. Most of the remaining separations for the 2016, 2015, and 2014 restructuring programs are expected to be completed by the end of 2016.

In the 2016 first quarter, cash payments of \$2, \$62, and \$2 respectively, were made against the layoff reserves related to the 2016, 2015, and 2014 restructuring programs, respectively.

Activity and reserve balances for restructuring charges were as follows:

	Layoff costs	Other exit costs	Total
Reserve balances at December 31, 2014	\$ 98	\$ 34	\$ 132
<b>2015:</b>			
Cash payments	(111)	(12)	(123)
Restructuring charges	299	233	532
Other*	(60)	(231)	(291)
Reserve balances at December 31, 2015	226	24	250
<b>2016:</b>			
Cash payments	(67)	(10)	(77)
Restructuring charges	19	26	45
Other*	(22)	2	(20)
Reserve balances at March 31, 2016	\$ 156	\$ 42	\$ 198

\* Other includes reversals of previously recorded restructuring charges and the effects of foreign currency translation. In the 2016 three-month period, Other for exit costs also included a reclassification of \$7 in asset retirement obligations, as this liability was included in Alcoa's separate reserves for asset retirement obligations. In 2015, Other for layoff costs also included a reclassification of \$35 in pension and/or other postretirement benefit costs, as these obligations were included in Alcoa's separate liabilities for pension and other postretirement obligations. Additionally, in 2015, Other for exit costs also included a reclassification of \$76 and \$86 in asset retirement obligations and environmental obligations, respectively, as these liabilities were included in Alcoa's separate reserves for asset retirement obligations and environmental remediation.

The remaining reserves are expected to be paid in cash during the remainder of 2016, with the exception of approximately \$15 to \$20, which is expected to be paid over the next several years for special separation benefit payments and ongoing site remediation work.

**E. Acquisitions and Divestitures** – In March 2015, Alcoa completed the acquisition of an aerospace structural castings company, TITAL, for \$205 (€189) in cash. Alcoa recognized goodwill of \$117 for this transaction, none of which is deductible for income tax purposes. The purchase price allocation has been finalized.

In July 2015, Alcoa completed the acquisition of RTI International Metals, Inc. (RTI). RTI was a global supplier of titanium and specialty metal products and services for the commercial aerospace, defense, energy, and medical device end markets. The purpose of this acquisition was to expand Alcoa's range of titanium offerings and add advanced technologies and materials, primarily related to the aerospace end market. Alcoa purchased all outstanding shares of RTI common stock in a stock-for-stock transaction valued at \$870 (based on the \$9.96 per share July 23, 2015 closing price of Alcoa's common stock). Each issued and outstanding share of RTI common stock prior to the completion of the transaction was converted into the right to receive 2.8315 shares of Alcoa common stock. In total, Alcoa issued 87,397,414 shares of its common stock to consummate this transaction. The operating results and assets and liabilities of RTI were included within Alcoa's Engineered Products and Solutions segment since the date of acquisition. Based on the preliminary allocation of the purchase price, goodwill of \$251 was recorded for this transaction, none of which is estimated to be deductible for income tax purposes. The final allocation of the purchase price will be based on management's best estimates, including a third-party valuation of the assets acquired and other studies related to potential environmental and contingent liabilities.

In March 2016, Alcoa reached an agreement for the sale of its Remmele Medical business for \$102 in cash, subject to post-closing adjustments (this transaction closed on April 29, 2016). This business, which was acquired by Alcoa in July 2015 in conjunction with the RTI acquisition, generated sales of approximately \$16 in the first quarter of 2016. The operating results and assets and liabilities of the business were included in the Engineered Products and Solutions segment.

Also in March 2016, Alcoa's majority-owned subsidiary, Alcoa of Australia Limited (AofA), which is part of Alcoa World Alumina and Chemicals (AWAC), reached an agreement to sell its 20% interest in DBP, the owner and operator of the Dampier to Bunbury Natural Gas Pipeline (DBNGP) for \$154 (A\$205) in cash. As part of the transaction, AofA will maintain its current access to approximately 30% of the DBNGP transmission capacity for gas supply to its three alumina refineries in Western Australia. See Note G for additional information.

Additionally in March 2016, Alcoa sold certain company-owned life insurance contracts for \$234 in cash. No gain or loss was recognized on the sale of these contracts. These contracts were included in Other noncurrent assets on the accompanying Consolidated Balance Sheet at December 31, 2015.

In the first quarter of 2015, Alcoa completed the divestiture of an operation in Russia (see below) and had post-closing adjustments, as provided for in the respective purchase agreements, related to three divestitures completed in December 2014. The divestiture and post-closing adjustments combined resulted in a net cash payment of \$8 and a net loss of \$149 (\$142 after-tax and noncontrolling interest), which was recorded in Restructuring and other charges (see Note D) on the accompanying Statement of Consolidated Operations. These four divestitures are no longer subject to post-closing adjustments.

In March 2015, Alcoa completed the sale of a rolling mill located in Belaya Kalitva, Russia to a wholly-owned subsidiary of Stupino Titanium Company. While owned by Alcoa, the operating results and assets and liabilities of the rolling mill were included in the Global Rolled Products segment.

## F. Inventories

	March 31, 2016	December 31, 2015
Finished goods	\$ 846	\$ 811
Work-in-process	1,312	1,272
Bauxite and alumina	423	445
Purchased raw materials	762	720
Operating supplies	206	194
	<u>\$ 3,549</u>	<u>\$ 3,442</u>

At March 31, 2016 and December 31, 2015, the total amount of inventories valued on a LIFO basis was \$1,381 and \$1,373, respectively. If valued on an average-cost basis, total inventories would have been \$553 and \$559 higher at March 31, 2016 and December 31, 2015, respectively.

## G. Contingencies and Commitments

### Contingencies

#### Litigation

On June 5, 2015, Alcoa World Alumina LLC (“AWA”) and St. Croix Alumina, L.L.C. (“SCA”) filed a complaint in Delaware Chancery Court for a declaratory judgment and injunctive relief to resolve a dispute between Alcoa and Glencore Ltd. (“Glencore”) with respect to claimed obligations under a 1995 asset purchase agreement between Alcoa and Glencore. The dispute arose from Glencore’s demand that Alcoa indemnify it for liabilities it may have to pay to Lockheed Martin (“Lockheed”) related to the St. Croix alumina refinery. Lockheed had earlier filed suit against Glencore in federal court in New York seeking indemnity for liabilities it had incurred and would incur to the U.S. Virgin Islands to remediate certain properties at the refinery property and claimed that Glencore was required by an earlier, 1989 purchase agreement to indemnify it. Glencore had demanded that Alcoa indemnify and defend it in the Lockheed case and threatened to claim against Alcoa in the New York action despite exclusive jurisdiction for resolution of disputes under the 1995 purchase agreement being in Delaware. After Glencore conceded that it was not seeking to add Alcoa to the New York action, AWA and SCA dismissed their complaint in the Chancery Court case and on August 6, 2015 filed a complaint for declaratory judgment in Delaware Superior Court. AWA and SCA filed a motion for judgment on the pleadings on September 16, 2015. Glencore answered AWA’s and SCA’s complaint and asserted counterclaims on August 27, 2015, and on October 2, 2015 filed its own motion for judgment on the pleadings. Argument on the parties’ motions was held by the court on December 7, 2015, and by order dated February 8, 2016, the court granted Alcoa’s motion and denied Glencore’s motion, resulting in Alcoa not being liable to indemnify Glencore for the Lockheed action. The decision also leaves for pretrial discovery and possible summary judgment or trial Glencore’s claims for costs and fees it incurred in defending and settling an earlier Superfund action brought against Glencore by the Government of the Virgin Islands. On February 17, 2016, Glencore filed notice of its application for interlocutory appeal of the February 8 ruling. AWA and SCA filed an opposition to that application on February 29, 2016. On March 10, 2016, the court denied Glencore’s motion for interlocutory appeal and on the same day entered judgment on claims other than Glencore’s claims for costs and fees it incurred in defending and settling the earlier Superfund action brought against Glencore by the Government of the Virgin Islands. On March 29, 2016, Glencore filed a withdrawal of its notice of interlocutory appeal and also noted its intent to appeal the court’s March 10, 2016 judgment. At this time, the Company is unable to reasonably predict an outcome for this matter.

Before 2002, Alcoa purchased power in Italy in the regulated energy market and received a drawback of a portion of the price of power under a special tariff in an amount calculated in accordance with a published resolution of the Italian Energy Authority, Energy Authority Resolution n. 204/1999 (“204/1999”). In 2001, the Energy Authority published another resolution, which clarified that the drawback would be calculated in the same manner, and in the same amount, in either the regulated or unregulated market. At the beginning of 2002, Alcoa left the regulated energy market to purchase energy in the unregulated market. Subsequently, in 2004, the Energy Authority introduced regulation no. 148/2004 which set forth a different method for calculating the special tariff that would result in a different drawback for the regulated and unregulated markets. Alcoa challenged the new regulation in the Administrative Court of Milan and received a favorable judgment in 2006. Following this ruling, Alcoa continued to receive the power price drawback in accordance with the original calculation method, through 2009, when the European Commission declared all such special tariffs to be impermissible “state aid.” In 2010, the Energy Authority appealed the 2006 ruling to the Consiglio di Stato (final court of

appeal). On December 2, 2011, the Consiglio di Stato ruled in favor of the Energy Authority and against Alcoa, thus presenting the opportunity for the energy regulators to seek reimbursement from Alcoa of an amount equal to the difference between the actual drawback amounts received over the relevant time period, and the drawback as it would have been calculated in accordance with regulation 148/2004. On February 23, 2012, Alcoa filed its appeal of the decision of the Consiglio di Stato (this appeal was subsequently withdrawn in March 2013). On March 26, 2012, Alcoa received a letter from the agency (Cassa Conguaglio per il Settore Elettrico (CCSE)) responsible for making and collecting payments on behalf of the Energy Authority demanding payment in the amount of approximately \$110 (€85), including interest. By letter dated April 5, 2012, Alcoa informed CCSE that it disputes the payment demand of CCSE since (i) CCSE was not authorized by the Consiglio di Stato decisions to seek payment of any amount, (ii) the decision of the Consiglio di Stato has been appealed (see above), and (iii) in any event, no interest should be payable. On April 29, 2012, Law No. 44 of 2012 (“44/2012”) came into effect, changing the method to calculate the drawback. On February 21, 2013, Alcoa received a revised request letter from CCSE demanding Alcoa’s subsidiary, Alcoa Trasformazioni S.r.l., make a payment in the amount of \$97 (€76), including interest, which reflects a revised calculation methodology by CCSE and represents the high end of the range of reasonably possible loss associated with this matter of \$0 to \$97 (€76). Alcoa rejected that demand and formally challenged it through an appeal before the Administrative Court on April 5, 2013. The Administrative Court scheduled a hearing for December 19, 2013, which was subsequently postponed until April 17, 2014, and further postponed until June 19, 2014. On that date, the Administrative Court listened to Alcoa’s oral argument, and on September 2, 2014, rendered its decision. The Administrative Court declared the payment request of CCSE and the Energy Authority to Alcoa to be unsubstantiated based on the 148/2004 resolution with respect to the January 19, 2007 through November 19, 2009 timeframe. On December 18, 2014, the CCSE and the Energy Authority appealed the Administrative Court’s September 2, 2014 decision; however, a date for the hearing has not been scheduled. Management recorded a partial reserve for this matter of \$37 (€34) during the quarter ended December 31, 2015 (see Note N in the Company’s Annual Report on Form 10-K for the year ended December 31, 2015). At this time, the Company is unable to reasonably predict an outcome for this matter.

### Environmental Matters

Alcoa participates in environmental assessments and cleanups at more than 100 locations. These include owned or operating facilities and adjoining properties, previously owned or operating facilities and adjoining properties, and waste sites, including Superfund (Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)) sites.

A liability is recorded for environmental remediation when a cleanup program becomes probable and the costs can be reasonably estimated. As assessments and cleanups proceed, the liability is adjusted based on progress made in determining the extent of remedial actions and related costs. The liability can change substantially due to factors such as the nature and extent of contamination, changes in remedial requirements, and technological changes, among others.

Alcoa’s remediation reserve balance was \$605 and \$604 at March 31, 2016 and December 31, 2015 (of which \$47 and \$50 was classified as a current liability), respectively, and reflects the most probable costs to remediate identified environmental conditions for which costs can be reasonably estimated.

In the 2016 first quarter, the remediation reserve was increased by \$7 associated with a number of sites. The changes to the remediation reserve in the 2016 first quarter were recorded in Cost of goods sold on the accompanying Statement of Consolidated Operations.

Payments related to remediation expenses applied against the reserve were \$11 in the first quarter. This amount includes expenditures currently mandated, as well as those not required by any regulatory authority or third party. In the 2016 first quarter, the change in the reserve also reflects an increase of \$5 due to the effects of foreign currency translation.

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

The following discussion provides details regarding the current status of certain significant reserves related to current or former Alcoa sites.

**Massena West, NY**—Alcoa has an ongoing remediation project related to the Grasse River, which is adjacent to Alcoa’s Massena plant site. Many years ago, it was determined that sediments and fish in the river contain varying levels of polychlorinated biphenyls (PCBs). The project, which was selected by the U.S. Environmental Protection Agency (EPA) in a Record of Decision (ROD) issued in April 2013, is aimed at capping PCB contaminated sediments with concentration in excess of one part per million in the main channel of the river and dredging PCB contaminated sediments in the near-shore areas where total PCBs exceed one part per million. At March 31, 2016 and December 31, 2015, the reserve balance

associated with this matter was \$233 and \$234, respectively. Alcoa is in the planning and design phase, which is expected to be completed in 2017. Subsequently in 2017, the actual remediation fieldwork is expected to commence and take approximately four years. The majority of the project funding is expected to be spent between 2017 and 2021.

**Sherwin, TX**—In connection with the sale of the Sherwin alumina refinery, which was required to be divested as part of the Reynolds merger in 2000, Alcoa agreed to retain responsibility for the remediation of the then existing environmental conditions, as well as a pro rata share of the final closure of the active bauxite residue waste disposal areas (known as the Copano facility). Alcoa's share of the closure costs is proportional to the total period of operation of the active waste disposal areas. At March 31, 2016 and December 31, 2015, the reserve balance associated with Sherwin was \$30. Approximately half of the project funding is expected to be spent through 2019. The remainder is not expected to be spent in the foreseeable future as it is dependent upon the operating life of the active waste disposal areas.

**East St. Louis, IL**—Alcoa has an ongoing remediation project related to an area used for the disposal of bauxite residue from former alumina refining operations. The project, which was selected by the EPA in a ROD issued in July 2012, is aimed at implementing a soil cover over the affected area. On November 1, 2013, the U.S. Department of Justice lodged a consent decree on behalf of the EPA for Alcoa to conduct the work outlined in the ROD. This consent decree was entered as final in February 2014 by the U.S. Department of Justice. As a result, Alcoa began construction in March 2014; this project is expected to be completed by the end of June 2016 (Alcoa has a second project in East St. Louis that is separate from the matter presented herein on which Alcoa is expecting an EPA decision in 2016 – any resulting liability is not expected to be material). At March 31, 2016 and December 31, 2015, the reserve balance associated with this matter was \$7 and \$8, respectively.

**Fusina and Portovesme, Italy**—In 1996, Alcoa acquired the Fusina smelter and rolling operations and the Portovesme smelter, both of which are owned by Alcoa's subsidiary Alcoa Trasformazioni S.r.l. ("Trasformazioni"), from Alumix, an entity owned by the Italian Government. At the time of the acquisition, Alumix indemnified Alcoa for pre-existing environmental contamination at the sites. In 2004, the Italian Ministry of Environment and Protection of Land and Sea (MOE) issued orders to Trasformazioni and Alumix for the development of a clean-up plan related to soil contamination in excess of allowable limits under legislative decree and to institute emergency actions and pay natural resource damages. Trasformazioni appealed the orders and filed suit against Alumix, among others, seeking indemnification for these liabilities under the provisions of the acquisition agreement. In 2009, Ligestra S.r.l. ("Ligestra"), Alumix's successor, and Trasformazioni agreed to a stay of the court proceedings while investigations were conducted and negotiations advanced towards a possible settlement.

In December 2009, Trasformazioni and Ligestra reached an initial agreement for settlement of the liabilities related to Fusina while negotiations continued related to Portovesme (see below). The agreement outlined an allocation of payments to the MOE for emergency action and natural resource damages and the scope and costs for a proposed soil remediation project, which was formally presented to the MOE in mid-2010. The agreement was contingent upon final acceptance of the remediation project by the MOE. As a result of entering into this agreement, Alcoa increased the reserve by \$12 in 2009 for Fusina. Based on comments received from the MOE and local and regional environmental authorities, Trasformazioni submitted a revised remediation plan in the first half of 2012; however, such revisions did not require any change to the existing reserve. In October 2013, the MOE approved the project submitted by Alcoa, resulting in no adjustment to the reserve.

In January 2014, in anticipation of Alcoa reaching a final administrative agreement with the MOE, Alcoa and Ligestra entered into a final agreement related to Fusina for allocation of payments to the MOE for emergency action and natural resource damages and the costs for the approved soil remediation project. The agreement resulted in Ligestra assuming 50% to 80% of all payments and remediation costs. On February 27, 2014, Alcoa and the MOE reached a final administrative agreement for conduct of work. The agreement includes both a soil and groundwater remediation project estimated to cost \$33 (€24) and requires payments of \$25 (€18) to the MOE for emergency action and natural resource damages. The remediation projects are slated to begin as soon as Alcoa receives final approval from the Ministry of Infrastructure. Based on the final agreement with Ligestra, Alcoa's share of all costs and payments is \$17 (€12), of which \$9 (€6) related to the damages will be paid annually over a 10-year period, which began in April 2014, and was previously fully reserved.

Separately, in 2009, due to additional information derived from the site investigations conducted at Portovesme, Alcoa increased the reserve by \$3. In November 2011, Trasformazioni and Ligestra reached an agreement for settlement of the liabilities related to Portovesme, similar to the one for Fusina. A proposed soil remediation project for Portovesme was formally presented to the MOE in June 2012. Neither the agreement with Ligestra nor the proposal to the MOE resulted in a change to the reserve for Portovesme. In November 2013, the MOE rejected the proposed soil remediation project and requested a revised project be submitted. In May 2014, Trasformazioni and Ligestra submitted a revised soil remediation project that addressed certain stakeholders' concerns. Alcoa increased the reserve by \$3 in 2014 to reflect the estimated higher costs associated with the revised soil remediation project, as well as current operating and maintenance costs of the Portovesme site.

In October 2014, the MOE required a further revised project be submitted to reflect the removal of a larger volume of contaminated soil than what had been proposed, as well as design changes for the cap related to the remaining contaminated soil left in place and the expansion of an emergency containment groundwater pump and treatment system that was previously installed. Trasformazioni and Ligestra submitted the further revised soil remediation project in February 2015. As a result, Alcoa increased the reserve by \$7 in March 2015 to reflect the increase in the estimated costs of the project. In October 2015, Alcoa received a final ministerial decree approving the February 2015 revised soil remediation project. Work on the soil remediation project will commence in 2016 and is expected to be completed in 2019. Alcoa and Ligestra are now working on a final groundwater remediation project, which will be submitted to the MOE for review during 2016. The ultimate outcome of this matter may result in a change to the existing reserve for Portovesme.

**Baie Comeau, Quebec, Canada**—In August 2012, Alcoa presented an analysis of remediation alternatives to the Quebec Ministry of Sustainable Development, Environment, Wildlife and Parks (MDDEP), in response to a previous request, related to known PCBs and polycyclic aromatic hydrocarbons (PAHs) contained in sediments of the Anse du Moulin bay. As such, Alcoa increased the reserve for Baie Comeau by \$25 in 2012 to reflect the estimated cost of Alcoa's recommended alternative, consisting of both dredging and capping of the contaminated sediments. In July 2013, Alcoa submitted the Environmental Impact Assessment for the project to the MDDEP. The MDDEP notified Alcoa that the project as it was submitted was approved and a final ministerial decree was issued in July 2015. As a result, no further adjustment to the reserve was required in 2015. The decree provides final approval for the project and allows Alcoa to start work on the final project design, which is expected to be completed in 2016 with construction on the project expected to begin in 2017. Completion of the final project design and bidding of the project may result in additional liability in a future period.

**Mosjøen, Norway**—In September 2012, Alcoa presented an analysis of remediation alternatives to the Norwegian Environmental Agency (NEA) (formerly the Norwegian Climate and Pollution Agency, or "Klif"), in response to a previous request, related to known PAHs in the sediments located in the harbor and extending out into the fjord. As such, Alcoa increased the reserve for Mosjøen by \$20 in 2012 to reflect the estimated cost of the baseline alternative for dredging of the contaminated sediments. A proposed project reflecting this alternative was formally presented to the NEA in June 2014, and was resubmitted in late 2014 to reflect changes by the NEA. The revised proposal did not result in a change to the reserve for Mosjøen.

In April 2015, the NEA notified Alcoa that the revised project was approved and required submission of the final project design before issuing a final order. Alcoa completed and submitted the final project design, which identified a need to stabilize the related wharf structure to allow for the sediment dredging in the harbor. As a result, Alcoa increased the reserve for Mosjøen by \$11 in June 2015 to reflect the estimated cost of the wharf stabilization. Also in June 2015, the NEA issued a final order approving the project as well as the final project design. In September 2015, Alcoa increased the reserve by \$1 to reflect the potential need (based on prior experience with similar projects) to perform additional dredging if the results of sampling, which is required by the order, don't achieve the required cleanup levels. Project construction will commence in 2016 and is expected to be completed by the end of 2017.

## Tax

In September 2010, following a corporate income tax audit covering the 2003 through 2005 tax years, an assessment was received as a result of Spain's tax authorities disallowing certain interest deductions claimed by a Spanish consolidated tax group owned by the Company. An appeal of this assessment in Spain's Central Tax Administrative Court by the Company was denied in October 2013. In December 2013, the Company filed an appeal of the assessment in Spain's National Court.

Additionally, following a corporate income tax audit of the same Spanish tax group for the 2006 through 2009 tax years, Spain's tax authorities issued an assessment in July 2013 similarly disallowing certain interest deductions. In August 2013, the Company filed an appeal of this second assessment in Spain's Central Tax Administrative Court, which was denied in January 2015. The Company filed an appeal of this second assessment in Spain's National Court in March 2015.

The combined assessments (remeasured for a tax rate change enacted in November 2014) total \$273 (€241), including interest. The Company believes it has meritorious arguments to support its tax position and intends to vigorously litigate the assessments through Spain's court system. However, in the event the Company is unsuccessful, a portion of the assessments may be offset with existing net operating losses available to the Spanish consolidated tax group. Additionally, it is possible that the Company may receive similar assessments for tax years subsequent to 2009. At this time, the Company is unable to reasonably predict an outcome for this matter.



In March 2013, Alcoa's subsidiary, Alcoa World Alumina Brasil (AWAB), was notified by the Brazilian Federal Revenue Office (RFB) that approximately \$110 (R\$220) of value added tax credits previously claimed are being disallowed and a penalty of 50% assessed. Of this amount, AWAB received \$41 (R\$82) in cash in May 2012. The value added tax credits were claimed by AWAB for both fixed assets and export sales related to the Juruti bauxite mine and São Luís refinery expansion. The RFB has disallowed credits they allege belong to the consortium in which AWAB owns an interest and should not have been claimed by AWAB. Credits have also been disallowed as a result of challenges to apportionment methods used, questions about the use of the credits, and an alleged lack of documented proof. AWAB presented defense of its claim to the RFB on April 8, 2013. If AWAB is successful in this administrative process, the RFB would have no further recourse. If unsuccessful in this process, AWAB has the option to litigate at a judicial level. Separately from AWAB's administrative appeal, in June 2015, new tax law was enacted repealing the provisions in the tax code that were the basis for the RFB assessing a 50% penalty in this matter. As such, the estimated range of reasonably possible loss is \$0 to \$29 (R\$103), whereby the maximum end of the range represents the portion of the disallowed credits applicable to the export sales and excludes the 50% penalty. Additionally, the estimated range of disallowed credits related to AWAB's fixed assets is \$0 to \$32 (R\$117), which would increase the net carrying value of AWAB's fixed assets if ultimately disallowed. It is management's opinion that the allegations have no basis; however, at this time, management is unable to reasonably predict an outcome for this matter.

Between 2000 and 2002, Alcoa Alumínio (Alumínio) sold approximately 2,000 metric tons of metal per month from its Poços de Caldas facility, located in the State of Minas Gerais (the "State"), to Alfio, a customer also located in the State. Sales in the State were exempted from value-added tax (VAT) requirements. Alfio subsequently sold metal to customers outside of the State, but did not pay the required VAT on those transactions. In July 2002, Alumínio received an assessment from State auditors on the theory that Alumínio should be jointly and severally liable with Alfio for the unpaid VAT. In June 2003, the administrative tribunal found Alumínio liable, and Alumínio filed a judicial case in the State in February 2004 contesting the finding. In May 2005, the Court of First Instance found Alumínio solely liable, and a panel of a State appeals court confirmed this finding in April 2006. Alumínio filed a special appeal to the Superior Tribunal of Justice (STJ) in Brasilia (the federal capital of Brazil) later in 2006. In 2011, the STJ (through one of its judges) reversed the judgment of the lower courts, finding that Alumínio should neither be solely nor jointly and severally liable with Alfio for the VAT, which ruling was then appealed by the State. In August 2012, the STJ agreed to have the case reheard before a five-judge panel. A decision from this panel is pending, but additional appeals are likely. At March 31, 2016, the assessment totaled \$38 (R\$137), including penalties and interest. While the Company believes it has meritorious defenses, the Company is unable to reasonably predict an outcome.

#### Other

In addition to the matters discussed above, various other lawsuits, claims, and proceedings have been or may be instituted or asserted against Alcoa, including those pertaining to environmental, product liability, safety and health, and tax matters. While the amounts claimed in these other matters may be substantial, the ultimate liability cannot now be determined because of the considerable uncertainties that exist. Therefore, it is possible that the Company's liquidity or results of operations in a particular period could be materially affected by one or more of these other matters. However, based on facts currently available, management believes that the disposition of these other matters that are pending or asserted will not have a material adverse effect, individually or in the aggregate, on the financial position of the Company.

#### Commitments

##### Investments

Alcoa has an investment in a joint venture for the development, construction, ownership, and operation of an integrated aluminum complex (bauxite mine, alumina refinery, aluminum smelter, and rolling mill) in Saudi Arabia. The joint venture is owned 74.9% by the Saudi Arabian Mining Company (known as "Ma'aden") and 25.1% by Alcoa and consists of three separate companies as follows: one each for the mine and refinery, the smelter, and the rolling mill. Alcoa accounts for its investment in the joint venture under the equity method. Capital investment in the project is expected to total approximately \$10,800 (SAR 40.5 billion) and has been funded through a combination of equity contributions by the joint venture partners and project financing by the joint venture, which has been guaranteed by both

partners (see below). Both the equity contributions and the guarantees of the project financing are based on the joint venture's partners' ownership interests. Originally, it was estimated that Alcoa's total equity investment in the joint venture would be approximately \$1,100, of which Alcoa has contributed \$982, including \$1 in the 2016 first quarter. Based on changes to both the project's capital investment and equity and debt structure from the initial plans, the estimated \$1,100 equity contribution may be reduced. As of March 31, 2016 and December 31, 2015, the carrying value of Alcoa's investment in this project was \$906 and \$928, respectively.

The smelting and rolling mill companies have project financing totaling \$4,311 (reflects principal repayments made through March 31, 2016), of which \$1,082 represents Alcoa's share (the equivalent of Alcoa's 25.1% interest in the smelting and rolling mill companies). In conjunction with the financings, Alcoa issued guarantees on behalf of the smelting and rolling mill companies to the lenders in the event that such companies default on their debt service requirements through 2017 and 2020 for the smelting company and 2018 and 2021 for the rolling mill company (Ma'aden issued similar guarantees for its 74.9% interest). Alcoa's guarantees for the smelting and rolling mill companies cover total debt service requirements of \$142 in principal and up to a maximum of approximately \$40 in interest per year (based on projected interest rates). At March 31, 2016 and December 31, 2015, the combined fair value of the guarantees was \$7 in both periods, which was included in Other noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet.

The mining and refining company has project financing totaling \$2,232, of which \$560 represents AWAC's 25.1% interest in the mining and refining company. In conjunction with the financings, Alcoa, on behalf of AWAC, issued guarantees to the lenders in the event that the mining and refining company defaults on its debt service requirements through 2019 and 2024 (Ma'aden issued similar guarantees for its 74.9% interest). Alcoa's guarantees for the mining and refining company cover total debt service requirements of \$120 in principal and up to a maximum of approximately \$30 in interest per year (based on projected interest rates). At March 31, 2016 and December 31, 2015, the combined fair value of the guarantees was \$3 in both periods, which was included in Other noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet. In the event Alcoa would be required to make payments under the guarantees, 40% of such amount would be contributed to Alcoa by Alumina Limited, consistent with its ownership interest in AWAC.

In 2004, AofA acquired a 20% interest in a consortium, which subsequently purchased the Dampier to Bunbury Natural Gas Pipeline (DBNGP) in Western Australia, in exchange for an initial cash investment of \$17 (A\$24). The investment in the DBNGP, which is classified as an equity investment, was made in order to secure a competitively priced long-term supply of natural gas to AofA's refineries in Western Australia. AofA made additional contributions of \$141 (A\$176) for its share of the pipeline capacity expansion and other operational purposes of the consortium through September 2011. No further expansion of the pipeline's capacity is planned at this time. In late 2011, the consortium initiated a three-year equity call plan to improve its capitalization structure. The plan required AofA to contribute \$39 (A\$40), all of which was made through December 2014. Following the completion of the three-year equity call plan in December 2014, the consortium initiated a new equity call plan to further improve its capitalization structure. This plan requires AofA to contribute \$30 (A\$36) through mid 2016, of which \$20 (A\$27) was made through March 31, 2016, including \$3 (A\$5) in the 2016 first quarter. In addition to its equity ownership, AofA has an agreement to purchase gas transmission services from the DBNGP. At March 31, 2016, Alcoa has an asset of \$284 (A\$369) representing prepayments made under the agreement for future gas transmission services. AofA's maximum exposure to loss on the investment and the related contract is approximately \$400 (A\$520) as of March 31, 2016.

In April 2016, AofA completed the sale of its 20% interest in DBP, the owner and operator of the DBNGP for \$154 (A\$205).

In April 2015, AofA secured a new 12-year gas supply agreement to power its three alumina refineries in Western Australia beginning in July 2020. This agreement was conditional on the completion of a third-party acquisition of the related energy assets from the then-current owner, which occurred in June 2015. The terms of AofA's gas supply agreement require a prepayment of \$500 to be made in two installments. The first installment of \$300 was made in the second quarter of 2015 and the second installment of \$200 was paid in April 2016. At March 31, 2016 and December 31, 2015, an asset of \$304 (A\$395) and \$288 (A\$395), respectively, was included in Other noncurrent assets on the accompanying Consolidated Balance Sheet.

## H. Other Expenses (Income), Net

	First quarter ended March 31,	
	2016	2015
Equity loss	\$ 22	\$ 20
Interest income	(4)	(3)
Foreign currency losses (gains), net	15	(16)
Net loss from asset sales	2	—
Net loss (gain) on mark-to-market derivative contracts (N)	1	(4)
Other, net	(2)	(9)
	<u>\$ 34</u>	<u>\$ (12)</u>

**I. Segment Information** — The operating results of Alcoa's reportable segments were as follows (differences between segment totals and consolidated totals are in Corporate):

	Alumina	Primary Metals	Global Rolled Products	Engineered Products and Solutions	Transportation and Construction Solutions	Total
<b>First quarter ended March 31, 2016</b>						
Sales:						
Third-party sales	\$ 545	\$ 1,123	\$ 1,397	\$ 1,449	\$ 429	\$4,943
Intersegment sales	292	475	29	—	—	796
Total sales	<u>\$ 837</u>	<u>\$ 1,598</u>	<u>\$ 1,426</u>	<u>\$ 1,449</u>	<u>\$ 429</u>	<u>\$5,739</u>
Profit and loss:						
Equity (loss) income	\$ (14)	\$ 4	\$ (11)	\$ —	\$ —	\$ (21)
Depreciation, depletion, and amortization	63	102	56	65	11	297
Income taxes	5	(16)	34	78	14	115
After-tax operating income (ATOI)	8	14	68	162	39	291
<b>First quarter ended March 31, 2015</b>						
Sales:						
Third-party sales	\$ 887	\$ 1,572	\$ 1,621	\$ 1,257	\$ 471	\$5,808
Intersegment sales	501	692	36	—	—	1,229
Total sales	<u>\$ 1,388</u>	<u>\$ 2,264</u>	<u>\$ 1,657</u>	<u>\$ 1,257</u>	<u>\$ 471</u>	<u>\$7,037</u>
Profit and loss:						
Equity loss	\$ (7)	\$ (3)	\$ (9)	\$ —	\$ —	\$ (19)
Depreciation, depletion, and amortization	80	109	56	51	10	306
Income taxes	92	57	36	76	14	275
ATOI	221	187	54	156	38	656

The following table reconciles total segment ATOI to consolidated net income attributable to Alcoa:

	First quarter ended March 31,	
	2016	2015
Total segment ATOI	\$ 291	\$ 656
Unallocated amounts (net of tax):		
Impact of LIFO	4	7
Metal price lag	1	(23)
Interest expense	(83)	(80)
Noncontrolling interests	5	(60)

	First quarter ended March 31,	
	2016	2015
Corporate expense	(55)	(62)
Restructuring and other charges	(61)	(161)
Other	(86)	(82)
Consolidated net income attributable to Alcoa	\$ 16	\$ 195

Items required to reconcile total segment ATOI to consolidated net income attributable to Alcoa include: the impact of LIFO inventory accounting and metal price lag; interest expense; noncontrolling interests; corporate expense (general administrative and selling expenses of operating the corporate headquarters and other global administrative facilities, along with depreciation and amortization on corporate-owned assets); restructuring and other charges; and other items, including intersegment profit eliminations, differences between tax rates applicable to the segments and the consolidated effective tax rate, and other nonoperating items such as foreign currency transaction gains/losses and interest income.

**J. Earnings Per Share** — Basic earnings per share (EPS) amounts are computed by dividing earnings, after the deduction of preferred stock dividends declared, by the average number of common shares outstanding. Diluted EPS amounts assume the issuance of common stock for all potentially dilutive share equivalents outstanding.

The information used to compute basic and diluted EPS attributable to Alcoa common shareholders was as follows (shares in millions):

	First quarter ended March 31,	
	2016	2015
Net income attributable to Alcoa	\$ 16	\$ 195
Less: preferred stock dividends declared	18	17
Net (loss) income available to Alcoa common shareholders – basic	(2)	178
Add: dividends related to mandatory convertible preferred stock	—	—
Add: interest expense related to convertible notes	—	—
Net (loss) income available to Alcoa common shareholders – diluted	\$ (2)	\$ 178
Average shares outstanding – basic	1,314	1,221
Effect of dilutive securities:		
Stock options	—	6
Stock and performance awards	—	11
Mandatory convertible preferred stock	—	—
Convertible notes	—	—
Average shares outstanding – diluted	1,314	1,238

In the first quarter of 2016, basic average shares outstanding and diluted average shares outstanding were the same because the effect of potential shares of common stock was anti-dilutive since Alcoa generated a net loss available to Alcoa common shareholders. As a result, 77 million share equivalents related to mandatory convertible preferred were not included in the computation of diluted EPS. Additionally, 24 million stock awards, 42 million stock options, and 28 million share equivalents related to convertible debt were not included in the computation of diluted EPS. Had Alcoa generated sufficient net income in the first quarter of 2016, 77 million, 28 million, 10 million, and 2 million potential shares of common stock related to mandatory convertible preferred stock, convertible notes, stock awards, and stock options, respectively, would have been included in diluted average shares outstanding.

In the first quarter of 2015, 77 million share equivalents related to mandatory convertible preferred stock were not included in the computation of diluted EPS because their effect was anti-dilutive.

Options to purchase 26 million and 13 million shares of common stock at a weighted average exercise price of \$12.74 and \$14.79 per share were outstanding as of March 31, 2016 and 2015, respectively, but were not included in the computation of diluted EPS because they were anti-dilutive, as the exercise prices of the options were greater than the average market price of Alcoa's common stock.

**K. Equity Investments** – A summary of unaudited financial information for Alcoa’s equity investments is as follows (amounts represent 100% of investee financial information):

	First quarter ended March 31,	
	2016	2015
Sales	\$ 892	\$ 886
Cost of goods sold	681	695
Income before interest expense and income taxes	142	87
Net income (loss)	15	(41)
Net income (loss) attributable to significant equity investments	15	(41)

**L. Receivables** – Alcoa has an arrangement with three financial institutions to sell certain customer receivables without recourse on a revolving basis. The sale of such receivables is completed through the use of a bankruptcy remote special purpose entity, which is a consolidated subsidiary of Alcoa. This arrangement provides for minimum funding of \$200 up to a maximum of \$500 for receivables sold. On March 30, 2012, Alcoa initially sold \$304 of customer receivables in exchange for \$50 in cash and \$254 of deferred purchase price under this arrangement. Alcoa has received additional net cash funding of \$300 for receivables sold (\$1,358 in draws and \$1,058 in repayments) since the program’s inception. Draws and repayments in the 2016 first quarter were \$100 and \$0, respectively.

As of March 31, 2016 and December 31, 2015, the deferred purchase price receivable was \$210 and \$249, respectively, which was included in Other receivables on the accompanying Consolidated Balance Sheet. The deferred purchase price receivable is reduced as collections of the underlying receivables occur; however, as this is a revolving program, the sale of new receivables will result in an increase in the deferred purchase price receivable. The net change in the deferred purchase price receivable was reflected in the (Increase) in receivables line item on the accompanying Statement of Consolidated Cash Flows. This activity is reflected as an operating cash flow because the related customer receivables are the result of an operating activity with an insignificant, short-term interest rate risk.

The gross amount of receivables sold and total cash collected under this program since its inception was \$26,055 and \$25,495, respectively. Alcoa services the customer receivables for the financial institutions at market rates; therefore, no servicing asset or liability was recorded.

**M. Pension and Other Postretirement Benefits** – The components of net periodic benefit cost were as follows:

First quarter ended March 31,	Pension benefits		Other postretirement benefits	
	2016	2015	2016	2015
Service cost	\$ 40	\$ 44	\$ 3	\$ 3
Interest cost	122	144	18	23
Expected return on plan assets	(185)	(188)	—	—
Recognized net actuarial loss	102	118	6	4
Amortization of prior service cost (benefit)	4	4	(6)	(9)
Settlements*	—	1	—	—
Special termination benefits*	1	2	—	—
Net periodic benefit cost	\$ 84	\$ 125	\$ 21	\$ 21

\* These amounts were recorded in Restructuring and other charges on the accompanying Statement of Consolidated Operations (see Note D).

In conjunction with the annual measurement of the funded status of Alcoa’s pension and other postretirement benefit plans at December 31, 2015, management elected to change the manner in which the interest cost component of net periodic benefit cost is determined in 2016 and beyond. Previously, the interest cost component was determined by multiplying the single equivalent rate and the aggregate discounted cash flows of the plans’ projected benefit obligations. Under the new methodology, the interest cost component is determined by aggregating the product of the discounted cash flows of the plans’ projected benefit obligations for each year and an individual spot rate (referred to as the “spot rate” approach). This change resulted in a lower interest cost component of net periodic benefit cost for the pension plans and other postretirement benefit plans of \$24 and \$4, respectively, in the first quarter of 2016.

## N. Derivatives and Other Financial Instruments

### Fair Value

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy distinguishes between (i) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (ii) an entity’s own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

- Level 1 — Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.
- Level 2 — Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, including quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates); and inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 — Inputs that are both significant to the fair value measurement and unobservable.

## **Derivatives**

Alcoa is exposed to certain risks relating to its ongoing business operations, including financial, market, political, and economic risks. The following discussion provides information regarding Alcoa's exposure to the risks of changing commodity prices, interest rates, and foreign currency exchange rates.

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

The aluminum, energy, interest rate, and foreign exchange contracts are held for purposes other than trading. They are used primarily to mitigate uncertainty and volatility, and to cover underlying exposures. Alcoa is not involved in trading activities for energy, weather derivatives, or other nonexchange commodity trading activities.

A number of Alcoa's aluminum, energy, and foreign exchange contracts are classified as Level 1 and an interest rate contract is classified as Level 2 under the fair value hierarchy. These energy, foreign exchange, and interest rate contracts are not material to Alcoa's Consolidated Financial Statements for all periods.

For the aluminum contracts classified as Level 1, the total fair value of derivatives recorded as assets and liabilities was \$4 and \$35 and \$8 and \$58 at March 31, 2016 and December 31, 2015, respectively. These contracts were entered into to either hedge forecasted sales or purchases of aluminum in order to manage the associated aluminum price risk. Certain of these contracts are designated as hedging instruments, either fair value or cash flow, and the remaining are not designated as such. Combined, Alcoa recognized a net gain of \$2 and \$26 in the first quarter of 2016 and 2015, respectively, in Sales on the accompanying Statement of Consolidated Operations related to these aluminum contracts.

In addition to the Level 1 and 2 derivative instruments described above, Alcoa has nine derivative instruments classified as Level 3 under the fair value hierarchy. These instruments are composed of seven embedded aluminum derivatives, an energy contract, and an embedded credit derivative, all of which relate to energy supply contracts associated with eight smelters and three refineries. Five of the embedded aluminum derivatives and the energy contract were designated as cash flow hedging instruments and two of the embedded aluminum derivatives and the embedded credit derivative were not designated as hedging instruments.

The following section describes the valuation methodologies used by Alcoa to measure its Level 3 derivative instruments at fair value. Derivative instruments classified as Level 3 in the fair value hierarchy represent those in which management has used at least one significant unobservable input in the valuation model. Alcoa uses a discounted cash flow model to fair value all Level 3 derivative instruments. Where appropriate, the description below includes the key inputs to those models and any significant assumptions. These valuation models are reviewed and tested at least on an annual basis.

Inputs in the valuation models for Level 3 derivative instruments are composed of the following: (i) quoted market prices (e.g., aluminum prices on the 10-year London Metal Exchange (LME) forward curve and energy prices), (ii) significant other observable inputs (e.g., information concerning time premiums and volatilities for certain option type embedded derivatives and regional premiums for aluminum contracts), and (iii) unobservable inputs (e.g., aluminum and energy prices beyond those quoted in the market). For periods beyond the term of quoted market prices for aluminum, Alcoa estimates the price of aluminum by extrapolating the 10-year LME forward curve. Additionally, for periods beyond the term of quoted market prices for energy, management has developed a forward curve based on independent consultant market research. Where appropriate, valuations are adjusted for various factors such as liquidity, bid/offer spreads, and credit considerations. Such adjustments are generally based on available

market evidence (Level 2). In the absence of such evidence, management's best estimate is used (Level 3). If a significant input that is unobservable in one period becomes observable in a subsequent period, the related asset or liability would be transferred to the appropriate classification (Level 1 or 2) in the period of such change (there were no such transfers in the periods presented).

Alcoa has embedded derivatives in two power contracts that index the price of power to the LME price of aluminum. Additionally, Alcoa has embedded derivatives in three power contracts, each of which contain an embedded derivative that indexes the price of power to the LME price of aluminum plus the Midwest premium. The embedded derivatives in these five power contracts are primarily valued using observable market prices; however, due to the length of the contracts, the valuation models also require management to estimate the long-term price of aluminum based upon an extrapolation of the 10-year LME forward curve and/or 5-year Midwest premium curve. Significant increases or decreases in the actual LME price beyond 10 years and/or the Midwest premium beyond 5 years would result in a higher or lower fair value measurement. An increase in actual LME price and/or the Midwest premium over the inputs used in the valuation models will result in a higher cost of power and a corresponding decrease to the derivative asset or increase to the derivative liability. The embedded derivatives have been designated as cash flow hedges of forward sales of aluminum. Unrealized gains and losses were included in Other comprehensive loss on the accompanying Consolidated Balance Sheet while realized gains and losses were included in Sales on the accompanying Statement of Consolidated Operations.

Also, Alcoa has a power contract separate from above that contains an LME-linked embedded derivative. The embedded derivative is valued using the probability and interrelationship of future LME prices, Australian dollar to U.S. dollar exchange rates, and the U.S. consumer price index. Significant increases or decreases in the LME price would result in a higher or lower fair value measurement. An increase in actual LME price over the inputs used in the valuation model will result in a higher cost of power and a corresponding decrease to the derivative asset. This embedded derivative did not qualify for hedge accounting treatment. Unrealized gains and losses from the embedded derivative were included in Other expenses (income), net on the accompanying Statement of Consolidated Operations while realized gains and losses were included in Cost of goods sold on the accompanying Statement of Consolidated Operations as electricity purchases were made under the contract. At the time this derivative asset was recognized, an equivalent amount was recognized as a deferred credit in Other noncurrent liabilities and deferred credits on the accompanying Consolidated Balance Sheet. This deferred credit is recognized in Other expenses (income), net on the accompanying Statement of Consolidated Operations as power is received over the life of the contract.

Additionally, Alcoa has a natural gas supply contract, which has an LME-linked ceiling. This embedded derivative is valued using probabilities of future LME aluminum prices and the price of Brent crude oil (priced on Platts), including the interrelationships between the two commodities subject to the ceiling. Any change in the interrelationship would result in a higher or lower fair value measurement. An LME ceiling was embedded into the contract price to protect against an increase in the price of oil without a corresponding increase in the price of LME. An increase in oil prices with no similar increase in the LME price would limit the increase of the price paid for natural gas. This embedded derivative did not qualify for hedge accounting treatment. Unrealized gains and losses from the embedded derivative were included in Other expenses (income), net on the accompanying Statement of Consolidated Operations while realized gains and losses were included in Cost of goods sold on the accompanying Statement of Consolidated Operations as gas purchases were made under the contract.

Furthermore, Alcoa has an embedded derivative in a power contract that indexes the difference between the long-term debt ratings of Alcoa and the counterparty from any of the three major credit rating agencies. Management uses market prices, historical relationships, and forecast services to determine fair value. Significant increases or decreases in any of these inputs would result in a lower or higher fair value measurement. A wider credit spread between Alcoa and the counterparty would result in a higher cost of power and a corresponding increase in the derivative liability. This embedded derivative did not qualify for hedge accounting treatment. Unrealized gains and losses were included in Other expenses (income), net on the accompanying Statement of Consolidated Operations while realized gains and losses were included in Cost of goods sold on the accompanying Statement of Consolidated Operations as electricity purchases were made under the contract.

Finally, Alcoa has a derivative contract that will hedge the anticipated power requirements at one of its smelters once the existing power contract expires in September 2016. Beyond the term where market information is available, management has developed a forward curve, for valuation purposes, based on independent consultant market research. Significant increases or decreases in the power market may result in a higher or lower fair value measurement. Lower prices in the power market would cause a decrease in the derivative asset. The derivative contract has been designated as a cash flow hedge of future purchases of electricity. Unrealized gains and losses on this contract were recorded in Other comprehensive loss on the accompanying Consolidated Balance Sheet. Once the designated hedge period begins in September 2016, realized gains and losses will be recorded in Cost of goods sold as electricity purchases are made under the power contract.

The following table presents quantitative information related to the significant unobservable inputs described above for Level 3 derivative contracts:

	Fair value at March 31, 2016*	Unobservable input	Range (\$ in full amounts)
<b>Assets:</b>			
Embedded aluminum derivatives	\$ 931	Price of aluminum beyond forward curve	Aluminum: \$2,027 per metric ton in 2026 to \$2,192 per metric ton in 2029 (two contracts) and \$2,489 per metric ton in 2036 (one contract) Midwest premium: \$0.084 per pound in 2021 to \$0.084 per pound in 2029 (two contracts) and 2036 (one contract)
Embedded aluminum derivative	48	Interrelationship of future aluminum prices, foreign currency exchange rates, and the U.S. consumer price index (CPI)	Aluminum: \$1,487 per metric ton in April 2016 to \$1,507 per metric ton in September 2016 Foreign currency: A\$1 = \$0.77 in 2016 (April through September) CPI: 1982 base year of 100 and 232 in April 2016 to 234 in September 2016
Embedded aluminum derivative	9	Interrelationship of LME price to overall energy price	Aluminum: \$1,518 per metric ton in 2016 to \$1,681 per metric ton in 2019
Embedded aluminum derivative	–	Interrelationship of future aluminum and oil prices	Aluminum: \$1,487 per metric ton in 2016 to \$1,615 per metric ton in 2018 Oil: \$39 per barrel in 2016 to \$49 per barrel in 2018
<b>Liabilities:</b>			
Embedded aluminum derivative	161	Price of aluminum beyond forward curve	Aluminum: \$2,027 per metric ton in 2026 to \$2,084 per metric ton in 2027
Embedded credit derivative	33	Credit spread between Alcoa and counterparty	3.17% to 4.00% (3.58% median)
Energy contract	5	Price of electricity beyond forward curve	Electricity: \$47 per megawatt hour in 2019 to \$115 per megawatt hour in 2036

\* The fair value of the energy contract reflected as a liability in this table is lower by \$6 compared to the respective amount reflected in the Level 3 tables presented below. This is due to the fact that this contract is in a liability position for the current portion but is in an asset position for the noncurrent portion, and is reflected as such on the accompanying Consolidated Balance Sheet. However, this derivative is reflected as a net liability in the above table for purposes of presenting the assumptions utilized to measure the fair value of the derivative instrument in its entirety.



The fair values of Level 3 derivative instruments recorded as assets and liabilities in the accompanying Consolidated Balance Sheet were as follows:

<u>Asset Derivatives</u>	<u>March 31, 2016</u>	<u>December 31, 2015</u>
Derivatives designated as hedging instruments:		
Prepaid expenses and other current assets:		
Embedded aluminum derivatives	\$ 72	\$ 72
Other noncurrent assets:		
Embedded aluminum derivatives	868	994
Energy contract	6	2
Total derivatives designated as hedging instruments	<u>\$ 946</u>	<u>\$ 1,068</u>
Derivatives not designated as hedging instruments:		
Prepaid expenses and other current assets:		
Embedded aluminum derivatives	\$ 48	\$ 69
Total derivatives not designated as hedging instruments	<u>\$ 48</u>	<u>\$ 69</u>
<b>Total Asset Derivatives</b>	<b><u>\$ 994</u></b>	<b><u>\$ 1,137</u></b>
<u>Liability Derivatives</u>		
Derivatives designated as hedging instruments:		
Other current liabilities:		
Embedded aluminum derivatives	\$ 8	\$ 9
Energy contract	11	4
Other noncurrent liabilities and deferred credits:		
Embedded aluminum derivatives	153	160
Total derivatives designated as hedging instruments	<u>\$ 172</u>	<u>\$ 173</u>
Derivatives not designated as hedging instruments:		
Other current liabilities:		
Embedded credit derivative	\$ 5	\$ 6
Other noncurrent liabilities and deferred credits:		
Embedded credit derivative	28	29
Total derivatives not designated as hedging instruments	<u>\$ 33</u>	<u>\$ 35</u>
<b>Total Liability Derivatives</b>	<b><u>\$ 205</u></b>	<b><u>\$ 208</u></b>

The following tables present a reconciliation of activity for Level 3 derivative contracts:

<u>First quarter ended March 31, 2016</u>	<u>Assets</u>		<u>Liabilities</u>		
	<u>Embedded aluminum derivatives</u>	<u>Energy contract</u>	<u>Embedded aluminum derivatives</u>	<u>Embedded credit derivative</u>	<u>Energy contract</u>
Opening balance – January 1, 2016	\$ 1,135	\$ 2	\$ 169	\$ 35	\$ 4
Total gains or losses (realized and unrealized) included in:					
Sales	(7)	–	(2)	–	–
Cost of goods sold	(31)	–	–	(1)	–
Other expenses (income), net	(4)	2	–	(1)	(1)
Other comprehensive income (loss)	(121)	2	(6)	–	8

First quarter ended March 31, 2016	Assets		Liabilities		
	Embedded aluminum derivatives	Energy contract	Embedded aluminum derivatives	Embedded credit derivative	Energy contract
Purchases, sales, issuances, and settlements*	—	—	—	—	—
Transfers into and/or out of Level 3*	—	—	—	—	—
Foreign currency translation	16	—	—	—	—
Closing balance – March 31, 2016	\$ 988	\$ 6	\$ 161	\$ 33	\$ 11
Change in unrealized gains or losses included in earnings for derivative contracts held at March 31, 2016:					
Sales	\$ —	\$ —	\$ —	\$ —	\$ —
Cost of goods sold	—	—	—	—	—
Other expenses (income), net	(4)	2	—	(1)	(1)

\* There were no purchases, sales, issuances or settlements of Level 3 derivative instruments. Additionally, there were no transfers of derivative instruments into or out of Level 3.

#### Derivatives Designated As Hedging Instruments – Cash Flow Hedges

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of unrealized gains or losses on the derivative is reported as a component of other comprehensive income (OCI). Realized gains or losses on the derivative are reclassified from OCI into earnings in the same period or periods during which the hedged transaction impacts earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized directly in earnings immediately.

Alcoa has five Level 3 embedded aluminum derivatives and one Level 3 energy contract that have been designated as cash flow hedges as follows.

**Embedded aluminum derivatives.** Alcoa has entered into energy supply contracts that contain pricing provisions related to the LME aluminum price. The LME-linked pricing features are considered embedded derivatives. Five of these embedded derivatives have been designated as cash flow hedges of forward sales of aluminum. At March 31, 2016 and December 31, 2015, these embedded aluminum derivatives hedge forecasted aluminum sales of 3,246 kmt and 3,307 kmt, respectively.

In the first quarter of 2016 and 2015, Alcoa recognized an unrealized loss of \$115 and \$98 in Other comprehensive loss related to these five derivative instruments. Additionally, Alcoa reclassified a realized loss of \$5 and \$12 from Accumulated other comprehensive loss to Sales in the first quarter of 2016 and 2015, respectively. Assuming market rates remain constant with the rates at March 31, 2016, a realized gain of \$46 is expected to be recognized in Sales over the next 12 months.

In the first quarter of 2016 and 2015, Alcoa also recognized a gain of less than \$1 and \$1, respectively, in Other expenses (income), net related to the amount excluded from the assessment of hedge effectiveness. There was no ineffectiveness related to these five derivative instruments in the first quarter of 2016 and 2015.

**Energy contract.** Alcoa has a derivative contract that will hedge the anticipated power requirements at one of its smelters once the existing power contract expires in 2016. At March 31, 2016 and December 31, 2015, this energy contract hedges forecasted electricity purchases of 59,409,328 megawatt hours. In the first quarter of 2016 and 2015, Alcoa recognized an unrealized gain of \$6 and \$6, respectively, in Other comprehensive loss. Assuming market rates remain constant with the rates at March 31, 2016, a loss of \$5 is expected to be realized in Cost of goods sold over the next 12 months. Alcoa recognized a gain of \$3 in Other expenses (income), net related to hedge ineffectiveness in the first quarter of 2016. There was no ineffectiveness related to the energy contract in the first quarter of 2015.

#### Derivatives Not Designated As Hedging Instruments

Alcoa has two Level 3 embedded aluminum derivatives and one Level 3 embedded credit derivative that do not qualify for hedge accounting treatment. As such, gains and losses related to the changes in fair value of these instruments are recorded directly in earnings. In the first quarter of 2016 and 2015, Alcoa recognized a loss of \$3 and a gain of \$3, respectively, in Other expenses (income), net, of which a loss of \$4 and gain of \$1, respectively, related to the two embedded aluminum derivatives and a gain of \$1 and \$2, respectively, related to the embedded credit derivative.

## Material Limitations

The disclosures with respect to commodity prices, interest rates, and foreign currency exchange risk do not take into account the underlying commitments or anticipated transactions. If the underlying items were included in the analysis, the gains or losses on the futures 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. 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.

## Other Financial Instruments

The carrying values and fair values of Alcoa's other financial instruments were as follows:

	March 31, 2016		December 31, 2015	
	Carrying value	Fair value	Carrying value	Fair value
Cash and cash equivalents	\$ 1,384	\$1,384	\$ 1,919	\$1,919
Restricted cash	33	33	37	37
Noncurrent receivables	19	19	17	17
Available-for-sale securities	177	177	193	193
Short-term borrowings	40	40	38	38
Commercial paper	—	—	—	—
Long-term debt due within one year	772	772	21	21
Contingent payment related to an acquisition	131	131	130	130
Long-term debt, less amount due within one year	8,257	8,330	8,993	8,922

The following methods were used to estimate the fair values of other financial instruments:

**Cash and cash equivalents, Restricted cash, Short-term borrowings, and Commercial paper.** The carrying amounts approximate fair value because of the short maturity of the instruments. The fair value amounts for Cash and cash equivalents, Restricted cash, and Commercial paper were classified in Level 1, and Short-term borrowings were classified in Level 2.

**Noncurrent receivables.** The fair value of noncurrent receivables was based on anticipated cash flows, which approximates carrying value, and was classified in Level 2 of the fair value hierarchy.

**Available-for-sale securities.** The fair value of such securities was based on quoted market prices. These financial instruments consist of exchange-traded fixed income and equity securities, which are carried at fair value and were classified in Level 1 of the fair value hierarchy.

**Contingent payment related to an acquisition.** The fair value was based on the net present value of expected future cash flows and was classified in Level 3 of the fair value hierarchy.

**Long-term debt due within one year and Long-term debt, less amount due within one year.** The fair value was based on quoted market prices for public debt and on interest rates that are currently available to Alcoa for issuance of debt with similar terms and maturities for non-public debt. The fair value amounts for all Long-term debt were classified in Level 2 of the fair value hierarchy. In the first quarter of 2016, \$750 of 5.55% Notes with a maturity date of February 2017 were reclassified from Long-term debt, less amount due within one year to Long-term debt due within one year on the accompanying Consolidated Balance Sheet.

**O. Proposed Separation Transaction** – On September 28, 2015, Alcoa announced that its Board of Directors approved a plan to separate into two independent, publicly-traded companies: An Upstream Company, the new Alcoa, that will primarily comprise the Alumina and Primary Metals segments; and a Value-Add Company, Arconic, that will principally include the Global Rolled Products, Engineered Products and Solutions, and Transportation and Construction Solutions segments. The Company currently plans that upon separation, which is targeted in the second half of 2016, the new Alcoa will also become owner of the rolling mill at the Warrick, IN Operations and the stake in the Ma'aden Rolling Company in Saudi Arabia.

The transaction is subject to a number of conditions, including, but not limited to, final approval by Alcoa's Board of Directors, receipt of a favorable opinion of legal counsel with respect to the tax-free nature of the transaction for U.S. federal income tax purposes, and the effectiveness of a Form 10 registration statement to be filed with the U.S. Securities and Exchange Commission. Upon completion of the separation, Alcoa shareholders will own all of the outstanding shares of both companies. Alcoa may, at any time and for any reason until the proposed transaction is complete, abandon the separation plan or modify or change its terms. For the first quarter of 2016, Alcoa recognized \$18 (\$17 after-tax) in Selling, general administrative, and other expenses on the accompanying Statement of Consolidated Operations for costs related to the proposed transaction.

**P. Subsequent Events** – Management evaluated all activity of Alcoa and concluded that no subsequent events have occurred that would require recognition in the Consolidated Financial Statements or disclosure in the Notes to the Consolidated Financial Statements.

**Report of Independent Registered Public Accounting Firm\***

To the Shareholders and Board of Directors of Alcoa Inc.

We have reviewed the accompanying consolidated balance sheet of Alcoa Inc. and its subsidiaries (Alcoa) as of March 31, 2016, and the related statements of consolidated operations, consolidated comprehensive income (loss), changes in consolidated equity, and consolidated cash flows for the three-month periods ended March 31, 2016 and 2015. These consolidated interim financial statements are the responsibility of Alcoa's management.

We conducted our review in accordance with the standards of the Public Company Accounting Oversight Board (United States). A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States), the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

Based on our review, we are not aware of any material modifications that should be made to the accompanying consolidated interim financial statements for them to be in conformity with accounting principles generally accepted in the United States of America.

We previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet as of December 31, 2015, and the related statements of consolidated operations, consolidated comprehensive loss, changes in consolidated equity, and consolidated cash flows for the year then ended (not presented herein), and in our report dated February 19, 2016, which included a paragraph that described the change in classification of current deferred income tax assets and liabilities in the consolidated balance sheet at December 31, 2015 and 2014, we expressed an unqualified opinion on those consolidated financial statements. As discussed in Note B to the accompanying consolidated interim financial statements, the Company changed the classification of debt issuance costs in the consolidated balance sheet. The accompanying December 31, 2015 consolidated balance sheet reflects this change.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP  
Pittsburgh, Pennsylvania  
May 5, 2016

\* This report should not be considered a "report" within the meanings of Sections 7 and 11 of the Securities Act of 1933, and the independent registered public accounting firm's liability under Section 11 does not extend to it.

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

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

On September 28, 2015, Alcoa announced that its Board of Directors approved a plan to separate into two independent, publicly-traded companies: An Upstream Company, the new Alcoa, that will primarily comprise the Alumina and Primary Metals segments; and a Value-Add Company, Arconic, that will principally include the Global Rolled Products, Engineered Products and Solutions, and Transportation and Construction Solutions segments. The Company currently plans that upon separation, which is targeted in the second half of 2016, the new Alcoa will also become owner of the rolling mill at the Warrick, IN Operations and the stake in the Ma'aden Rolling Company in Saudi Arabia.

The transaction is subject to a number of conditions, including, but not limited to, final approval by Alcoa's Board of Directors, receipt of a favorable opinion of legal counsel with respect to the tax-free nature of the transaction for U.S. federal income tax purposes, and the effectiveness of a Form 10 registration statement to be filed with the U.S. Securities and Exchange Commission. Upon completion of the separation, Alcoa shareholders will own all of the outstanding shares of both companies. Alcoa may, at any time and for any reason until the proposed transaction is complete, abandon the separation plan or modify or change its terms.

### Results of Operations

#### Selected Financial Data:

	First quarter ended	
	March 31,	
	2016	2015
Sales	\$4,947	\$5,819
Net income attributable to Alcoa	\$ 16	\$ 195
Diluted earnings per share attributable to Alcoa common shareholders	\$ 0.00	\$ 0.14
Shipments of alumina (kmt)	2,168	2,538
Shipments of aluminum products (kmt)	1,075	1,091
Alcoa's average realized price per metric ton of primary aluminum	\$1,793	\$2,420

Net income attributable to Alcoa was \$16, or \$0.00 per diluted share, in the 2016 first quarter compared with \$195, or \$0.14 per share, in the 2015 first quarter. The decrease in results of \$179 was primarily the result of a lower average realized price for aluminum and alumina, partially offset by net productivity improvements and lower restructuring-related charges.

Sales declined \$872, or 15%, in the 2016 first quarter compared to the same period in 2015. The decrease was largely attributable to a lower average realized price for alumina, a lower average realized price for aluminum in both the upstream and midstream operations, the absence of sales related to capacity that was closed, sold or curtailed in the upstream and midstream operations (see Alumina, Primary Metals, and Global Rolled Products in Segment Information below), and net unfavorable foreign currency movements. These negative impacts were partially offset by the addition of sales from two recently acquired businesses (see Engineered Products and Solutions in Segment Information below) and higher volumes in the upstream operations.

Cost of goods sold (COGS) as a percentage of Sales was 81.7% in the 2016 first quarter compared with 76.4% in the 2015 first quarter. The percentage was negatively impacted by lower average realized prices for alumina and aluminum, partially offset by net productivity improvements across all segments.

Selling, general administrative, and other expenses (SG&A) increased \$28 in the 2016 first quarter compared to the corresponding period in 2015. The increase was primarily driven by new SG&A related to inorganic growth in the Engineered Products and Solutions segment (\$19) and expenses for professional and consulting services related to the planned separation (see above) of Alcoa (\$18). These increases were partially offset by a decrease in corporate overhead expenses. SG&A as a percentage of Sales increased from 4.0% in the 2015 first quarter to 5.3% in the 2016 first quarter.

Depreciation, depletion, and amortization (DD&A) declined \$12, or 4%, in the 2016 first quarter compared with the same period in 2015. The decrease was mainly caused by foreign currency movements due to a stronger U.S. dollar and the absence of DD&A (\$7) related to the curtailments or closures at Suriname, Poços de Caldas, and Massena East in the Primary Metals segment and the sale of a Russian rolling mill in the Global Rolled Products segment, partially offset by new DD&A of (\$15) associated with two acquisitions that occurred from March 2015 through July 2015 in the Engineered Products and Solutions segment and new DD&A associated with other growth projects.

Restructuring and other charges in the 2016 first quarter were \$93 (\$61 after-tax and noncontrolling interest), which were comprised of the following components: \$60 (\$39 after-tax) related to the 2015 announced permanent closure of the Warrick smelter; \$19 (\$14 after-tax and noncontrolling interest) for layoff costs, including the separation of approximately 560 employees (500 in the Engineered Products and Solutions segment, 30 in the Primary Metals segment, and 30 in the Global Rolled Products segment); \$18 (\$11 after-tax and noncontrolling interest) related to the curtailments of the Point Comfort refinery and Wenatchee smelter; and \$4 (\$3 after-tax and noncontrolling interest) for the reversal of a number of small layoff reserves related to prior periods and other miscellaneous items.

In 2016, costs related to the closure and curtailment actions included \$70 for accelerated depreciation as the Warrick facility continued to operate through March 2016, \$27 in other exit costs primarily for contract terminations, and \$19 for the reversal of previously accrued severance costs that will not be incurred. Additionally in the first quarter of 2016, inventories were written down to their net realizable value, resulting in a charge of \$3 (\$2 after-tax), which was recorded in COGS.

Restructuring and other charges in the 2015 first quarter were \$177 (\$158 after-tax and noncontrolling interest), which were comprised of the following components: \$149 (\$142 after-tax and noncontrolling interest) related to the March 2015 divestiture of a rolling mill in Russia (see Global Rolled Products in segment Information below) and post-closing adjustments associated with three December 2014 divestitures; \$16 (\$11 after-tax) for the separation of approximately 680 employees (Primary Metals segment) and supplier contract-related costs associated with the decision to temporarily curtail the remaining capacity (74 kmt-per-year) at the São Luís smelter in Brazil (see Primary Metals in Segment Information below); \$13 (\$8 after-tax and noncontrolling interest) for layoff costs, including the separation of approximately 210 employees (80 in the Engineered Products and Solutions segment, 40 in the Transportation and Construction Solutions segment, 30 in the Global Rolled Products segment, and 60 in Corporate); a net charge of \$6 (\$3 after-tax and noncontrolling interest) for other miscellaneous items; and \$7 (\$6 after-tax) for the reversal of a number of small layoff reserves related to prior periods.

Alcoa does not include Restructuring and other charges in the results of its reportable segments. The pretax impact of allocating such charges to segment results would have been as follows:

	First quarter ended March 31,	
	2016	2015
Alumina	\$ 5	\$ 7
Primary Metals	78	25
Global Rolled Products	2	135
Engineered Products and Solutions	8	3
Transportation and Construction Solutions	—	2
Segment total	93	172
Corporate	—	5
Total restructuring and other charges	<u>\$ 93</u>	<u>\$ 177</u>

As of March 31, 2016, approximately 320 of the 560 employees associated with 2016 restructuring programs, approximately 2,750 of the 5,050 (previously 5,200 – updated to reflect employees accepting other positions within Alcoa and natural attrition) employees associated with 2015 restructuring programs, and approximately 2,590 of the 2,820 employees (previously 2,870 – updated to reflect employees accepting other positions within Alcoa and natural attrition) associated with 2014 restructuring programs were separated. Most of the remaining separations for the 2016, 2015, and 2014 restructuring programs are expected to be completed by the end of 2016.

In the 2016 first quarter, cash payments of \$2, \$62, and \$2 respectively, were made against the layoff reserves related to the 2016, 2015, and 2014 restructuring programs, respectively.

Interest expense increased \$5, or 4%, in the 2016 first quarter compared to the corresponding period in 2015. The increase was principally the result of lower capitalized interest (\$2) and a 1% higher average debt level.

Other expenses, net was \$34 in the 2016 first quarter compared with Other income, net of \$12 in the 2015 first quarter. The change of \$46 in the first quarter was mainly the result of net unfavorable foreign currency movements (\$31), a net unfavorable change in numerous miscellaneous expenses, and an unfavorable change in mark-to-market derivative contracts (\$5).

The effective tax rate for the first quarter of 2016 and 2015 was 73.2% and 47.0%, respectively.

The rate for the 2016 first quarter differs from the U.S. federal statutory rate of 35% primarily due to book basis in excess of tax basis of company-owned life insurance contracts that will be sold during 2016, separation expenses for which no tax benefit was recognized, and a \$5 discrete income tax charge for valuation allowances of certain deferred tax assets in Australia.

The rate for the 2015 first quarter differs from the U.S. federal statutory rate of 35% primarily due to a loss on the sale of a rolling mill in Russia (see Global Rolled Products in Segment Information below) for which no tax benefit was recognized, a \$35 unfavorable impact related to the interim period treatment of losses in certain foreign jurisdictions for which no tax benefit was recognized (impact reversed by the end of 2015), and a \$33 net discrete income tax charge as described below, somewhat offset by foreign income taxed in lower rate jurisdictions.

In the first quarter of 2015, Alcoa World Alumina and Chemicals (AWAC), a joint venture owned 60% by Alcoa and 40% by Alumina Limited (Alcoa consolidates AWAC for financial reporting purposes), recognized an \$83 discrete income tax charge (increased to \$85 in the 2015 second quarter) for a valuation allowance on certain deferred tax assets, which were related mostly to employee benefits and tax loss carryforwards. Alcoa also had a \$50 deferred tax liability (increased to \$51 in the 2015 second quarter) related to its 60%-share of these deferred tax assets that was written off as a result of the valuation allowance recognized by AWAC.

Net loss attributable to noncontrolling interests was \$5 in the 2016 first quarter compared with Net income attributable to noncontrolling interests of \$60 in the 2015 first quarter. These amounts were virtually all related to Alumina Limited's 40% ownership interest in AWAC.

In the 2016 first quarter, AWAC generated a loss compared to income in the same period in 2015. The change in AWAC's results was mainly driven by a lower average realized price for alumina. This negative impact was partially offset by net productivity improvements and net favorable foreign currency movements due to a stronger U.S. dollar, especially against the Australian dollar and Brazilian real.

## Segment Information

### Alumina

	First quarter ended	
	March 31,	
	2016	2015
Alumina production (kmt)	3,330	3,933
Third-party alumina shipments (kmt)	2,168	2,538
Alcoa's average realized price per metric ton of alumina	\$ 249	\$ 344
Alcoa's average cost per metric ton of alumina*	\$ 222	\$ 251
Third-party sales	\$ 545	\$ 887
Intersegment sales	292	501
Total sales	\$ 837	\$1,388
ATOI	\$ 8	\$ 221

\* Includes all production-related costs, including raw materials consumed; conversion costs, such as labor, materials, and utilities; depreciation, depletion, and amortization; and plant administrative expenses.

Alumina production decreased 15% in the 2016 first quarter compared with the corresponding period in 2015. The decline was largely attributable to lower production from the Point Comfort refinery (see below) and the absence of production at the Suralco refinery (Suriname – see below), slightly offset by higher production at the Australian refineries.

In March 2015, management initiated a 12-month review of 2,800 kmt in refining capacity for possible curtailment (partial or full), permanent closure or divestiture. This review is part of management's target to lower Alcoa's refining operations' position on the global alumina cost curve to the 21st percentile (currently 23rd)



by 2016. As part of this review, management decided to curtail all of the operating capacity at both the Suralco (1,330 kmt-per-year) and Point Comfort (2,010 kmt-per-year) refineries. The curtailment of the capacity at Suralco was completed by the end of November 2015. Management is currently in discussions with the Suriname government to determine the best long-term solution for Suralco due to limited bauxite reserves and the absence of a long-term energy alternative. The curtailment of the capacity at Point Comfort is expected to be completed by the end of June 2016 (1,553 kmt-per-year was completed by the end of March 31, 2016). Suralco and Point Comfort have nameplate capacity of 2,207 kmt-per-year and 2,305 kmt-per-year, respectively, of which 877 kmt and 295 kmt, respectively, was curtailed prior to the review.

Third-party sales for the Alumina segment declined 39% in the 2016 first quarter compared to the same period in 2015. The decrease was primarily due to a 28% decrease in average realized price and a 15% decline in volume. Unfavorable foreign currency movements also contributed to the decline in the 2016 first quarter. The change in average realized price was mostly driven by a lower average alumina index/spot price.

Intersegment sales decreased 42% in the 2016 first quarter compared with the corresponding period in 2015 due to lower demand from the Primary Metals segment, as a result of the closure, curtailment or divestiture of a number of smelters (see Primary Metals below), and a lower average realized price.

ATOI for this segment decreased \$213 in the 2016 first quarter compared to the same period in 2015. This decrease was principally driven by the decline in Alumina Price Index and LME. These negative impacts were partially offset by net productivity improvements, net favorable foreign currency movements due to a stronger U.S. dollar, especially against the Australian dollar and Brazilian real, and a higher percentage of shipments linked to alumina index/spot price.

In the second quarter of 2016 (comparison with the 2015 second quarter), alumina production is expected to be down 16%, driven by the curtailments of the Suralco and Point Comfort refineries. Also, net productivity improvements are anticipated and third party bauxite sales are expected to continue expanding.

### Primary Metals

	First quarter ended	
	March 31,	
	2016	2015
Aluminum production (kmt)	655	711
Third-party aluminum shipments (kmt)	575	589
Alcoa's average realized price per metric ton of aluminum*	\$1,793	\$2,420
Alcoa's average cost per metric ton of aluminum**	\$1,803	\$2,216
Third-party sales	\$1,123	\$1,572
Intersegment sales	475	692
Total sales	\$1,598	\$2,264
ATOI	\$ 14	\$ 187

\* Average realized price per metric ton of aluminum includes three elements: a) the underlying base metal component, based on quoted prices from the LME; b) the regional premium, which represents the incremental price over the base LME component that is associated with the physical delivery of metal to a particular region (e.g., the Midwest premium for metal sold in the United States); and c) the product premium, which represents the incremental price for receiving physical metal in a particular shape (e.g., billet, slab, rod, etc.) or alloy.

\*\* Includes all production-related costs, including raw materials consumed; conversion costs, such as labor, materials, and utilities; depreciation and amortization; and plant administrative expenses.

At March 31, 2016, Alcoa had 778 kmt of idle capacity on a base capacity of 3,133 kmt. In the 2016 first quarter, base capacity decreased 269 kmt compared to December 31, 2015 due to the permanent closure of the Warrick, IN smelter.

In March 2015, management initiated a 12-month review of 500 kmt in smelting capacity for possible curtailment (partial or full), permanent closure or divestiture. This review is part of management's target

to lower Alcoa's smelting operations on the global aluminum cost curve to the 38th percentile (currently 43rd) by 2016. As part of this review, during the fourth quarter of 2015, management decided to curtail the remaining capacity at the Wenatchee smelter (143 kmt-per-year) and approved the permanent closure of the Warrick, IN smelter (269 kmt-per-year).

Also in March 2015, management decided to curtail the remaining capacity (74 kmt-per-year) at the São Luís smelter in Brazil; this action was completed in April 2015. In 2013 and 2014 combined, Alcoa curtailed capacity of 194 kmt-per-year at the São Luís smelter under a prior management review.

Separate from the smelting capacity review described above, in June 2015, management decided to permanently close the Poços de Caldas smelter (96 kmt-per-year) in Brazil effective immediately. The Poços de Caldas smelter had been temporarily idle since May 2014 due to challenging global market conditions for primary aluminum and higher operating costs, which made the smelter uncompetitive. The decision to permanently close the Poços de Caldas smelter was based on the fact that these underlying conditions had not improved.

Aluminum production decreased 8% in the 2016 first quarter compared with the corresponding period in 2015. The decline in the 2016 first quarter was the result of the absence of production at one smelter each in Brazil and the United States. Furthermore, the production at the Warrick smelter decreased in preparation for the closure of this smelter.

Third-party sales for the Primary Metals segment decreased 29% in the 2016 first quarter compared to the same period in 2015. The decrease was mostly the result of a 26% decrease in average realized price, the absence of sales from two smelters that were curtailed in 2015, and unfavorable foreign currency movements, primarily due to a weaker Brazilian real. These negative impacts were slightly offset by higher volume in the remaining smelter portfolio. The change in average realized price was driven by a 16% lower average LME price (on 15-day lag) and lower regional premiums, which dropped by an average of 61% in the United States and Canada and 66% in Europe.

Intersegment sales declined 31% in the 2016 first quarter compared with the corresponding period in 2015 due to a decrease in average realized price and lower demand from the midstream business.

ATOI for this segment decreased \$173 in the 2016 first quarter compared to the same period in 2015. The decline was primarily driven by the previously mentioned lower average realized aluminum price. These negative price impacts were somewhat offset by net productivity improvements and lower alumina costs.

In the second quarter of 2016 (comparison with the 2015 second quarter), aluminum production will be approximately 100 kmt lower due to the announced curtailments and closure of the Warrick smelter. Also, net productivity improvements are anticipated that will more than offset lower energy sale prices in Brazil and the United States.

#### Global Rolled Products

	First quarter ended	
	March 31,	
	2016	2015
Third-party aluminum shipments (kmt)	433	432
Alcoa's average realized price per metric ton of aluminum*	\$3,226	\$3,755
Third-party sales	\$1,397	\$1,621
Intersegment sales	29	36
Total sales	\$1,426	\$1,657
ATOI	\$ 68	\$ 54

\* Generally, average realized price per metric ton of aluminum includes two elements: a) the price of metal (the underlying base metal component plus a regional premium – see the footnote to the table in Primary Metals above for a description of these two components), and b) the conversion price, which represents the incremental price over the metal price component that is associated with converting primary aluminum into sheet and plate. In this circumstance, the metal price component is a pass-through to this segment's customers with limited exception (e.g., fixed-priced contracts, certain regional premiums).

Third-party sales for the Global Rolled Products segment decreased 14% in the 2016 first quarter compared with the corresponding period in 2015. The decline was mostly due to a decrease in metal prices (both LME and regional premium components); the absence of sales (\$20) from the divested

Belaya Kalitva rolling mill in Russia in the first quarter of 2015; and unfavorable foreign currency movements, primarily due to a weaker euro and Brazilian real. These negative impacts were partially offset by increased demand and favorable product mix.

ATOI for this segment increased \$14 in the 2016 first quarter compared to the same period in 2015. The increase was primarily due to net productivity improvements across all businesses. This was partially offset by unfavorable price/product mix which was largely attributable to pricing pressure in the packaging end market and additional costs to secure alternative metal supply as Warrick transitions to a cold metal rolling mill.

In the 2016 second quarter (comparison with the 2015 second quarter), demand in automotive sheet shipments is expected to increase due to the Tennessee automotive ramp-up. Also, pricing pressure from the packaging market is expected to continue. Additionally, lower demand in the aerospace market due to the new model transition and reduced North American heavy duty truck build rates are expected to continue.

### Engineered Products and Solutions

	First quarter ended March 31,	
	2016	2015
Third-party sales	\$1,449	\$1,257
ATOI	\$ 162	\$ 156

Third-party sales for the Engineered Products and Solutions segment increased 15% in the 2016 first quarter compared with the corresponding period in 2015. The improvement was mostly due to an increase in third-party sales (\$217) from two businesses (TITAL and RTI), primarily aerospace-related, that were acquired in March 2015 and July 2015, slightly offset by unfavorable pricing and unfavorable foreign currency movements, principally due to a weaker euro and British pound.

ATOI for this segment increased \$6 in the 2016 first quarter compared to the same period in 2015, mainly the result of productivity improvements across most businesses and the July 2015 acquisition of RTI. These positive impacts were partially offset by price reductions, an unfavorable product mix, and higher costs related to growth projects.

In the 2016 second quarter (comparison with the 2015 second quarter), the commercial aerospace end market is expected to remain strong, despite slower ramp up of next generation platforms. Also, weakness in the oil and gas, European industrial gas turbine, and North American commercial transportation markets is expected to continue due to softer demand. Also, share gains from innovation and net productivity improvements are anticipated.

### Transportation and Construction Solutions

	First quarter ended March 31,	
	2016	2015
Third-party sales	\$ 429	\$ 471
ATOI	\$ 39	\$ 38

Third-party sales for the Transportation and Construction Solutions segment decreased 9% in the 2016 first quarter compared with the corresponding period in 2015. The decline was due to lower volumes in the North American commercial transportation end market, weaker Brazilian markets, and unfavorable foreign currency movements, principally caused by a weaker euro and Brazilian real.

ATOI for this segment increased \$1 in the 2016 first quarter compared to the same period in 2015. The increase was principally the result of net productivity improvements across all businesses, which were offset by a decrease in volumes, as noted previously, and cost increases.

In the 2016 second quarter (comparison with the 2015 second quarter), the North American non-residential construction sector is expected to improve, with sustained levels in Europe. North American heavy truck build rates are expected to continue declining, slightly offset by improvement in Europe. Current weakness in Brazil's economy will negatively impact business results. Also, net productivity gains are anticipated.

#### Reconciliation of ATOI to Consolidated Net Income Attributable to Alcoa

Items required to reconcile total segment ATOI to consolidated net income attributable to Alcoa include: the impact of LIFO inventory accounting and metal price lag; interest expense; noncontrolling interests; corporate expense (general administrative and selling expenses of operating the corporate headquarters and other global administrative facilities, along with depreciation and amortization on corporate-owned assets); restructuring and other charges; and other items, including intersegment profit eliminations, differences between tax rates applicable to the segments and the consolidated effective tax rate, and other nonoperating items such as foreign currency transaction gains/losses and interest income.

The following table reconciles total segment ATOI to consolidated net income attributable to Alcoa:

	First quarter ended March 31,	
	2016	2015
Total segment ATOI	\$ 291	\$ 656
Unallocated amounts (net of tax):		
Impact of LIFO	4	7
Metal price lag	1	(23)
Interest expense	(83)	(80)
Noncontrolling interests	5	(60)
Corporate expense	(55)	(62)
Restructuring and other charges	(61)	(161)
Other	(86)	(82)
Consolidated net income attributable to Alcoa	<u>\$ 16</u>	<u>\$ 195</u>

The significant changes in the reconciling items between total segment ATOI and consolidated net income attributable to Alcoa for the 2016 first quarter compared with the corresponding period in 2015 (unless otherwise noted) consisted of:

- a change in the Impact of LIFO, mostly due to lower first quarter 2015 LME levels (decrease in price at March 31, 2015 indexed to December 31, 2014 compared to a first quarter 2016 slight increase in price at March 31, 2016 indexed to December 31, 2015);
- a change in Metal price lag, the result of a metal price decline during the first quarter of 2015 compared to a slight increase during the first quarter of 2016;
- an increase in Interest expense in the 2016 first quarter, principally the result of lower capitalized interest (\$1) and a 1% higher average debt level;
- a change in Noncontrolling interests, due to the change in results of AWAC, principally driven by a decline in operating results due to lower realized prices;
- a decrease in Restructuring and other charges, in the 2016 first quarter, primarily attributable to lower charges due to fewer portfolio actions; and
- a change in Other, largely the result of net unfavorable foreign currency movements (\$20), discrete income tax charges (\$14), and other net unfavorable miscellaneous expense, partially offset by the absence of a 2015 discrete income tax charge for the valuation allowance on certain deferred tax assets (\$33).

## Environmental Matters

See the Environmental Matters section of Note G to the Consolidated Financial Statements in Part I Item 1 of this Form 10-Q.

## Liquidity and Capital Resources

### Cash From Operations

Cash used for operations was \$430 in the 2016 three-month period compared with \$175 in the same period of 2015. The increase in cash used for operations of \$255 was principally due to lower operating results (net income plus net add-back for noncash transactions in earnings), partially offset by a positive change associated with working capital of \$125, lower pension contributions of \$15, a positive change in noncurrent assets of \$13, and a positive change in noncurrent liabilities of \$1.

The components of the positive change in working capital were as follows:

- a favorable change of \$7 in receivables, primarily due to lower customer sales as a result of closed, divested, and curtailed locations and lower metal prices;
- a positive change of \$208 in inventories, largely attributable to lower inventory purchases in the downstream businesses;
- a favorable change of \$17 in prepaid expenses and other current assets;
- a negative change of \$89 in accounts payable, trade, principally the result of timing of payments;
- a positive change of \$11 in accrued expenses; primarily due to the timing of employee payroll, partially offset by severance payments; and
- an unfavorable change of \$29 in taxes, including income taxes, mostly driven by lower pretax income.

### Financing Activities

Cash used for financing activities was \$107 in the 2016 three-month period compared with \$26 in the 2015 three-month period, resulting in an increase in cash used of \$81.

The use of cash in the 2016 three-month period was primarily due to \$441 in payments on debt, mostly related to the repayment of borrowings under certain revolving credit facilities (see below), \$57 in dividends paid to shareholders, and \$50 in cash paid to the noncontrolling interest in AWAC, Alumina Limited. These items were mostly offset by \$439 in additions to debt, virtually all of which was the result of borrowings under certain revolving credit facilities (see below).

The use of cash in the 2015 three-month period was primarily due to \$519 in payments on debt, virtually all of which was the result of borrowings under certain revolving credit facilities, \$54 in dividends paid to shareholders, and \$29 in cash paid to the noncontrolling interest in AWAC, Alumina Limited. These items were mostly offset by \$517 in additions to debt, virtually all of which was the result of borrowings under certain revolving credit facilities, a \$26 change in short-term borrowings, and \$24 in proceeds from employee exercises of 2.7 million stock options at a weighted average exercise price of \$8.92 (not in millions).

As of March 31, 2016, Alcoa has a number of credit agreements that provide a combined borrowing capacity of \$990, of which \$840 is due to expire in 2016 and \$150 is due to expire in 2017. The purpose of any borrowings under these credit arrangements is to provide for working capital requirements and for other general corporate purposes.

During the first quarter of 2016, Alcoa borrowed and repaid \$435 under these credit arrangements. The weighted-average interest rate and weighted-average days outstanding of the borrowings during the first quarter of 2016 were 1.87% and 57 days, respectively.

Alcoa's cost of borrowing and ability to access the capital markets are affected not only by market conditions but also by the short- and long-term debt ratings assigned to Alcoa's debt by the major credit rating agencies.

On March 31, 2016, Moody's Investor Service (Moody's) affirmed the following credit ratings for Alcoa: long-term debt at Ba1 and short-term debt at Speculative Liquidity Rating-1. Additionally, Moody's changed the current outlook from rating under review to negative.

On April 21, 2016, Fitch affirmed the following credit ratings for Alcoa: long-term debt at BB+ and short-term debt at B. Additionally, Fitch changed the current outlook from positive to evolving.

On April 29, 2016, Standard and Poor's Ratings Services (S&P) affirmed the following credit ratings for Alcoa: long-term debt at BBB- and short-term debt at A-3. Additionally, S&P maintained the current outlook of stable.

## Investing Activities

Cash used for investing activities was \$1 in the 2016 three-month period compared with \$465 in the 2015 three-month period, resulting in a decrease in cash used of \$464.

The 2016 three-month period included \$251 in capital expenditures, 35% of which related to growth projects, including the aerospace expansion (thick plate stretcher) at the Davenport, IA plant. This amount was offset by \$234 in gross proceeds received from the liquidation of certain company-owned life insurance policies; and sales of \$19 in equities and fixed income securities held by Alcoa's captive insurance company.

The use of cash in the 2015 three-month period was mainly due to \$247 in capital expenditures, 50% of which related to growth projects, including the aerospace expansion at the La Porte, IN plant, the automotive expansion at the Alcoa, TN plant, the aerospace expansion (thick plate stretcher) at the Davenport, IA plant, and the specialty foil expansion at the Itapissuma plant in Brazil; and \$204 (net of cash acquired) for the acquisition of TITAL.

## Recently Adopted and Recently Issued Accounting Guidance

See Note B to the Consolidated Financial Statements in Part I Item 1 of this Form 10-Q.

## Forward-Looking Statements

This report contains statements that relate to future events and expectations and, as such, constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include those containing such words as "anticipates," "believes," "could," "estimates," "expects," "forecasts," "goal," "intends," "may," "outlook," "plans," "projects," "seeks," "sees," "should," "targets," "will," "would," or other words of similar meaning. All statements that reflect Alcoa's expectations, assumptions, or projections about the future, other than statements of historical fact, are forward-looking statements, including, without limitation, forecasts concerning global demand growth for aluminum, supply/demand balances, and growth of the aerospace, automotive, and other end markets; statements regarding targeted financial results or operating performance; statements about Alcoa's strategies, outlook, and business and financial prospects; and statements regarding the separation transaction, including the future performance of the two independent companies if the separation is completed, the expected benefits of the separation, the expected timing of the Form 10 filing and the completion of the separation, and the expected qualification of the separation as a tax-free transaction. These statements reflect beliefs and assumptions that are based on Alcoa's perception of historical trends, current conditions and expected future developments, as well as other factors management believes are appropriate in the circumstances. Forward-looking statements are subject to a number of risks, uncertainties and other factors, and are not guarantees of future performance. Important factors that could cause actual results to differ materially from those expressed or implied in the forward-looking statements include, but are not limited to: (a) uncertainties as to the timing of the separation and whether it will be completed; (b) the possibility that various closing conditions for the separation may not be satisfied; (c) failure of the separation to qualify for the expected tax treatment; (d) the possibility that any third-party consents required in connection with the separation will not be received; (e) the impact of the separation on the businesses of Alcoa; (f) the risk that the businesses will not be separated successfully or such separation may be more difficult, time-consuming or costly than expected, which could result in additional demands on Alcoa's resources, systems, procedures and controls, disruption of its ongoing business and diversion of management's attention from other business concerns; (g) material adverse changes in aluminum industry conditions, including global supply and demand conditions and fluctuations in London Metal Exchange-based prices and premiums, as applicable, for primary aluminum, alumina, and other products, and fluctuations in indexed-based and spot prices for alumina; (h) deterioration in global economic and financial market conditions generally; (i) unfavorable changes in the markets served by Alcoa; (j) the impact of changes in foreign currency exchange rates on costs and results; (k) increases in energy costs; (l) the inability to achieve the level of revenue growth, cash generation, cost savings, improvement in profitability and margins, fiscal discipline, or strengthening of competitiveness and operations (including executing on the business improvement plans, moving the alumina and aluminum businesses down on the industry cost curves, and increasing revenues and improving margins in the Global Rolled Products, Engineered Products and Solutions, and Transportation and Construction Solutions segments) anticipated from restructuring programs and productivity improvement, cash sustainability, technology advancements (including, without limitation, advanced aluminum alloys, Alcoa Micromill, and other materials and

processes), and other initiatives; (m) Alcoa's inability to realize expected benefits, in each case as planned and by targeted completion dates, from acquisitions, divestitures, facility closures, curtailments, or expansions, or international joint ventures; (n) political, economic, and regulatory risks in the countries in which Alcoa operates or sells products; (o) the outcome of contingencies, including legal proceedings, government or regulatory investigations, and environmental remediation; (p) the impact of cyber attacks and potential information technology or data security breaches; (q) the potential failure to retain key employees while the separation transaction is pending or after it is completed; (r) the risk that increased debt levels, deterioration in debt protection metrics, contraction in liquidity, or other factors could adversely affect the credit ratings for the two proposed independent companies; and (s) the other risk factors summarized in Alcoa's Form 10-K for the year ended December 31, 2015, including under Part I, Item 1A thereof, and in the following sections of this report: Note G and the Derivatives section of Note N to the Consolidated Financial Statements; and the discussion included above under Segment Information. Alcoa disclaims any intention or obligation to update publicly any forward-looking statements, whether in response to new information, future events, or otherwise, except as required by applicable law. Market projections are subject to the risks discussed above and other risks in the market.

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**Item 3. Quantitative and Qualitative Disclosures about Market Risk.**

See the Derivatives section of Note N to the Consolidated Financial Statements in Part I Item 1 of this Form 10-Q.



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**Item 4. Controls and Procedures.****(a) Evaluation of Disclosure Controls and Procedures**

Alcoa's Chief Executive Officer and Chief Financial Officer have evaluated the Company's disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as of the end of the period covered by this report, and they have concluded that these controls and procedures are effective.

**(b) Changes in Internal Control over Financial Reporting**

There have been no changes in internal control over financial reporting during the first quarter of 2016, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

## PART II – OTHER INFORMATION

### Item 1. Legal Proceedings.

#### Environmental Matters

##### *St. Croix Proceedings*

Glencore Contractual Indemnity Claim. As previously reported, on June 5, 2015, Alcoa World Alumina LLC (“AWA”) and St. Croix Alumina, L.L.C. (“SCA”) filed a complaint in Delaware Chancery Court for a declaratory judgment and injunctive relief to resolve a dispute between Alcoa and Glencore Ltd. (“Glencore”) with respect to claimed obligations under a 1995 asset purchase agreement between Alcoa and Glencore. The dispute arose from Glencore’s demand that Alcoa indemnify it for liabilities it may have to pay to Lockheed Martin (“Lockheed”) related to the St. Croix alumina refinery. Lockheed had earlier filed suit against Glencore in federal court in New York seeking indemnity for liabilities it had incurred and would incur to the U.S. Virgin Islands to remediate certain properties at the refinery property and claimed that Glencore was required by an earlier, 1989 purchase agreement to indemnify it. Glencore had demanded that Alcoa indemnify and defend it in the Lockheed case and threatened to claim against Alcoa in the New York action despite exclusive jurisdiction for resolution of disputes under the 1995 purchase agreement being in Delaware. After Glencore conceded that it was not seeking to add Alcoa to the New York action, AWA and SCA dismissed their complaint in the Chancery Court case and on August 6, 2015 filed a complaint for declaratory judgment in Delaware Superior Court. AWA and SCA filed a motion for judgment on the pleadings on September 16, 2015. Glencore answered AWA’s and SCA’s complaint and asserted counterclaims on August 27, 2015, and on October 2, 2015 filed its own motion for judgment on the pleadings. Argument on the parties’ motions was held by the court on December 7, 2015 and by order dated February 8, 2016, the court granted Alcoa’s motion and denied Glencore’s motion, resulting in Alcoa not being liable to indemnify Glencore for the Lockheed action. The decision also leaves for pretrial discovery and possible summary judgment or trial Glencore’s claims for costs and fees it incurred in defending and settling an earlier Superfund action brought against Glencore by the Government of the Virgin Islands. On February 17, 2016, Glencore filed notice of its application for interlocutory appeal of the February 8 ruling. AWA and SCA filed an opposition to that application on February 29, 2016. On March 10, 2016, the court denied Glencore’s motion for interlocutory appeal and on the same day entered judgment on claims other than Glencore’s claims for costs and fees it incurred in defending and settling the earlier Superfund action brought against Glencore by the Government of the Virgin Islands. On March 29, 2016, Glencore filed a withdrawal of its notice of interlocutory appeal and also noted its intent to appeal the court’s March 10, 2016 judgment. At this time, the Company is unable to reasonably predict an outcome for this matter.

##### *Other*

On October 19, 2015, an Alcoa subsidiary, Alúmina Española S.A., received a request by the Court of Vivero, Spain to provide the names of the “manager,” as well as those of the “environmental managers,” of the San Ciprián alumina refinery from 2009 to the present date. Upon reviewing the documents filed with the Court, Alcoa learned for the first time that the request is the result of a criminal proceeding that began in 2010 after the filing of a claim by two San Ciprián neighbors alleging that the plant’s activities had adverse effects on vegetation, crops and human health. In 2011 and 2012, some neighbors claimed individually in the criminal court for caustic spill damages to vehicles, and the judge decided to administer all issues in the court proceeding (865/2011). Currently, that court proceeding is in its first phase (preliminary investigation phase) led by the judge. The purpose of that investigation is to determine whether there has been a criminal offense for actions against natural resources and the environment. The Spanish public prosecutor is also involved in the case, having requested technical reports. To date, only “Alcoa-Alúmina Española S.A.” has been identified as a potential defendant and no Alcoa representative has yet been required to appear before the judge. No other material step has been taken during this preliminary investigation phase. Monetary sanctions for an offense in the form of a fine could range from 30 to 5,000 euros per day, for a maximum period of three years. Given that this proceeding is in its preliminary stage and the current uncertainty in the case, the Company is unable to reasonably predict an outcome or to estimate a range of reasonably possible loss.

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**Item 4. Mine Safety Disclosures.**

The information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Securities and Exchange Commission Regulation S-K (17 CFR 229.104) is included in Exhibit 95 of this report, which is incorporated herein by reference.

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**Item 6. Exhibits.**

12.	Computation of Ratio of Earnings to Fixed Charges
15.	Letter regarding unaudited interim financial information
31.	Certifications pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
95.	Mine Safety Disclosure
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Alcoa Inc.

May 5, 2016

\_\_\_\_\_  
Date

By /s/ WILLIAM F. OPLINGER

\_\_\_\_\_  
William F. Oplinger  
Executive Vice President and  
Chief Financial Officer  
(Principal Financial Officer)

May 5, 2016

\_\_\_\_\_  
Date

By /s/ ROBERT S. COLLINS

\_\_\_\_\_  
Robert S. Collins  
Vice President and Controller  
(Principal Accounting Officer)

**EXHIBIT INDEX**

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**Alcoa and subsidiaries**  
**Computations of Ratio of Earnings to Fixed Charges and Ratio of Earnings to Combined Fixed**  
**Charges and Preferred Stock Dividends**  
**(in millions, except ratio)**

<b>Three months ended March 31,</b>	<b>2016</b>
<b>Earnings:</b>	
Income before income taxes	\$ 41
Noncontrolling interests' share of earnings of majority-owned subsidiaries without fixed charges	—
Equity loss	(15)
Fixed charges added to earnings	136
Distributed income of less than 50 percent-owned persons	19
Amortization of capitalized interest:	
Consolidated	10
Proportionate share of 50 percent-owned persons	—
Total earnings	<u>\$191</u>
<b>Fixed Charges:</b>	
Interest expense:	
Consolidated	\$127
Proportionate share of 50 percent-owned persons	—
	<u>\$127</u>
Amount representative of the interest factor in rents:	
Consolidated	\$ 9
Proportionate share of 50 percent-owned persons	—
	<u>\$ 9</u>
Fixed charges added to earnings	<u>\$136</u>
Interest capitalized:	
Consolidated	\$ 13
Proportionate share of 50 percent-owned persons	—
	<u>\$ 13</u>
Preferred stock dividend requirements of majority-owned subsidiaries	—
Total fixed charges	<u>\$149</u>
Pretax earnings required to pay preferred stock dividends*	<u>\$ 27</u>
Combined total fixed charges and preferred stock dividends	<u>\$176</u>
Ratio of earnings to fixed charges	<u>1.3</u>
Ratio of earnings to fixed charges and preferred stock dividends	<u>1.1</u>

\* Based on a U.S. statutory tax rate of 35%

May 5, 2016

Securities and Exchange Commission  
100 F Street, NE  
Washington, D.C. 20549

RE: Alcoa Inc.

Commissioners:

We are aware that our report dated May 5, 2016 on our review of interim financial information of Alcoa Inc. and its subsidiaries (Alcoa) for the three-month periods ended March 31, 2016 and 2015 and included in Alcoa's quarterly report on Form 10-Q for the quarter ended March 31, 2016 is incorporated by reference in its Registration Statements on Form S-3 (Nos. 333-197371 and 333-201055) and Form S-8 (Nos. 333-32516, 333-106411, 333-128445, 333-146330, 333-153369, 333-155668, 333-159123, 333-168428, 333-170801, 333-182899, 333-189882, 333-205829, 333-203275, 333-209772, and 333-209777).

Very truly yours,

/s/ PricewaterhouseCoopers LLP

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PricewaterhouseCoopers LLP  
Pittsburgh, Pennsylvania



I, Klaus Kleinfeld, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Alcoa Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 5, 2016

/s/ KLAUS KLEINFELD

Name: Klaus Kleinfeld

Title: Chairman and

Chief Executive Officer

I, William F. Oplinger, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Alcoa Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 5, 2016

/s/ WILLIAM F. OPLINGER

Name: William F. Oplinger

Title: Executive Vice President and  
Chief Financial Officer

**Certification**  
**Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code), each of the undersigned officers of Alcoa Inc., a Pennsylvania corporation (the "Company"), does hereby certify that:

The Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (the "Form 10-Q") of the Company fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 5, 2016

/s/ KLAUS KLEINFELD

Name: Klaus Kleinfeld  
Title: Chairman and  
Chief Executive Officer

Date: May 5, 2016

/s/ WILLIAM F. OPLINGER

Name: William F. Oplinger  
Title: Executive Vice President and  
Chief Financial Officer

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

The foregoing certification is being furnished to the Securities and Exchange Commission as an exhibit to the Form 10-Q and shall not be considered filed as part of the Form 10-Q.

## MINE SAFETY DISCLOSURE

At Alcoa, management strives to work safely in a manner that protects and promotes the health and well-being of the Company's employees, contractors, and the communities in which Alcoa operates because it is fundamentally the right thing to do. Despite uncertainties and economic challenges, Alcoa remains committed to living its values and managing risks accordingly. In 2015, 44.4% of Alcoa's global locations reported no recordable injuries, and 79.1% reported zero lost workdays. In Alcoa's 2015 Employee Global Voices Survey, "If I see a situation that is unsafe, I can stop work" received the highest overall rating (at 92% favorable) by employees participating in the survey.

Alcoa's health and safety systems are anchored by committed people who are actively engaged and effectively support a safe work environment, safe work methods, and overall production system stability. Each day, people at all levels proactively monitor and intervene to defend against weaknesses that develop in Alcoa's safety systems by identifying potential hazards and error-likely situations and responding to eliminate or control them.

In the table below, there are disclosures involving the Point Comfort, TX alumina refinery. All citations have been or are being addressed. None constituted an imminent danger.

Dodd-Frank Act Disclosure of Mine Safety and Health Administration Safety Data

Certain of Alcoa's U.S. facilities are subject to regulation by the Mine Safety and Health Administration (MSHA) under the U.S. Federal Mine Safety and Health Act of 1977 (the "Mine Act"). The MSHA inspects these facilities on a regular basis and issues various citations and orders when it believes a violation has occurred under the Mine Act. Whenever the MSHA issues a citation or order, it also generally proposes a civil penalty, or fine, related to the alleged violation. Citations or orders can be contested and appealed, and as part of that process, are often reduced in severity and amount, and are sometimes dismissed.

Management believes the following mine safety disclosures meet the requirements of section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act").

**Mine Safety Data.** The table and other data below present mine safety information related to Alcoa's U.S. facilities subject to MSHA regulation, as required by section 1503(a)(1) of the Dodd-Frank Act. The following data reflects citations and orders received from the MSHA during the quarter ended March 31, 2016, as reflected in the MSHA system on March 31, 2016, and the proposed penalties received from the MSHA during such period. (\$ in full amounts)

Mine or Operating Name/ MSHA Identification Number(1)	Section 104 S&S Citations(3) (#)	Section 104(b) Orders(4) (#)	Section 104(d) Citations and Orders(5) (#)	Section 110(b)(2) Violations(6) (#)	Section 107(a) Orders(7) (#)	Total Dollar Value of MSHA Assessments Pro- posed(8) (\$)	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violations Under Section 104(e) (yes/no)	Received Notice of Potential to Have Pattern Under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)	Legal Actions Initiated During Period (#)	Legal Actions Resolved During Period (#)
Point Comfort, TX Alumina Refinery(2)	9	—	3	—	—	\$ 82,153	—	no	no	12	3	—

- (1) The MSHA assigns an identification number to each mine or operation and may or may not assign separate identification numbers to related facilities. The information provided in this table is presented by mine or operation rather than the MSHA identification number because that is how Alcoa manages and operates its business, and management believes that this presentation is more useful to investors.
- (2) Under the Interagency Agreement dated March 29, 1979 between the MSHA, the U.S. Department of Labor, and The Occupational Safety and Health Administration, alumina refineries (such as Alcoa's Point Comfort facility) are subject to MSHA jurisdiction.
- (3) Represents the total number of citations issued under section 104 of the Mine Act, for violations of mandatory health or safety standards that could significantly and substantially contribute to a serious injury if left unabated. This includes the citations listed under the column headed §104(d).
- (4) Represents the total number of orders issued under section 104(b) of the Mine Act, which represents a failure to abate a citation under section 104(a) within the period prescribed by the MSHA. This results in an order of immediate withdrawal from the area of the mine affected by the condition until the MSHA determines that the violation has been abated.
- (5) Represents the total number of citations and orders issued under section 104(d) of the Mine Act for unwarrantable failure to comply with mandatory health or safety standards.
- (6) Represents the total number of flagrant violations identified under section 110(b)(2) of the Mine Act.
- (7) Represents the total number of imminent danger orders issued under section 107(a) of the Mine Act.

(8) Amounts represent the total dollar value of proposed assessments received.

During the quarter ended March 31, 2016, Alcoa had no mining related fatalities, and none of the Company's mining operations received written notice from the MSHA of a pattern of, or the potential to have a pattern of, violations of mandatory health or safety standards that are of such nature as could have significantly and substantially contributed to the cause and effect of mine health or safety hazards under section 104(e) of the Mine Act.

The Federal Mine Safety and Health Review Commission (the "Commission") is an independent adjudicative agency that provides administrative trial and appellate review of legal disputes arising under the Mine Act. As of March 31, 2016, Alcoa has a total of 12 matters pending before the Commission. Eleven of these matters concern contests of citations or orders issued under section 104 of the Mine Act, along with the contests of the proposed penalties for each of these. The remaining matter was a retaliation complaint filed by an employee, which was dismissed by an Administrative Law Judge on September 28, 2015. The employee has appealed the dismissal to the Commission where the matter is currently pending. All of these matters concern citations, orders or proposed assessments issued by MSHA during 2016 (three), 2015 (seven) or 2014 (two). One of the seven matters filed in 2015 was not previously reported because it was filed by the U.S. Secretary of Labor on December 30, 2015, which was not received by Alcoa until 2016.